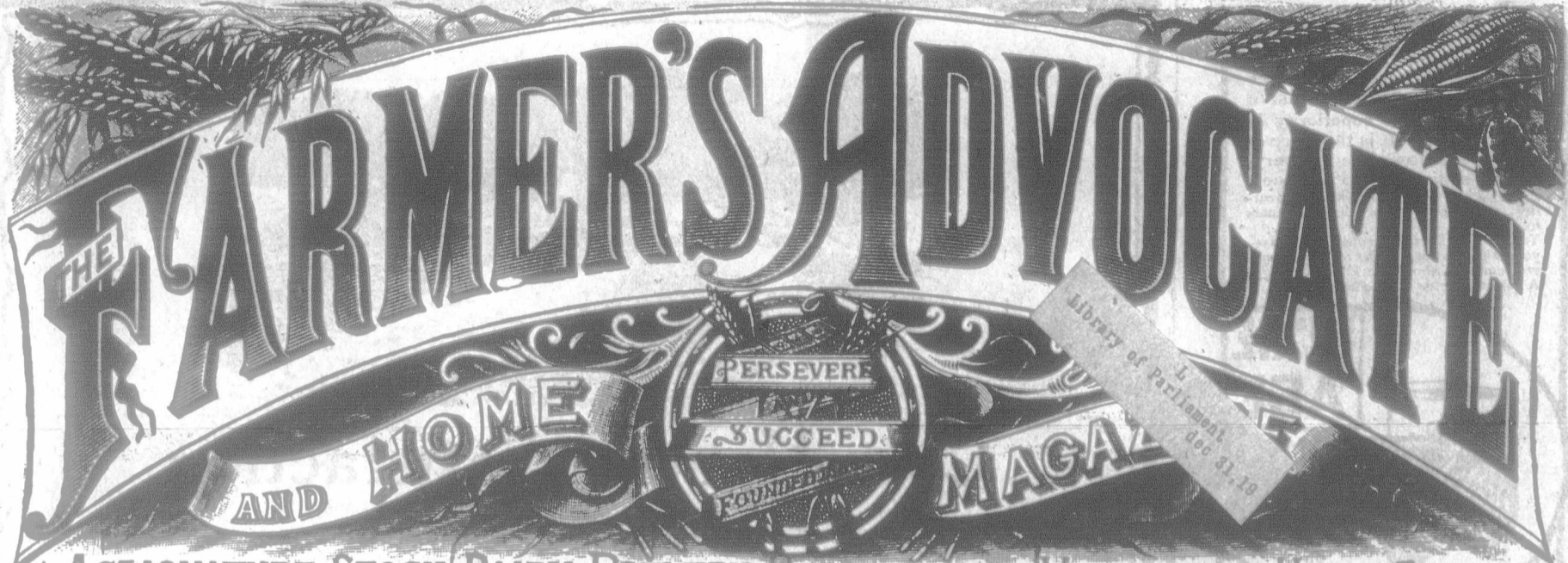


JULY 17, 1919

PUBLISHED EVERY WEEK. \$1.50 PER YEAR.



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LONDON, ONTARIO, JULY 24, 1919.

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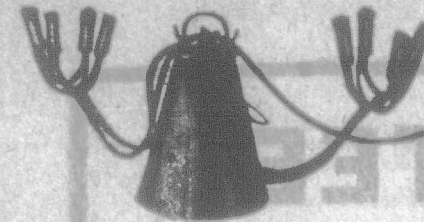
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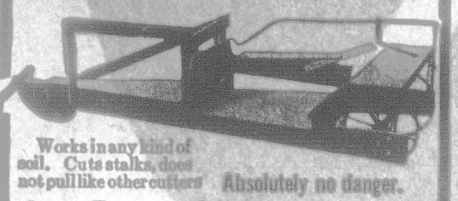
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Send for booklet and circular telling all about this labor-saving machine; also testimonials of many users.
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A nearby International agent will point out to you the money and time-saving features of these machines, or full information will be furnished by writing the nearest address below.

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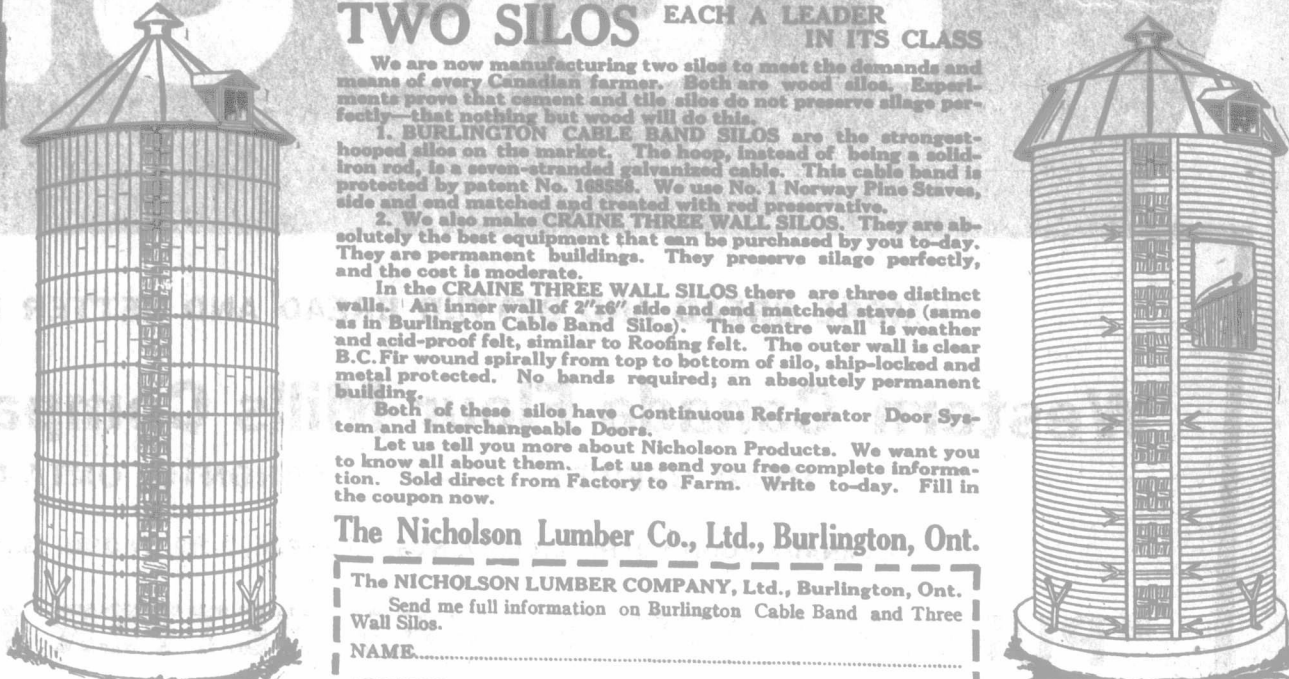
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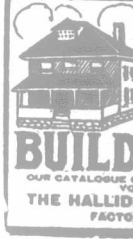
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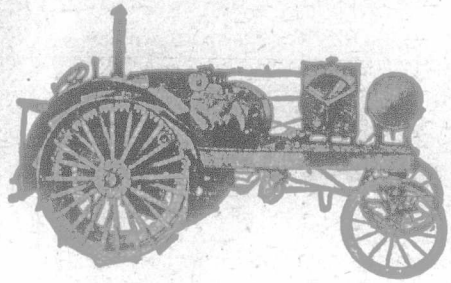
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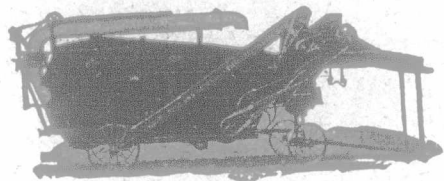
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The Simplest, most Accessible, most Powerful 3-plow Tractor on the market. Suitable for hauling 3 Plows, Threshing, Silo Filling and General Farm Work.



Individual Farmers' Threshers, suitable size to be driven by small Tractors and Gasoline Engines. Do your own threshing. Keep your farm clean and save expense. Write for free catalogue, prices and any information wanted. THE ROBT. BELL ENGINE & THRESHER COMPANY, LIMITED, Seaforth, Ontario. Also Steam Tractors, and large size Threshers

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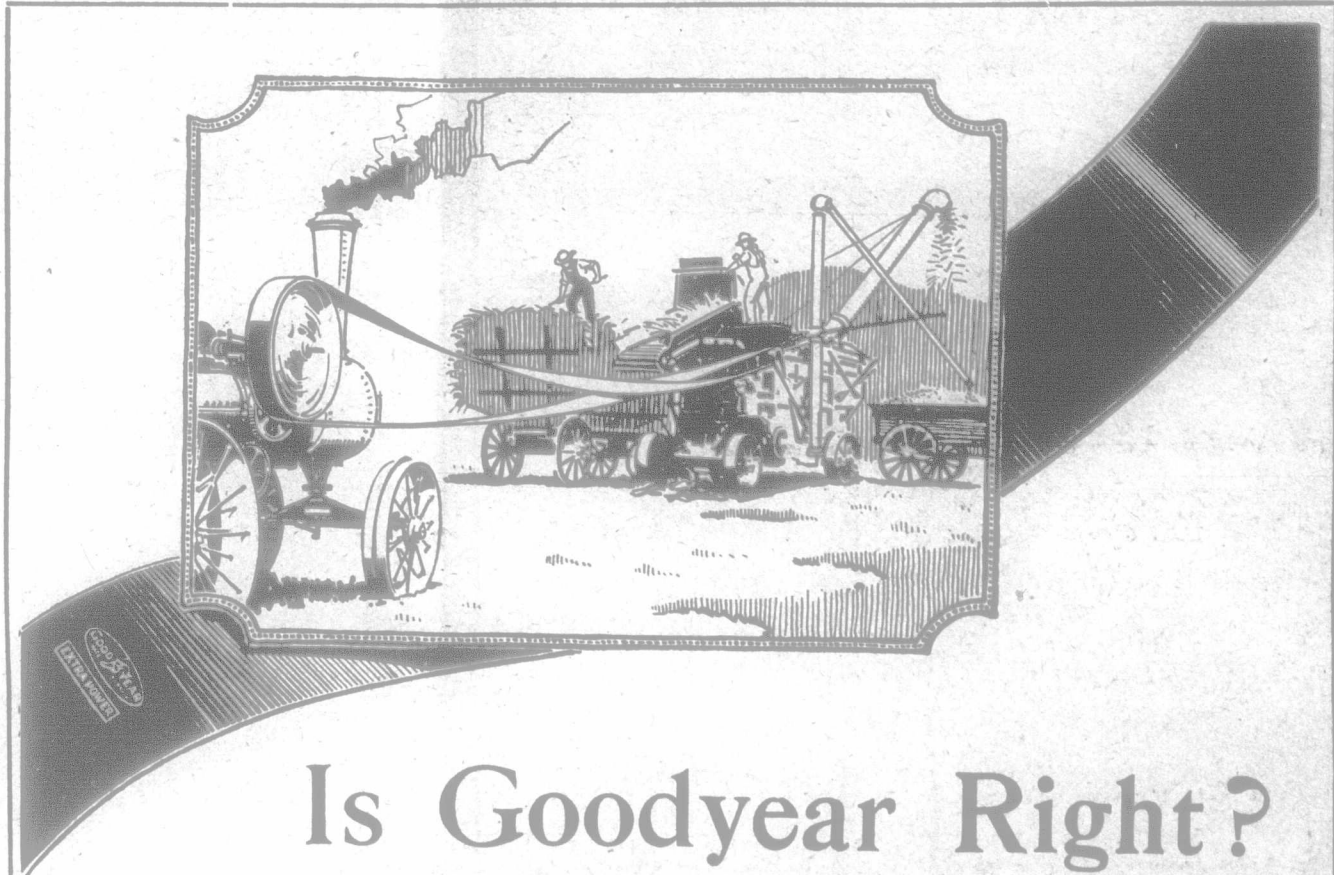
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Is Goodyear Right?

Why should we advise farmers to buy the most costly belt we make?

Certainly it is going against custom.

What was always sold, and is still generally offered as "agricultural belting" is low priced.

Farmers have bought it for years. We have sold it.

Then why do we urge farmers to buy "Extra Power Belting," the highest grade Goodyear belt?

Because, there is no reason why a farmer, who gives a belt harder usage than anyone else, should buy one that will not give him the very limit of service.

Because a farmer needs a better quality of belting than any other class of buyer.

Because we know he won't get the best service from ordinary "agricultural belting."

Because we know he *will* get the best value for his money and the best service, from Extra Power Belting.

What difference is there between a poor belt and Extra Power?

The main difference is in the rubber protection.

Extra Power is made the way you would make a belt yourself.

Now if you were making a belt you would see that enough high-grade rubber was used to protect the cotton. You would see that it was forced through the layers of cotton until the whole became a solid pliable mass. You would make that belt so strong that it would resist the roughest outdoor usage a belt gets on the farm. You would use the same kind of cotton we do in "Extra Power"—25 to 50% stronger than is ordinarily used.

That's the kind of belt you would make and it would be a mate for the Goodyear Extra Power Belt.

Then is not Goodyear right in recommending that you buy Extra Power Belting?

Next time you buy a belt, pay a little more and get "Extra Power." Demand it by name. Your implement or hardware dealer has it or can get it for you.

If you have trouble securing genuine Goodyear Extra Power Belting, send your order to us and we will fill it.

The Goodyear Tire & Rubber Co. of Canada, Limited
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MADE IN CANADA
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"Canada's Largest Dairy" TORONTO

More Milk Wanted

City Dairy, Toronto, offers a steady, attractive market to a few more shippers who can start at an early date and who can produce and ship milk through the Fall and Winter.

On account of the continuous growth of City Dairy our present requirements call for

Another 150 Cans a Day

and our prices at Union Station, Toronto, are:

July.....	\$2.95 per 100 lbs.
August.....	3.01 per 100 lbs.
September.....	3.01 per 100 lbs.

Fall and Winter prices will be announced later. Last year's price was \$3.33 per 100 lbs. at Union Station.

Shippers must have clean, sanitary stables and milk houses.

In making application, please state how soon you can start shipping, and what your shipments will be approximately during the Fall and Winter months.

Please answer this advt. to-day if you want the advantages of the best city market, as our shippers' list is quickly filling up.

CITY DAIRY CO., Limited

Spadina Crescent, Toronto



Where the Good Milk and Ice Cream come from



After Sunday Dinner—

PASS a box of Chiclets while the family is still sitting around the table. These candy-coated dainties are a splendid wind-up to a good meal. And the peppermint aids digestion.



Keep a box of Chiclets always in the house. Take a packet with you to the fields. When you're hot and dusty you'll find Chiclets a good thirst-quencher.

Get the dollar box containing 20 packets. Each packet holds ten Chiclets. Sold everywhere.

MADE IN CANADA

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CANDY COATED GUM

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LONDON, ONTARIO, JULY 24, 1919.

1400

EDITORIAL.

Hot weather means greater danger of sour milk on the dairy farm. Cleanliness and quick cooling will go a long way to minimize loss in this direction.

Apparently the acreage of beans is much smaller this year than usual. Crop areas which fluctuate widely from year to year can only be prevented by some method of stabilizing the marketing of the crop.

The R-34 is an airship of some considerable size, but we read that others are being built several times as large. What would the big monsters of pre-historic ages think of this?

Nova Scotia promises close to a million-barrel apple crop this year. It is to be hoped that control prices in Great Britain will not be so low as to prevent profitable export for the Maritime grower.

With plenty of assurance that eggs will again be high priced this fall and next winter, those who look after the farm flock should see that the poor hens are culled out, and that the pullets have every chance

Wheat cutting at Weldwood Farm this year was eighteen days ahead of last year. With a big crop of hay and an early harvest, farmers certainly need to use their time to advantage.

The Canadian Council of Agriculture believes some steps should be taken by the Government to stabilize the market for the wheat crop of 1919 in Canada. The Government was prompted continually during the past session to do something of the kind, and it is to be hoped that no unnecessary delay will be indulged in.

Farmers in many parts of Western Canada are looking forward to the harvest this year with faint hope of a profitable crop. Improvident use of soil and moisture, and the absence of mixed farming with live stock, are showing up to the disadvantage of Western agriculture.

Few farmers realize that in a normal year Toronto market for alsike clover seed controls the world's market. The production of red clover seed is likewise becoming popular. Care should be taken, therefore, to ensure a product that will grade high and maintain the reputation of our seed.

Hogs at \$23.40. No doubt our forefathers looking down from the twentieth plane, are green with envy. But then they didn't have even a bowing acquaintance with the High Cost of Living—or the high cost of production either—so, perhaps, they are just as well off where they are.

The farmers of Canada have refused to attend the National Liberal Convention in August. It is unfortunate that farmers should ever have been forced to enter the political field as an organized body in order to get proper representation, but since it has seemed necessary, independence of party affiliation is the only way by which misrepresentation can be avoided.

A correspondent from Northern Ontario writes somewhat critically of the methods of colonization followed in the Northland. That country, particularly the Timiskaming district, from which the complaint comes, is a rich mine for the farmer, but it should be remembered that it excels in the production of farm roughages, even corn maturing better than one would expect. Live stock, therefore, should have the premier place in the agriculture of Northern Ontario.

Agricultural Prosperity

What has been the effect of the war upon agricultural prosperity? Almost every branch of business has shown greater prosperity, attended by larger profits, during the war years than before. Large profits from various industries are being constantly reported, but no one has yet been able to show that the farmer is exerting any undue influence upon the cost of living. It would be strange indeed, if, with food so urgently needed and farm help so greatly curtailed, increased efforts should not have been attended by increased profits from the farm during the unprecedented period from which we are now emerging. But it is easily possible to greatly exaggerate these increased returns, because it is by no means probable that all farmers benefited from them. Moreover, so far as farm surveys have progressed in the Province of Ontario, they go to show that on hundreds of farms of the smaller and more common sizes the labor income has advanced from less than a living wage to the wage of a farm laborer. Thus, even yet the business ability of these farmers is not rewarded adequately, although it is, no doubt, rewarded proportionately to the scale of profit from farming.

A recent publication of the Carnegie Endowment for International Peace, covers the effect of the war on the agricultural prosperity of the United States in a rather voluminous manner, and the material therein presented would appear to show that farmers in the neighboring republic reaped a greater degree of prosperity from the war than did our own farmers in Canada. The extent to which labor figures in the cost of production is well known, and it is stated that, "since 1914 the expenditure for labor has increased about 33 1/8 per cent." We are also told that the weighted index for the prices of crops in 1918 is 111 per cent. above that of 1915, while of 94 articles purchased by farmers, only 5 cost more than twice as much in 1917 as they had cost in 1914. With further reference to the 94 articles, we are told that the product of an acre would buy as much in 1917 as in 1914, except of seven articles, namely, lard, calico, muslin, carbolic acid, Paris green, hemp rope and binder twine. Reading still farther we find that, "Everything considered, it is safe to say that the farmers are making money faster than they ever did before," but this apparent indication of unparalleled prosperity is qualified by the fact that, "In the case of those who habitually pay out for living expenses about all of their income, the situation has changed very little. The man who just made a living before the war can just make a living now." The author, who is Professor of Agricultural Economics in the University of Wisconsin, is fair enough to concede that "the added profits are on a rather precarious foundation," even though he does think them real for the United States farmer.

When prices for farm products show proportionately higher than the prices of the farmer's purchases, the net result is by no means added profit for the farmer. Labor must be available to enable the farmer to utilize his land most profitably, or, failing this, he must have sufficient capital to invest in labor-saving machinery. In the latter case his farm must be large enough to warrant the extra expenditure, and when all is said and done, transportation and marketing facilities must be such as to enable him to realize the full value of his product. Few people know what it costs to produce farm products, but if it costs 12 cents per pound to raise a two-year-old export steer weighing 1,200 pounds, or \$18 per hundred to produce pork, or 60 cents per pound to produce butter from milk testing 3.8 per cent. fat, or \$2.50 per hundred to produce milk, there is not much hope for a quick rise to wealth from the farms. These estimates are the best that we have, and were recently given before the Cost of Living Committee by prominent agriculturists. The effect of the war on agriculture in Eastern Canada has been to awaken

the co-operative spirit, to key up the individual to a better utilization of labor and machinery, and to force a greater degree of business judgment, rather than to add appreciably to the labor income of the farmer.

Save The Straw

A comparatively lean year very often follows one of plenty. Last year there was an abundance of straw the Province over, and in most districts hay was a satisfactory crop. Straw stacks or piles were seen in most barnyards. Naturally, much of the straw that would make good feed, were it needed, was tramped into manure in the yard. This year the prospects for spring-sown crops are poor, and many farmers have a limited supply of hay. As the stockman must depend to a large extent on the roughage which he produces on the farm, in order to secure economical results with his stock, it is necessary to save the straw in as good a condition as possible this year. In a good many districts the extremely wet weather in the early spring, followed by a prolonged drouth, has rendered the crops in many fields almost nil. Where possible the straw should be kept in the barn, as unless it is particularly well stacked it will deteriorate with the coming of the fall rains. No farmer can afford this year to take chances in leaving the straw pile exposed to the rain. Every bit of straw will be needed before next spring to carry over the herds. If one is fortunate enough to have a surplus of straw, there is no doubt but that there will be a good market for it, and, if not, it may be used in the ration to save hay, so that that fodder may be sold to help out some less fortunate neighbor. The custom throughout Ontario is to fill the barn with the sheaves, and then blow the straw into a heap in the yard. It is next to impossible to make a rain-proof stack when the straw comes from the blower. In order to offset this method of handling straw, farmers in some districts thresh direct from the field and blow the straw into the barn. This saves a good deal of labor in the way of mowing away the grain and then pitching it out to the machine again. If neighbors would co-operate, the machine could move from farm to farm, and first the wheat and then the oat harvest finished up in the neighborhood. This method would permit of considerably more time in the fall to get the necessary work done. In a rainy harvest season, this system has its drawbacks. However, if weather permits, it is a means of expediting the harvest, and of retaining the quality of the straw.

Oat straw is the most nutritious, with barley standing next in the list. If the oats are cut a little on the green side, the straw will have a higher feeding value than if left until dead ripe. It is not well, however, to cut too green, as this will decrease the weight of the oats. Good oat straw or wheat chaff can be used to advantage in wintering cattle, or idle horses, and a considerable amount may enter into the ration of the dairy cow or the fattening steer. Mixed with roots and silage, its palatability is increased. Wheat straw has the lowest feeding value of any. It is very fibrous, thus it is advisable to save it for bedding, leaving the more nutritious straw for feed.

If it is not practicable to thresh from the field and keep the straw indoors, plan on building as good a stack as possible, so that the fall rains will not penetrate to the centre. If threshing is delayed until after the fall rains, the straw blown out in a loose heap does not deteriorate in quality very much before the winter sets in. Where it is found necessary to blow the straw into the yard at the time of threshing, some have immediately run it through the cutting-box and blown it back into the barn in the space previously occupied by the sheaves. Save the straw in as good a condition as possible. Roughage will be none too plentiful this winter.

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 Journal,"
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.—25 cents per line, agate, flat. Live-stock advertising rates given on application.
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THE WILLIAM WELD COMPANY (Limited),
London, Canada.

Exhibit a Sheaf.

Between seven and eight thousand farmers competed last year in standing field crop competitions in the Province of Ontario. About three hundred fall fairs are held annually in the Province, and there are few farmers indeed who are not reached by one or more of these fairs. The same good work is being carried out in other provinces, and much valuable aid being given to agriculture thereby. One of the best features of the work of agricultural societies is the standing field crop competition, the principal object of which is to improve the quality of seed grain produced in the Province. Competitions are held with spring and fall wheat, oats, barley, rye, peas, flint and dent corn, potatoes, alsike and red clover, alfalfa and beans. The principal competitions are among the cereals, and it is not too much to hope that, with steady progress in the direction of standardized varieties, eliminating those of no special value, the quality of seed grain in Ontario can be very materially affected.

The popularity of these competitions, and the good that can come from them in each fall fair district, can be increased very materially if the prize-winners in the competition are urged and encouraged to exhibit sheaves and samples of grain from the winning fields. At the last annual meeting of the Ontario Association of Fairs and Exhibitions the matter of sheaf exhibits was very thoroughly discussed. Considerable opposition developed to the proposal to make sheaf exhibits compulsory, but a motion to this end finally carried unanimously. If both sheaves and grain could be exhibited, the educational effect of the competition would be still greater, but it frequently happens that threshing is not completed at fair time, and compulsory grain exhibits seem, therefore, to be a practical impossibility. Some enterprising societies have partially overcome this difficulty by holding spring seed fairs where the grain is exhibited, but valuable as these are, we do not see that they will set forth the educational value of the standing field crop competition as well as where both grain and sheaves are exhibited at a fair following shortly upon the conclusion of the competition.

Every competitor in a competition of this kind should be willing to put his grain on exhibit at the local fall fair, especially if he was a winner. To increase the quality of seed grain of any description in a district is distinctly to the advantage of every farmer in it, and winners in competitions will be doing something that

is in their own interest when they exhibit both sheaves and grain if possible. Others who may have taken but little interest in the competition, or in the whole question of good seed, will be drawn to a consideration of the matter by the sight and examination of an attractive sheaf display from the winning fields. No man should consider his time lost if by exhibiting a sheaf or grain from a winning field, he can assist in interesting even one of his neighbors in the matter of good seed. Next to the improvement of live stock, the increase of crop yields offers the best method of increasing the labor income of the farm. Bear this in mind and, when fall fair time comes, exhibit a sheaf. If the grain can be threshed in time, show the grain too. You owe this as a duty to your local fair.

Nature's Diary.

A. B. KLUGH, M. A.

One evening at the end of June we walked out from Malpeque, P. E. I., to Royalty Point. This point projects out into the Gulf of St. Lawrence, and forms the boundary of the upper part of Richmond Bay.

On the way out we came across a pair of Purple Finches, and saw the brilliantly colored male give his dull plumaged mate a particularly tempting morsel in the form of a nice juicy little caterpillar. The male of this species is carmine-red, brightest on the head, breast and back, and has a rich warbling song which he rolls forth without any sign of exertion. From the fields on either hand the predominating song was the grasshopperlike trill of the Savanna Sparrow, while from the spruces, which in many places fringe the roadside, came the heavier trill of the Junco.

The Point is of somewhat peculiar formation, consisting of sandstone rocks the water-level, a deep layer of the characteristic red soil above this, and on top of this are rolling fixed sand-dunes, which are held fairly well in place by the growth of the Sand-binding Grass, (*Ammophila arundinacea*). At the extreme outer edge the soil of the point is weathered into odd rounded ridges, with gullies between them, a formation which reminds one quite forcibly of the "bench-lands" of the Thompson River in the Dry Belt of British Columbia.

Looking out from the Point we saw long sand-bars on which the breakers were rolling in,—a wall of white water several feet in height, rolling in with a roar which was audible at a distance of several miles inland. Connecting with the long bar to the west is a long chain of islands, which are connected by sand-bars that are bare at low-tide and which run for some twenty miles, closing off the mouth of Richmond Bay. According to local testimony the topography of the outer coast has changed a great deal in the past sixty years. Many years ago there was a chain of islands with comparatively deep water between them, but the sea has cut away the narrow parts of these islands, has probably cut some of the islands away altogether, and has converted their soil into sand which it has now built up into bars and into sand-dunes on the newly-formed low islands.

Along the mainland, at the west of Royalty Point, is a very gradually-sloping sandy beach, and on this beach are thrown up various things which give us an indication of the life which exists on the rocks of the bottom and in the sand below the level of the lowest tides. One of the most prominent features of this marine life are the larger seaweeds. Some of these are Red Algae, that is seaweeds in which the coloring matter is red, but the great majority are Brown Algae, in which the coloring matter is brownish or olive-green. To this latter group belong the "Devil's Aprons"—huge algae with stout round rubber-like stalks, often several feet in length, and broad leaflike blades up to twelve or more feet long. They grow attached by rootlike hold-fasts to rocks in fairly deep water, and are torn loose and cast on the beach by storms. To the same group belong the Rockweeds (*Fucus*), branching plants with inflated, cone-shaped organs, which bear the spores, at the tips of the branches. Less conspicuous, but really more abundant, are many other species of smaller Brown Algae, some fine and feathery, others cylindrical, solid and cordlike. One of the common Red Algae, a species with rather thin, leaflike blades, is known as Dulse and is dried and used as food.

Most conspicuous of the animal forms cast ashore are the shells of various species of marine clams—the heavy-shelled "Quahogs", and still heavier-shelled "Deep-sea Clams," some of the shells of which attain a size of six inches by four inches. Most remarkable of the clams is the Razor Clam, a species with long, narrow, thin valves which bear a strong resemblance to a closed razor. Crabs, sponges, whelks, sea-snails and the remains of many species of fishes were to be found on the beach at Royalty Point.

From the point we watched the sun slowly sink below the horizon, casting a red glow on the little waves which gently came in and receded on the shallow sandy shore, and tinged with rose the feathery clouds above. After the sun had set the yellow of the early after-glow, with the white points of light which marked the light-houses twinkling against it, the deep purple-blue of the sea, the white of the breakers on the bar, and the red cliffs, made a picture worthy the brush of a great artist.

On our homeward way, in the semi-light of the after-glow, as we passed a swamp we heard the call of the American Bittern—"ker-plunk—ker-plunk—ker-plunk," the call so greatly resembling the sound of driving stakes that it is no wonder this bird is often called the "Stake-driver."

A Hint About Progress.

BY ALLAN M'DIARMID.

As we write this, reports are coming from the West that are of what we might call "a disquieting nature," and it looks as though our brother farmers of Saskatchewan and Alberta were going to get another chance this year to show what kind of stuff they are made of, and to give an exhibition of their ability to stand misfortune, even when it comes on the heels of previous hard luck. Dry weather and hot winds can make the best of prospects in the spring turn to a pretty discouraging outlook before the summer is over. Of course, in provinces as large as those in the Canadian west, conditions are not the same for all, but it is pretty certain that a good many of those that had a crop failure last year are going to go through the same experience again this year.

I have in mind one young farmer who sold out his holdings—down east here and went to Saskatchewan to pick up some of the "easy money" that he understood to be lying around there. He settled about forty miles from a railroad, with the hope that a branch line would soon be built within a reasonable distance, possibly through his place. But plans have been changed, and he is still forty miles from that road, and apparently there is "nothing doing" in railroad building in that part of the country for a decade or two yet to come.

There is a good deal to admire in these pioneers, as we might call them, of our Western Canada provinces. They are the gamblers with Fate, the real "sports" in our agricultural world. The rest of us who have stayed at home on the old place that came to us by way of father and grandfather, have been playing safe and taking no chances. We sow a little of this and plant a little of that, we keep a few cows and enough horses to do our work. We raise a pig or two, and maybe a couple of dozen hens. A sort of "ham and eggs" combination that insures us against starvation. But when it comes to playing the game for all there is in it we're not there. The undertaking is too risky. Too much worry about it.

But our farmer of the West is generally the man who has decided to make big or lose everything in the attempt. He's ready to risk everything on one throw of the dice. If his credit is good he will borrow money to the limit to increase his acres, and his stock of horses and machinery. If there is an optimist anywhere on earth it is one of our prairie province farmers, as I have known them. This persistent cheerfulness may, at times, lead them into some rather foolish ventures, but it would seem to be a very pleasant state of mind to be in, at any rate.

It would be a great thing if we could combine these two natures. The typical Westerner probably needs some of our carefulness and conservatism. He might then see the wisdom of not having "all his eggs in one basket," and get, more quickly than he is doing, into some system of mixed farming that would be a guarantee of the permanence of his agriculture, and at the same time, an insurance against complete failure and extreme hardship in the case of those depending on him for the means of living.

It is pretty hard to imagine any method of farming that can be carried on indefinitely without returning to the soil something to make up for that of which we have been robbing it. Commercial fertilizers are expensive, and not altogether satisfactory unless used in connection with stable manure. So the logical conclusion is that it must pay in the long run to keep live stock, if for nothing but the maintaining of the fertility of the soil. Getting without giving is contrary to all Nature's rules. It simply can't be done indefinitely. And this is where it is evident that the average grain farmer in the West is on the wrong track. I have seen some pretty ragged looking grain crops in this old Province of Ontario, but I never saw anything here that would compare for what one might call real failure with some of the grain fields of the Canadian Northwest. Here is where a little of our Eastern "slow but sure" character would mix well with get-rich-quick tendencies and methods.

On the other hand, there is a chance that we might take a leaf out of their book with some little advantage to ourselves. What progress the human race has made never came to us by way of travelling in the footsteps of our ancestors. We've got to be on the lookout for something better than they knew and be ready to take up with it, if the object of life on the earth is to be accomplished. The pioneer in all countries, and at all times, is a progressive by instinct, and the only trouble with him is his tendency to go to extremes, as noted in the case of the Western Canada farmer. Avoid this fault and we get the ideal condition of things. To be conservative enough to retain what is of good in the old, and to be progressive enough to instinctively see what is of value in the new. This is a creed that might be adopted with advantage by any of our political parties, but it is particularly suited to the case of the private individual who, in general, came into this world with the natural tendency to be either a stick-in-the-mud opponent of all change and progress or else a regular Bolshevik. It's hard to say which of these two extremes are doing most to hold the world back at the present time.

We only bring them up, however, as an example to be avoided by those of us who are in the farming business, and who find ourselves troubled with the natural inclination to go either too fast or too slow. One seems to be as bad as the other. The first generally ends in a smash-up, and the last finally comes to a dead stop. Neither get anywhere.

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THE HORSE.

Keep the collar fitting properly if the horse is to work in comfort.

Watch the shoulders during hot weather. It is easy to cause a sore but more difficult to heal it. The top of the horse's neck should also be watched.

Keeping the wagon wheels greased and the implements in use well oiled, lightens the draft on the team. The good teamster always looks after the comfort and well being of the dumb animals in his charge.

Neglecting to tie the team when left standing while the teamster goes for repairs, a drink, etc., has resulted in more than one run-a-way, causing damage. Even the quiet horse may take fright and run. Never leave the team standing untied and unattended.

Some teamsters give little thought to their teams. Only recently we saw a team tied for over an hour to the south side of a barn where the heat was intense. There was a shady, breezy spot only a few rods away where there was a good hitching post where the thinking, considerate man would have left his horses. Always tie in a cool place when possible.

Weaning the Colt.

It will not be long before the foal can be weaned. The exact age at which wean a colt depends upon conditions. If the foal, or the dam, is not doing well it should be weaned comparatively early. When the dam is required for work on the farm, it is not well to leave the colt with her too long. On the other hand, however, if the mare is not needed for work and she is feeding her colt well, they might be left together until well on in the fall. If the colt has been fed a gradually increasing amount of grain as it developed, it is not likely to suffer any serious setback when weaned, as it will have learned to look after itself pretty well. It is a mistake to wean the colt before it is eating a considerable quantity of grain. When weaning, the colt should be placed in a stall where it is impossible for it to injure itself, and where it cannot hear its mother; otherwise it may do considerable fretting. After a few days separation both the dam and the colt become used to the new condition. Care must be taken that the mare is properly dried off. This may necessitate the reducing of the grain ration, and milking out the udder occasionally will be necessary.

Good bone and muscle are of prime importance in the horse, and these may be developed by feeding the proper ration. The legume hays, such as alfalfa and clover, are rich in lime—a mineral which is a component part of the bone,—therefore it is well to include one or more of the legumes in the ration. Wheat, bran, linseed-meal and oats make a very good concentrate ration, and these will help to develop muscle. Henry, in his book on "Feeds and Feeding," writes: "The young horse which is not developing the proper skeleton may be fed substances especially rich in phosphorus and lime, such as two or three ounces daily of tankage containing ground bone, or one ounce daily of ground bone, ground rock phosphate, or precipitated calcium phosphate." A stunted colt does not grow into the big, strong, well-proportioned horse. If there is to be any economizing in feed, let it be in the wintering of the old horses and not by any means with the colt. Keep the colt in good flesh and thrifty. The first fall and winter are very important.

Too many do not find time to handle the colt. They allow it to grow up, and then educate it for the bridle, harness and work in a week or two. If the young colt was handled and taught to stand tied in the stall, to be led, bridled, harnessed, and his feet looked after, he would be much easier to handle as a three-year-old, and would do better work for his master. It is unreasonable to expect a high-spirited colt to submit peacefully to the bridle and harness, and to know how to work, when it has had its freedom and its own way until it was three years old. The colt does not forget its first lessons, consequently care should be exercised in handling it.

LIVE STOCK.

Market Receipts for June.

There was a heavy run of cattle and hogs on the various Canadian markets during the month of June. It was considerably heavier, except at Winnipeg, than for the same month a year ago. Of the 20,059 cattle passing through the Union Stock Yards, Toronto, only 1,623 were graded as heavy-finished steers, and heys old at a top price of \$15. Good steers weighing from 1,000 to 1,200 lbs. numbered 3,415, with the top price at \$14.50. A similar number of steers running from 200 to 300 lbs. less were sold at from 50 to 75 cents per cwt. less. A considerable number of heifers and cows were sold, and veal calves reached a total of 7,364, selling at \$19.50. On the Montreal market there were 9,743 calves, with a top price of \$15. Comparatively few of the other grades of cattle were marketed. The receipts for hogs at Toronto were 30,298, as compared with 21,683 a year ago. The price went as high as \$23.50, or \$3.50 per cwt. more than it was in June 1918. The run of hogs on the Montreal, Calgary and Edmonton markets was comparatively light, but at Winnipeg there were 16,730 passed through the yards as compared with 23,051 in June a year ago. Less than 10,000 sheep were sold on the six leading Canadian markets; Toronto led with 4,158.

Diseases of Swine.—Con.

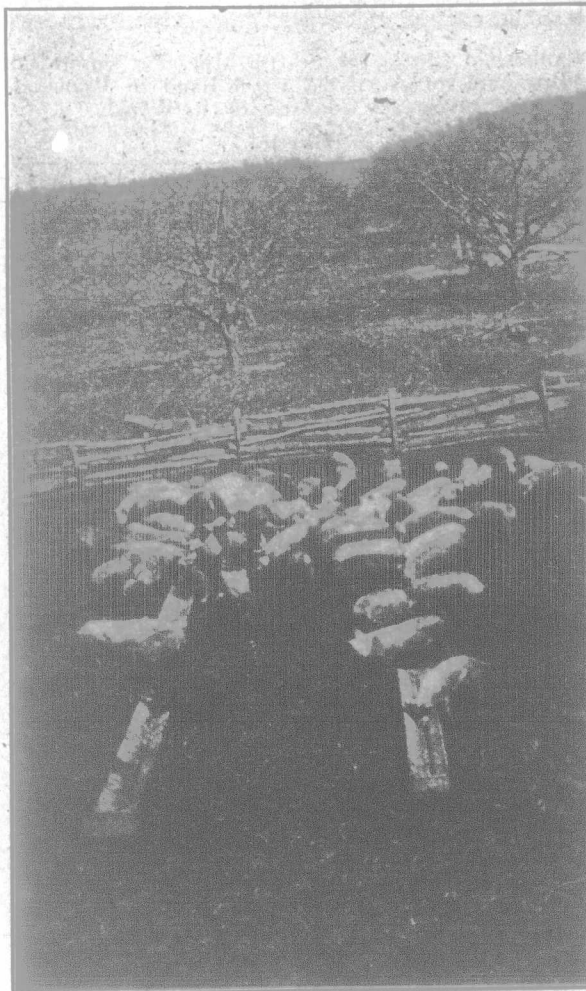
Diseases of the Stomach—Indigestion.

Like practically all animals, the pig is liable to derangement of the stomach. If fed for a long time on one kind of food it is liable to suffer from indigestion, loss of appetite, dullness and loss of flesh. In order to keep pigs in good health it is necessary to give a mixed diet, supply comfortable quarters, and see that a reasonable amount of regular exercise be taken.

Symptoms of Indigestion.—The appetite becomes more or less impaired, sometimes entirely wanting; in other cases there appears to be a craving for stuff that they would not consume in health; they come to the trough, take a few mouthfuls, then cease eating; in some cases the patient presses his nose against the ground or other solid substance, and may whine or squeal. In some cases the patient vomits a thin, sour-smelling liquid mixed with a little partially masticated food. The bowels may be constipated, or there may be semi-diarrhoea.

In chronic cases a cough is sometimes noticed, and the patient apparently suffers from brain trouble, becomes giddy, staggers and falls down; in young pigs it often causes fits. An animal in this condition, of course, will not thrive, usually loses flesh, becomes emaciated and tucked up in the abdomen.

The usual causes of indigestion is high feeding and want of exercise; feeding too largely on one kind of food, or on food of poor quality. Pigs that are fed on a mixed ration of food of good quality in reasonable quantities, provided with comfortable, well-ventilated quarters,



Shoats Growing Into Porker.

which are kept clean, and allowed regular exercise, seldom suffer from stomachic diseases.

Treatment.—If constipated, give 1 to 2 oz. of raw linseed oil or Epsom salt in solution. It is good practice to add to the purgative (especially when Epsom salt is given) about a teaspoonful of ginger, as it tends to prevent griping.

If diarrhoea be present, and the patient be still strong with reasonable appetite, it is good practice to give ½ to 1 oz. of castor oil. If diarrhoea still be present in 18 to 20 hours, efforts must be taken to check it. For this purpose it is probable that laudanum gives the best results, 10 to 20 drops (according to size of patient) in a little sweet milk should be given every 5 to 6 hours until diarrhoea ceases.

A few words re the necessity of extreme caution in administering liquids to swine may be wise. The pig is one of the hardest animals to drench with reasonable safety. Of course, the head must be elevated until the mouth is on a higher level than the throat. In order to do this it is necessary to get a rope with a slip knot around the upper jaw, posterior to the tusks, and get an assistant to hold this with the head at the proper elevation. The animal, in mostly all cases, continues to squeal, and, of course, when squealing the epiglottis is open, and fluids passed into the mouth pass down into the pharynx, and a greater or less portion enters the larynx, passes down the windpipe, enters the bronchial tubes, and causes serious trouble, and often death in a few minutes. The safest method of drenching pigs is to put the liquid in a bottle, and then press over the neck of the bottle one end of a piece of rubber hose 8 to 10 inches long. The attendant elevates the patient's head, and the operator inserts the free

end of the hose into the side of the mouth between the molar teeth. The pig now commences to chew the hose, and in doing so draws the fluid out of the bottle and swallows without danger. Some place the top of an old long boot or other contrivance in the mouth and carefully pour the liquid into this, but the hose gives better results.

Gastritis (Inflammation of the Stomach.)

This is usually caused by the consumption of indigestible food that sets up irritation, or by irritating medicines.

Symptoms.—Vomiting, well-marked pain, restlessness, the patient moving from place to place continuously and occasionally squealing, refuses food, but may be quite thirsty. The substance vomited will be first the ingesta contained in the stomach, followed by bile and mucous, often tinged with blood. The nose is dry and tongue coated with a whitish fur, bowels usually constipated. The animal breathes frequently; skin dry, urine high colored, and sometimes there is a dry, hard cough.

Treatment.—If possible discover the cause and remove it. If it be from the administration of any acid preparation, give 1 to 2 dessert spoonful of baking soda, or 2 to 4 oz. of lime water. On the other hand, if the trouble be caused by an alkali give ½ to 1 oz. of vinegar in a little cold water, and repeat either dose every 2 or 3 hours as long as necessary. To ease pain and check a tendency to diarrhoea, the patient should be given 15 to 20 drops of laudanum, or 1 to 2 grains of powdered opium. If from indigestible food give 1 to 2 oz. castor oil, and if pain be great give laudanum as above. Allow the patient all the cold water it will take, after the acute stage has passed, the animal should be given a little new milk several times daily. Care must be taken to not allow much food for a week or ten days, a little soft food as milk and a little oatmeal and boiling water mixed with milk gives good results.

Whip.

Calgary Exhibition.

The Calgary Summer Show, held early in July, was a decided success in spite of the poor crop prospects. Exceptionally large crowds attended the exhibition and enjoyed the splendid program put on by the management. Outside of the live stock, Sousa's celebrated band attracted a good deal of attention. The classes in live stock were well filled, making keen competition. There were very few tail-enders in any of the classes, as the entries were of good breed type and conformation, and were well brought out. J. A. Watt, of Salem, and L. O. Clifford, of Oshawa, were two Ontario breeders which were successful in capturing a portion of the honors.

The Percheron classes were possibly the best filled of any of the horse classes, and Dean Curtis, of Iowa, had his work cut out for him in placing the awards. No less than ten competed in the aged stallion class, with Joe Silver, from W. H. Devine's stable, in first place. The champion stallion was found in the three-year-old class in Olbert, shown by Geo. Lane. The female classes were strong, and E. A. Davenport secured first place in the aged mare class, and also won the female championship on Brilliantine of Acme. There was a large number of exhibitors in Clydesdales, but only four entries appeared in the aged stallion class. The outstanding winner was Bonnie Woodside, shown by Massie Bros. He also won the championship. A number of neatly-turned, clean-going, flinty-boned females were shown in the various classes, and the grand championship went to Ruby Rose, the entry of Thorburn and Riddle.

H. Bellows, of Missouri, made the awards in the Shorthorn classes, and animals well known to Ontario breeders confronted him in the various classes. J. G. Barron, of Manitoba, and J. A. Watt, of Ontario, gave a stern battle to the Alberta herds. Lancaster Lord, shown in the Ontario show circuit last year, was first in the aged bull class and was also made grand champion, with Star of Hope, from the same herd, as junior champion. In the two-year-old bull class J. A. Watt won first with Gainford Sultan. He also won the first honors in the junior yearling class with Gainford Monarch. Competition was particularly keen in the female classes. In the older animals, Barron was successful, although Bowes won the four-year-old class. There were eight entries in this class, and Duchess of Gloster 79th, owned by Watt, was crowded down to third place. Gainford Belle, from the Ontario herd, moved into second place in the two-year-old heifer class, Cicely's Gem, from the Manitoba herd, taking the first honors. Diamond Beauty, a heifer of rare quality and conformation shown by Watt, was the undisputed winner in the junior yearling class. She has a back like a table and carries herself with great style. In the junior and senior calf classes, the Ontario herd was well to the fore.

L. O. Clifford, of Oshawa, was one of ten exhibitors in the Hereford classes. He was competing against such noted herds as Collicut's, Fuller's, Cook's and the Curtis Cattle Company, and that he stood well to the fore in most of the classes in which he exhibited speaks well for the quality of the herd which he has built up. Not only did he win in several of the male classes, but annexed the majority of the firsts in the female classes, and carried away the ribbon for grand champion female, with Perfection Lass 5th. The grand champion male was Gay Lad 16th, shown by Collicut.

The Aberdeen-Angus exhibit was the best ever seen in Calgary. J. D. McGregor, of Brandon, furnished keen competition to breeders of Alberta, Saskatchewan and Northern States. The grand champion bull was Plowman, shown by Kershaw of Oklahoma, and the grand champion female was Muskogee May 6th, also shown by Kershaw. The dairy, sheep and swine classes were well filled with animals of high quality.

Live-stock Resources and Opportunities.

BY P. E. LIGHT.

What has already been written in the previous two issues will serve as a fair idea of the condition of the live-stock industry of the Dominion up to and at the present time. Upon the already accomplished, Canada must, to a certain extent, build for the future. Due, however, to ambition to establish a self-supporting empire, new interest has been directed toward Canada, as a lively source from whence to draw a large portion of the necessary meats for consumption in the United Kingdom. Our opportunity there is not new, but is larger, less obstructed and of a nature such as it is our duty to fulfill.

Fortunately, being part of the new world, we have one tremendous advantage over competitors for British trade; namely, millions of acres of the most fertile soil in the world, an excellent climate for the raising of vigorous, well-doing live stock, a well-watered country and unbeatable cropping possibilities, and last but of much importance, transportation facilities which are in a position to meet the requirements of the situation. It is well, however, to emphasize the necessity of developing our prospective increased trade in meats through a chilled meat service. It is chiefly through this method that we may hope to most successfully compete with countries not so favorably situated with respect to the British market.

Our Unlimited Acreage.

We have now to consider a subject already introduced, that of our resources in land. Exclusive of the Northwestern territory and the Yukon, Canada has a total area of 977,585,513 acres, of which it is estimated that 358,162,190 acres are suitable and available for farming purposes. It is significant that not more than 30.66 per cent. of the available land is at present occupied. It may also be of further interest to know that of the land suitable for farming purposes in British Columbia, 11.23 per cent. only is occupied, in Alberta 18.27 per cent., in Saskatchewan 30.65 per cent., in Manitoba 49.5 per cent., in Ontario 39.32 per cent., in Quebec 35.69 per cent., in New Brunswick 42.34 per cent., in Nova Scotia 65 per cent., in Prince Edward Island 95.66 per cent. In a word, of all the total available agricultural land in Canada there still remains unoccupied and unimproved 69.34 per cent.

The improved land amounts to 48,733,823 acres. Comparing this with the estimate of land which could be made suitable for farming in Canada, 358,162,190 acres, it will be found that only 13.6 per cent. of the farm land in Canada is being utilized for farming purposes. There are also districts in the Northwest territories and in the northern parts of the eastern and middle provinces, the possibilities of which for agricultural purposes, especially for live stock, are tremendous. Practically one-third of the total land area of Canada or 1,196,803,280 acres are situated in the Northwest territories.

Acres of Available Farm Land.

Province	Available Land for Farming	Occupied Land	Balance of Available Land Unoccupied
British Columbia	22,618,000	2,540,001	20,077,999
Alberta	97,123,000	17,744,372	79,378,628
Saskatchewan	93,458,000	28,644,877	64,813,123
Manitoba	24,700,000	12,226,500	12,473,500
Ontario	56,450,000	22,196,140	34,253,860
Quebec	43,745,000	15,612,590	28,132,410
New Brunswick	10,718,000	4,538,001	6,179,999
Nova Scotia	8,092,000	5,259,800	2,832,200
Prince Edward Island	1,258,000	1,203,402	54,598

Presenting the case from another angle the number of occupied acres per head of cattle, sheep and swine, is as follows:

Occupied Acres per Head of the Present Live-Stock Population in Canada.

	Cattle	Hogs	Sheep
British Columbia	10.31	63.81	56.08
Alberta	10.49	29.49	53.42
Saskatchewan	22.39	54.95	13.48
Manitoba	16.37	42.96	89.38
Ontario	7.72	13.40	22.82
Quebec	6.47	15.65	16.28
New Brunswick	15.82	56.85	32.41
Nova Scotia	12.91	77.08	20.24
Prince Edward Island	10.88	29.48	16.47

Estimated Number of Live Stock Canada could raise upon Available Lands not now Occupied, by Provinces, if there were sufficient population to care for them. (Live Stock Population of Occupied Land used as a Basis for Calculation.)

Provinces	Available Land for farming not Occupied	Cattle	Swine	Sheep
British Columbia	20,077,999	1,947,429	314,652	358,024
Alberta	79,378,628	7,567,076	2,691,713	1,485,934
Saskatchewan	64,813,123	2,894,735	1,179,492	303,602
Manitoba	12,473,500	761,973	290,351	139,555
Ontario	34,253,860	4,437,028	2,556,258	1,501,045
Quebec	28,132,410	4,348,131	1,797,598	1,728,035
New Brunswick	6,179,999	390,644	108,707	190,682
Nova Scotia	2,832,200	219,380	36,743	139,930
Prince Edward Island	54,598	5,018	1,852	3,315
Total	248,196,317	22,571,414	8,977,366	5,850,122

This is the last of a series of three articles written by P. E. Light, of the Live-Stock Branch, Ottawa. Canada's position as a producer and exporter of live stock and live-stock products has been clearly depicted. In this article Mr. Light points out our live-stock resources and opportunities. At present our live-stock population per acre of arable land is very low compared with other countries. Although at a low point in production there are great possibilities. On the basis of some older settled countries, Canada should have millions of pounds of meat to ship to the British market. Read this article and note where Canada now stands, and where she may in the near future stand as regards live-stock production.

With this information before us the possibilities for future advancement in this direction are the more emphasized in the light of the comparisons indicated in the table below as regards the numbers of live stock in different countries per unit of area and unit of population. Canada will be seen as showing the smallest numbers of cattle from any angle of consideration, even showing fewer cattle per acre than the Argentine Republic.

Numbers of Cattle Per Square Mile, Per Capita, and Per Acre, of Available Farm Land in Principal Live-Stock Countries of the World.

	Per Square Mile	Per Capita of Population	Per Acre of Available Land
Canada	2.09	1.13	.029
United Kingdom	106.18	.264	.166
Argentina	22.12	4.688	.034
Australia	3.60	2.815	.005
New Zealand	16.93	1.736	.026
United States	21.00	.691	.032
Denmark	152.40	.830	.238
France	61.44	.320	.096
Germany	94.18	.308	.146
Belgium	13.10	.253	.020

	Per Square Mile	Per Capita of Population	Per Acre of Available Land
Canada	.97	.42	.001
United Kingdom	29.67	.07	.040
Argentina	3.08	.43	.004
Australia	.24	.16	.0003
New Zealand	2.96	.35	.006
United States	22.71	.67	.030
Denmark	127.25	.54	.190
France	21.46	.18	.033
Germany	12.48	.18	.010
Belgium	82.80	.38	.120

	Per Square Mile	Per Capita of Population	Per Acre of Available Land
Canada	.63	.25	.006
United Kingdom	277.37	.60	.350
Argentina	70.43	9.75	.110
Australia	26.69	17.46	.040
New Zealand	10.32	22.70	.010
United States	16.57	.48	.020
Denmark	46.01	.27	.070
France	78.24	.41	.120
Germany	16.26	.02	.020
Belgium	40.77	.08	.060

NOTE.—Figures for Belgium and Germany January 1st, 1913.

By way of comment upon the preceding statement there is one feature which appears as more than ordinarily significant. It is to be expected, of course, that Canada on the basis of per unit of area would compare unfavorably with other countries, particularly the older settled countries, such as the United Kingdom, Germany and Belgium. On the other hand, bearing in mind the congestion of population in these countries, it is remark-

able to note that, on the basis of per unit of population, the numbers of live stock in Canada make no very favorable showing. On this basis we are again at the bottom of the list as compared with such countries as the Argentine, Australia and New Zealand, these countries, as our own, representing the producing countries. The significance lies in the fact that while actually we are at the low point of production compared with other live-stock countries, potentially we have the greatest opportunity of them all, the very small numbers of live stock for so great an area of land suggesting our line of action.

Canada has a tremendous area of land suitable to live-stock production, that has not yet been occupied, and, furthermore, the land is fertile and moderate in price. From a productive acreage point of view, the Dominion has well recognized advantages over the other chief meat-exporting countries of the world.

According to the foregoing calculations, if our population were to increase to 25,000,000, and the ratio between rural and urban remain constant the same proportion of land occupied, we could anticipate a live-stock population as follows:

Cattle, 32,622,281 head; sheep, 8,902,870 head; swine, 13,267,048 head. With such an increase, and, considering that the exportable surplus remains in the same ratio, we could supply approximately 600,000,000 lbs. of bacon, 270,000,000 lbs. of beef and 48,000,000 lbs. of hams and pork.

We are moving in the right direction, for the live-stock industry of Canada is making steady growth under the influence of a marked turning from straight grain to mixed farming in the Western Provinces, while in the older parts of the country the scrub sire is slowly but, fortunately, surely disappearing. By ceasing the practice of exporting our good quality breeding stock, we should shortly be in a position, both quantitatively and qualitatively, to supply a generous part of the United Kingdom's import requirements of meat.

In addition to cattle imported as meat into Great Britain, we must not forget the 189,229 head sent to the U. S. A. last year. If a reasonable proportion were shipped for finishing in Great Britain, it would add a very great deal to the out movement.

Whereas the calculation did not consider any improvement in the quality or increased numbers per acre, there is undoubtedly the greatest immediate field in this direction, because every pound of extra finish on cattle being marketed means a gain without too great an amount of extra labor, and each additional animal per acre means added productive power to the soil.

Comparisons with the Argentine, New Zealand and Australia indicate that we can readily increase our numbers on the present acreage, and, further, it is absolutely necessary if we are to secure and hold a portion of the trade in the face of such competition.

During the fiscal year ending March 31st, 1918, Canada exported approximately ten per cent. of the normal annual beef requirements, and one-tenth per cent. of Great Britain's annual mutton requirements. Comparing the volume of our export meats in connection with our extensive land acreage, our vigorous climate, transportation facilities and comparative freedom from trust control, it is at once apparent that Canada's live-stock future is before her, and that the filling of a very large percentage of the meat requirements of Great Britain is something that we may well be able to accomplish within the next twenty-five years.

Canada exported less chilled and frozen meats during the period of the war than any country doing business in that class of meats. As Great Britain imports her meats in a frozen and chilled state, and as Canada's geographical position in relation to her overseas market makes a chilled meat service a necessity, it is imperative that we at once provide facilities for such a service.

The following table gives Great Britain's import requirements of meats during normal time. Surely we are in an excellent position to fill a large portion of the needs of the Motherland if we put forth the necessary effort.

Food Supply of United Kingdom.

Average of Five Years, 1909-1913, inclusive.

Commodity	In Pounds	
	Home Grown	Imported
Beef and veal	1,808,100,000	1,082,655,000
Mutton	650,034,000	408,340,005
Lamb	79,821,000	184,779,000
Bacon	176,400,000	511,830,569
Hams	44,100,000	102,050,749
Pork	670,320,000	74,914,560
Meat Offal	13,230,000	
Poultry	90,405,000	30,780,000
Eggs (dozen)	191,554,954	191,554,954
Butter	251,370,000	456,435,000
Cheese	66,150,000	257,985,000
Margarine	132,300,000	129,213,000
Condensed Milk		121,716,000
Lard	198,450,000	198,450,000
Pork and Lard	890,820,000	887,245,878

It is not likely that the United Kingdom will require as heavy a volume of imported meats as before the war, owing to the progressive domestic policy pursued under the shadow of starvation during the years of 1917 and 1918. Her requirements will, however, still continue tremendously heavy. Word from representatives of Canadian agriculture in the United Kingdom indicates that there exists a particularly favorable outlet for

bacon, pork, butter, cheese and eggs. A glance at the first item in the preceding table shows that the largest imports into the United Kingdom are of beef. Here quality is our check. We need a large share of the billion pounds of beef trade. A united effort and individual progressiveness make its attainment possible.

To Establish Economic Equilibrium.

As a young country, growing rapidly in importance in relation to countries which have long passed the spring-time of their development and now depend upon the newer world to supply the needs they have learned cannot be economically produced by domestic endeavor, it is incumbent upon us to look well to the order of our going. Not the farmer alone, but all classes of the people who make up the human population of Canada will do well to weigh and consider soberly, and with care, our outstanding national assets upon which we may in future expect to realize. The question affects the common-weal, for proof against contradiction is the statement that agriculture and every other class of industry has an indispensable function to perform in the national life of Canada, and each will function in a varying degree according to world conditions and needs.

Should we not then consider what returns in the way of export trade can be secured from the natural industries of lumbering, mining and fishing? Should we not consider the position of the grain farmers when normal production is again established in Great Britain and Europe, and when the normal wheat supplies of Russia, Australia, India, the Argentine and elsewhere are again offered on the markets of importing countries? Should this latter question not be the more considered in the light of decreasing crop yield per acre, especially in Western Canada, due to continued grain farming? Have we not possibly reached the safety line there, while, on the other hand, our resources in the way of livestock production, bearing in mind our almost unlimited acreage of pasture land, have only as yet, in a very small way indeed, been realized upon? Is it not worth while considering if the live-stock industry cannot indeed be easily made to constitute the basis upon which our economic and financial equilibrium may now be dependably established?

THE FARM.

An Ontario's Farmer's View of Conditions in England.

EDITOR "THE FARMER'S ADVOCATE":

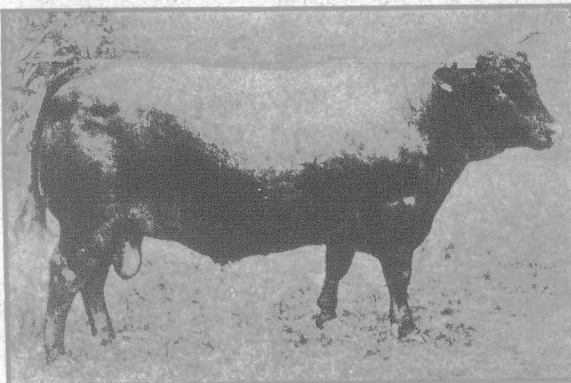
I am very pleased to hear the farming news of Canada from your paper. When so far away, home papers have a double interest. For six weeks after our arrival (March 4), we had nothing but rain, finishing up with a very heavy fall of snow—with drifts five to six feet deep. Now everything is suffering very seriously from six weeks' drought; rain is badly needed, as crops and garden stuff are all drying up. Haying is on, and a very light crop it is.

I was at the Hackney Stallion Show at Newmarket, and attended some big horse sales. Horses are twice the price they are in Canada. Cows go as high as \$300, but average about \$200. I saw a six-weeks-old calf sold on the market for \$50, store cattle up to \$200, and yearlings about \$100 each. Fat pigs are 26 cents a pound at the Farmer's Factory, little pigs six weeks old \$15 each. Eggs, poultry and seed potatoes sold by auction in one building. Horses, store cattle, pigs, fat cattle, and sheep for the butcher are all sold by auction in the market yards. A Government official sorts and classes the cattle and sheep. Veal sells at 50 to 62 cents a pound; lamb, 40 cents; hens, \$2 to \$3 each; eggs (sold at auction by the score) at about 6 to 8 cents each; cheese at set price 36 cents, but often not to be had; hay, \$35 to \$40 a ton; oil cake about \$85 a ton; butter 60 cents a pound, but margarine is largely used at from 16 to 30 cents a pound. In the best hotels in London, you constantly see the sign, "No butter to-day."

The advance in labor, shorter hours, set prices, and doubling the assessment for small holdings is making the farmers wake up. They have had much higher prices and lower cost of labor, so have done well, but now it is becoming a very different thing, and, as in Canada, it is the middleman who should be looked after and legislated against. Automobiles are a big price, with 30 per cent. duty. Old cars sell as high as new ones did before the war. There never was so much land offered for sale as now. Land owned for generations has to be sold, the charges on it being so high people simply have to get rid of it, and it is selling well—from \$150 to \$400 an acre, without buildings. Tenant farmers buying their farms in some cases bid against the Government. You should see big cultivators and plows worked by cables, the latter with six to eight shares and two big engines at each end. The charge for cultivation is \$7.25 an acre for twice over. The farms round here are 300 to 1,000 acres, with a bailiff and foreman and from ten to thirty men. There is still a lot of threshing to be done. With one outfit I saw the drum had been in use twenty-four years, with a fine big engine. All machinery is much stronger than ours.

In Canada the manufacturers have too much protection. If raw material, not produced in the country, was duty free it would help. In the town here (a "town" is where a market is held) of 5,000 people there is one bank, and one that opens an office two days a week. If you receive a draft or cheque from another bank, they do not charge you for cashing either, nor

shut up at noon on market days! The Canadian Government should do something to help get cheaper freight (ocean) to ship horses, etc., over here. Cattle could once be brought over for about \$15 a head; now it is \$100. What I have mentioned will show there is something more important than the tariff which farmers are up against. There will be considerable emigration from here, and unless something is done here to advertise Ontario's advantages, the Province will not get a proper share of it. People here know so little about Ontario. It has not been pushed enough in the past. With its good climate, plenty of fruits, and good cheap farms at a little above cost of buildings, it affords a better speculation (in farms) than England does to-day, and surely time will relieve the help question. When we were home last time, eight years ago, \$15 to \$20 capital per acre was enough to stock a farm, now \$50 and \$100 is required, as stock and machinery have gone up so. England. JOHN LLOYD-JONES.



Devon Bull.

The Settlers in Northern Ontario.

EDITOR "THE FARMER'S ADVOCATE":

The settlement of Northern Ontario is not rapid. A large number of people are coming in from Quebec Province, many without any appreciable acquaintance with the English language, and are buying improved lots as well as locating in the unapportioned townships. It is more the object of the writer to try and point out some features connected with the system of settlement of the land than interfere with the class of settlers. It is a matter of some importance to know if the plan of laying out a new tract of country which, by the way, originated in the United States, and is a system for which the land surveyors are responsible, is the most suitable. We must take into consideration the possibility that speculation was probably the basis of its origin at the time of its inception. A geometrical plan undoubtedly has its advantages, one of which is its simplicity, nevertheless physical features invariably greatly curtail any advantages.

Large areas to be surveyed in advance of settlement require a regular system, but classification of land, unfortunately for the settler, is not embraced in it. Surveyors in these cases are only required to furnish accurate boundaries, other information is from other source. Speculation usually accompanies any opening



A Pair of Romney Lambs.

of a new area, and, as an object of development, must be injurious. Land surveyed according to the Act of 1908 must be laid out in quadrilateral townships divided into sections containing 160 acres. Readjustment even in these places where territory has already been divided is quite possible. Closer settlement making farming more attractive and profitable, reduction of the unnecessary length of roads and a proper plan made and carefully approved which will eliminate the hopelessness of the "back lot" bachelor, and the ever lamenting mother of a family ten miles from school: this is a consummation greatly to be desired. Mr. J. F. Whitson in 1906 stated that "In a wooded country like Northern Ontario it is of great importance to have concentrated on one line of road two lines of farms as closely situated as possible. The enormous cost of constructing roads up to one thousand dollars per mile makes it imperative to have no more road

allowance than is absolutely necessary to accommodate the public,"—yet the Government persists in its lavish system of making our roads 66 feet wide. Owing to the ditch on either side, the actual road is 20 feet, the balance being on either side, and is of no use until sidewalks and boulevards come into fashion here.

It is reasonable to suppose that it is the first essential to settle the land adjacent to the towns, villages and railways before allotting to settlers places miles away, but the settler must "go hence", for all "close in" farms have long since been taken by the enterprising business man, clerk and office boy who can well afford to pay the poor settler for clearing some land occasionally, avoid any of the strenuous part of pioneering, and usually evade the resident duties embodied in his agreement with the Government. A more concentrated form of land settlement would provide better social conditions and numerous other advantages. Why open up hundreds of miles of country when there are more than sufficient farms to supply double the number of actual settlers now in the country?

In many cases settlers themselves have solved, to some extent, the problem of shorter roads by cutting a narrow way in a more or less direct line through the uncleared bush, avoiding even small hills in order to be able to draw as large loads as possible. This not only usually materially shortens the distance to market, but provides protection from the winter winds which quickly fill all tracks on the open roads owing to the noble proportions which have been given them. These "trails" are rapidly becoming less useful, however, as the primeval forest is rapidly giving way to the inroads of bush fires, leaving unsightly poles and skeletons of once large Poplar and Spruce trees. At the present time the smoke brings the tears to one's eyes while trying to put a few finishing sentences to this article, and another "near squeak" has been recorded and, alas! my favorite winter "road" obliterated forever. Oh, ye goodly number of fire rangers whose watchtowers dot the country and powerful red cars chase up and down the roads bearing ye legal documents egypt "Permits to burn," whereby the humble settler is graciously permitted to burn—and indeed has—and, judging by the darkened sun at noon these dry days, when no rain has fallen for six weeks, may have to "scorch" if no worse befall him. Yes, it's very comforting under these present circumstances to know the fire rangers are numerous, even if costly to the country, and from their high watchtowers may even now save the situation! Call off the watchdogs; divide the hundreds of thousands it costs to keep them "on the job" amongst the hundreds of poor settlers whose homes, hay and grain have been devoured by the greatest enemy as well as the best friend of the New Ontario pioneer. "It's a long road that has no turning." H. W. PARSONS. Temiskaming District.

Harvesting Red Clover Seed.

For some years Canadian-grown red clover seed has been advocated in preference to imported clover seed, and as a result of this propaganda carried on by Departments of Agriculture, both Provincial and Federal, the growing of red clover for seed is becoming quite popular, particularly since it has shown itself to be a profitable business. Discussing the harvesting of red clover seed, Dr. M. O. Malte, Dominion Agrostologist, has the following to say:

"As is well known, the seed crop is practically always taken from the second crop of the season. Assuming that the second crop has been set aside for seed production, it should be harvested when most of the heads have turned brown, and the stems of the plants begin to dry up. If the crop is cut before it has reached this stage of development, the quality of the seed is apt to be inferior, because too large a percentage of the seed will be immature and shrunken. As a consequence, the vitality will be low and the general appearance of the seed inferior. If, on the other hand, the crop is left standing too long, considerable losses may be suffered for the reason that, when the crop is over-ripe, the heads easily break off and shatter, especially if the harvesting is done in warm and dry weather. It is, therefore, important that the seed crop be harvested at the right time.

"If you are not sure about when to cut your clover seed crop, pick out some average heads, and rub them in the palm of your hand. If you are rubbing out firm and well-developed seed of a pronounced color, then it is time to cut. The seed crop may be cut either with a mower or with a binder, depending on circumstances. If the clover is only a foot high or less, the mower may be used; if it is more than a foot high, the binder may prove more satisfactory.

"If the seed crop is being cut with a mower, it is most desirable to arrange to have the swath moved out from the uncut crop before a round is completed, because otherwise the horses will have to walk on the swath and, in doing so, will thresh out quantities of seed which, of course, will be lost. The mowing out of the swath from the standing crop may be done by a clover buncher attachment, or by two men with hand rakes

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following the mower. If the seed crop is to be cut with a binder, the latter should be adjusted so that it will trip continuously. Furthermore, the side boards should be removed so that the clover is given a free course to the ground.

"The crop should be left in loose windrows, and may, when properly dried out, be gathered with the barley fork. It may be left in the stack or in the barn, as preferred, until it is convenient to thresh. The threshing should, if possible, take place in cold and dry weather."

Improving Tomatoes by Selection.

A great deal can be done in improving the crops grown on the farm or in the farm garden, by carefully selecting the seed. A little attention given to this matter at the proper time will very often mean greatly-increased yields and more desirable quality. For some time selection of tomatoes has been carried on by the Dominion Experimental Farms, and the following paragraphs were prepared by Gus. Langelier, Superintendent of the Experimental Station, at Cap Rouge, Quebec:

"In all northern districts, where the season is barely long enough for a heat-loving plant, such as the tomato, trueness to name is a very important consideration, because most fruits will not mature, and the grower will lose his time if, accidentally or otherwise, seed of a late variety is sold for that of an early one. A great many of the best growers now save their own seed, as they know that there are large quantities on the market which come from canning and catsup factories, where it is cheaply separated by machines. The mere fact that most seedsmen will not guarantee what they sell, shows that the commercial article cannot very well be relied upon.

What to Select For.

First of all, it must be remembered that tomatoes cross, so that only one variety can be grown. Theoretically, a person should select tomatoes for extreme earliness, great productiveness, bright red color, large size and high quality. But, as there is no such thing as an all-around perfect strain, it is better, in practice, to breed for one thing at a time. It is also no use to work for contradictory attributes; for instance, when the size of fruits is larger there are generally fewer in a cluster, though the total yield may be greater. It should always be remembered that attention must be directed towards the whole plant, and not only to a part of it. Thus, it is a mistake, in selecting for earliness, to save seed from a plant which bore one very early fruit whilst the others were rather late in maturing; what should be done is to save seed from a plant having the largest number of fruits maturing early enough for the locality where grown.

A few strains were isolated at Cap Rouge, for yield, in certain cases, and for earliness, in others. A selection of Prosperity from Bolgiano, 1914 stock, produced 20 per cent. more, in 1917, after three years' work, than seed bought in 1917; a selection of "Sunnybrook" Earliana from Burpee, 1914 stock, produced 46 per cent. more in 1917, after three years' work, than seed bought in 1917; a selection of Danish Export from Wiboltt, 1914 stock, matured fruit in 135 days, in 1915, whilst seed from this firm took 140 days in 1917; a selection of Bonny Best from Harris, 1911 stock, matured fruit in 163 days in 1913, whilst seed from this firm took 167 days in 1913.

"Strains of Earliana have been specially selected at the Experimental Station, Cap Rouge, Que., since 1911, and a limited quantity of choice seed is distributed free to interested parties who apply."

Raise Teachers' Salaries.

EDITOR "THE FARMER'S ADVOCATE":

Throughout the battle of life when all men have been called upon to bear a heavy burden, who has had a greater one to bear or who has borne it more gallantly than the teachers, who are in a position to become, as we all know, the greatest nation-building factor, and yet, with all responsibility and burden, they are the poorest paid people to-day.

For years these teachers have struggled in High School and Normal School for an education, and often in meagre circumstances, and at any rate spending a good sum of money and time to prepare themselves to mould the minds of the next generation; in fact, to shape the destiny of the nation, and as a reward receive a salary of between \$400 and \$700 per year, about two-thirds of what the common labor or garbage man receives. Can it be possible that we are more interested in sweeping streets than in educating our children?

We turn to the columns of the Toronto papers, where hundreds of advertisements are inserted asking for teachers. Glancing down we see the majority of boards asking for the service of a teacher for a year for less than \$700. It is a shame and a disgrace to the boards to advertise at that figure. No public school teacher should receive one cent less than \$1,000 a year, and then they would not be equally paid with other professions. In many sections of the country, boards have been broadminded enough to raise salaries to somewhat near what teachers deserve. In Essex County several rural schools have increased their salaries to \$1,000, and over. It is to be hoped that teachers in other sections will follow the splendid lead. Warning might be given to the graduating class at Normal Schools to remain firm and demand salaries ranging from \$1,000 to \$1,200, or higher. There is a scarcity of teachers, and salaries will increase if teachers demand it.

Essex Co.

PERCY P. McCALLUM.

Clover Seed Will Sell High.

From information received from G. H. Clark, Seed Commissioner, Department of Agriculture, Ottawa, we learn that prices of clover and timothy seed for autumn delivery are prospectively high. Mr. Clark informs us that he has just returned from the International Convention of the Seed Trade Association, held at Chicago, and says: "Through the greater part of the clover seed districts of the United States and Western Ontario the new clover crop was destroyed by drouth in August of last year. The timothy acreage in the United States was also much reduced in order to grow wheat. There are practically no reserve supplies of clover seeds being carried over for next year, and timothy seed stocks are also very low.

"Prices are soaring in consequence. Red clover seed on the Toledo market was quoted on June 28th at \$24.75 per bushel for autumn delivery, which is an advance of almost \$5 since May 16th. Timothy seed was quoted at \$13.50 per hundred pounds, and is advancing steadily. Farmers in Eastern Canada who have clover or timothy crops, reasonably free from weeds, with seeds difficult of separation, can depend on a strong demand for seed at unusually high prices. The Ontario Department of agriculture is arranging to assist in the transportation of clover seed hullers, which can be spared from Western Ontario, to those counties in Eastern Ontario which have excellent clover crops for seed purposes. In Quebec, New Brunswick and Nova Scotia clover seed hullers are available for the use of farmers."

CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

Room at the Bottom.

A recent writer, referring to the young people in rural communities, said: "Too long we have been training young people, in the school and in the home, to struggle for the best of everything; a sort of rivalry that results in envy, jealousy and strife, and the falling apart where there should be co-operation and sympathy, and a spirit of mutual helpfulness. It seems that we have overdone this thing of pointing to the top, and urging our young people to scramble for that until, as a result, no one is looking for a place to serve, while all are looking for a place to shine. There is a vast amount of good room at the bottom—acres of it—and we might well commend it to everyone who may be imbued with the idea of doing some effective work in the world."

It is quite true, as is often said, that there is plenty of room at the top, but it often happens that those who by dint of mad scrambling and the sacrifice of all the finer elements in the make-up of human nature finally arrive at the top, become less effective as members of society, and less happy among themselves than if they had worshipped the god of success a little less, and retained a little more of happiness as they went along. Just now we think of a young farmer who came of thrifty stock, was fairly well educated, part time at an agricultural college, and finally settled down on a farm that was rather gone to seed. There was no particular reason why a dollar should have looked any bigger to him than to any other young farmer in similar circumstances, but it did. He shortly became so that he almost worshipped the making of money. He was so wrapped up in his farm, and the success he was making of it, that he could scarcely talk about anything else but the money he was making from this or that crop, or the yield of hay or grain he procured from such and such a field. It was not merely boasting, because he was not naturally given to boasting; it was the impelling thought behind all his actions that these good crops meant more money, and he did not stop to consider that other people might not be so wholly given over to the making of money as he was himself.

No one certainly could object to anyone else thinking well of making money; most of us, unfortunately, are too well aware of the absolute necessity of making more money now than we did five years ago, if we are to live anywhere near as comfortably. Everyone looks forward, too, to the accumulation, before old age reaches them, of sufficient wealth to enable them to live in comfort, but one cannot help but be disgusted occasionally when people are met with who have sacrificed everything in a crazy effort to accumulate money. How often do we see men, and women too, who, at the age of thirty-five or forty, find themselves broken in health and unable to enjoy life, or to fully appreciate the pleasures which they have never allowed themselves to indulge in, merely because they could not take time for happiness. It is a tragedy in certain communities to find men and women who are forced to retire from the farms at a comparatively early age because they worked early and late, day in and day out, for so many years that they have apparently lost the power to really enjoy living.

It has been proven time and again that a purely selfish interest in the accumulation of money is not wise for the future happiness of the individual, or of the family. Young men who are starting out to farm should contrive to get what pleasure they can from a life of hard work. It pays to save one's physical ability by using one's head a little more. If this is done, the chances are that just as much money will be made in the long run as if one had devoted his whole energy to slavish work; and there is this added benefit, too, that a great deal more of contentment and happiness will be thrown in with it. People who obscure them-

selves in loneliness on the farm, and who dig and work every hour of the day that they are not either sleeping or eating, are not living—they are merely existing. We have seen people who, when they happen to meet someone else on the road or at church, or in the evening, could never find time to stop and talk; much less to visit. They were foregoing all the joy of living, and did not know it.

There is plenty of opportunity in rural districts for sociability and pure neighborliness. There is plenty of room at the bottom among the average people of one's acquaintance for the exercise of these qualities. When people get their heads in the air and begin to climb up among the clouds, they are likely to forget everything else in their hurry to be called successful. More often than not they drop back to earth with a thud, and find that a good many years have been wasted. After all, the man who is most respected among his fellows is one who, while he may be successful in money-making, is yet a man who has not forgotten that "all is not gold that glitters."

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

Proper Method for Cleaning the Motor Car.

The proper cleaning of a motor car is one of the most important things connected with its ownership, and the longevity of the machine depends to a large extent upon the manner in which the cleaning is done. Dirt is the natural enemy of all machinery. It is also a destroyer of fine polished surfaces. Your car is composed of both. Keep them clean and you will extend their periods of service.

Never use hot water to wash the car, but always cold or lukewarm water. If a hose is used do not turn on the water at full force as this drives the dirt into the the varnish and injures the finish. The water must be used plentifully if the car is caked with mud, as any attempt to remove mud before it is thoroughly saturated will damage the finish of the car. It is advisable to start in at the bottom, working up. In this way you will clear the running gear, usually the muddiest parts first, and by working up you will avoid splashing muddy water on an already clean body.

Working with water you will need a good sponge. Keep the sponge well saturated with clean water. You can do this by having a hose in your left hand playing a gentle stream on the sponge all the time. Start sponging from the top downward, working along to the radiator and then going over the mud-guards. Wash till the mud or dirt is removed, give your car a second quick rinse over with the hose and, if possible, a new sponge. We do not recommend special preparations for cleaning the body. Ivory soap or a good linseed oil soap will give satisfactory results.

It is important that you do not allow the water to dry off naturally on the body. If you let this happen your car will be streaked and unsightly. As soon as you have finished washing, take a piece of chamois, and, starting at the highest point, follow the path of the sponge, drying up all the moisture on the panels. A body or furniture polish of good quality may be used to add luster to the car.

Grease on the running gear may be removed with a gasoline dampened sponge or rag. The brass or nickel work may be polished with any good metal polish. Care should be exercised to dry the springs carefully after each washing, as water left on them is liable to rust the leaves.

Ivory soap or a linseed oil soap and warm water can be used to wash off the top. After it has been dried it is advisable that you use a high grade top-dressing, which will not only improve its appearance but will also preserve the material. The inside of the top can be brushed out with a whisk broom or cleaned with a vacuum cleaner.

The upholstery of the body should be thoroughly dusted off with a whisk broom, after which it may be cleaned with a rag that is slightly dampened with water. It is, of course, advisable to see that all traces of moisture are removed from the upholstery before the car is put into service.

New Type of Air Washer.

The effective removal of all the dust from the air entering the cylinders of truck and tractor engines is now generally recognized as an all-important necessity. Tractors, which do not travel fast enough to get out of their own dust clouds, have the worst conditions to meet, but motor trucks operating over dirt or macadam roads also need protection, and it is to be noted that the later class B 3-ton trucks for the U. S. Army were equipped with air cleaners.

For the past three years air cleaners have been in general use on tractors, and their good effect upon engine performance has been fully demonstrated—the nearer the cleaning efficiency has reached 100 per cent. the better the engine performance. Cloth filtering screens have been used, although the type more commonly used has been the centrifugal or cyclonic, which depends upon inertia to throw the dust particles out of the air stream. It is generally admitted that more or less of the lighter dust particles pass through these cleaners, and greater efficiency accordingly must be obtained by other means.

During the past year or two large numbers of water type air washers have been used by some of the most

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prominent tractor builders. In one type air enters at the top and is drawn downward through the central tube. The lower half of this tube is flared out "bell shaped," and is supported on a metal float or elliptical cross section slightly smaller in diameter than the bottom of the bell. The air passes through the narrow ring-shaped opening between the bell and the float at very high velocity. On account of the shape of the air stream large air bubbles passing through the water are impossible, and on account of the high velocity of the air, the heavy dust particles are thrown into the water. The air itself is so thoroughly mixed with the foaming water that the lighter dust particles are also trapped and the mud settles to the bottom of the tank, where it can be drained off daily or as often as is necessary.

This thorough mixing of the air and foaming water settles the dust, but the next big problem is to separate the water particles from the air before it leaves the washer. A series of baffle plates does this very effectively, and experience has shown that not over one quart of water is evaporated in an ordinary day's operation.

The restriction of the air flow through the washer is practically negligible, being above two inches of water under full engine load, which is very small compared with 15 or 20 inches through the carburetor. Many tests have shown that in spite of the slight frictional resistance, engines have developed slightly more power with the washer than without.

An overflow is provided to limit the high water level, and an indicating disc attached to the float tube not only shows the amount of water in the tank, but also automatically shuts off the air inlet when the water level reaches the low point.

While extremely high efficiency is claimed for this air washer, the makers wish to call attention to the fact that the washer can be placed to better advantage than in the very dustiest part of the tractor, and that all air piping from the washer to the hot air stove and thence to the carburetor should be absolutely tight. Dust is such a decided troublemaker, once it gets into the engine cylinder, that every precaution should be taken to keep out every possible particle.

THE DAIRY.

Kill the scrub bull and avoid continuing to slaughter unprofitable cows.

Beauty XI is the first United States Ayrshire to complete two Roll of Honor records in succession. Over and above this she has five records to her credit averaging 11,282 lbs. milk and 471.91 lbs. fat.

In the corn-belt states it is said that perhaps 80 per cent. of the stalk and leaves of corn is wasted annually. We should not permit anything like this condition to exist in Canada. Build a silo to take care of the cows next winter.

Twelve years ago a New York farmer bought a pure-bred dairy cow for \$150, and recently she sold in the sale-ring with 33 of her own direct descendants, for \$58,600. It looks as though it pays to breed good dairy cattle.

Breed societies should prevent, by some means, absurd names for animals. Fancy a cow named Creampot Pontiac Korndyke. If she is good enough to produce 795.9 lbs. milk and 40,561 lbs. fat in 7 days, she deserves, and so does the breed, a more thoughtful name.

France is buying dairy cattle from the United States to restock the devastated areas. Heifers from eighteen months up are required, and no cow over 6 years old is accepted. Two thousand head are to be shipped by the end of July. Canadian breeders should have some of this business.

Milk Testing on the Farm.

EDITOR "THE FARMER'S ADVOCATE":

While a considerable number of our farmers have begun to test their milk regularly, there is still a large percentage who evidently have not realized the benefits derived from this practice. Yet it is quite possible that many of these latter have high-producing, as well as low-producing, animals in their herds. Only recently this fact has been well demonstrated by the case of the record-breaker in South Oxford County, whose real value would not have been recognized had it not been for the carefully-made tests which are now possible on every Ontario farm. In the following paragraphs a brief outline of the most commonly used test, the Babcock, with approximate cost, is given.

The chief requisites for the test consist of a hand-turning machine, four whole-milk bottles, a pipette, a separate graduate jar, and a supply of sulphuric acid. On the average, a suitable testing outfit for private use on the farm costs from \$10 to \$15, depending

on the capacity of the machine used. The chief points to be noted in connection with the test are as follows:

1. The temperature of the milk should be from 60 to 70 degrees Fahrenheit.

2. In order to secure a representative sample, mix the milk thoroughly.

3. Measure 17.6 c. c. (cubic centimeters) of milk into a milk test bottle.

4. Then add to the milk in the bottle 17.5 c.c. of commercial sulphuric acid (at a temperature of 60 to 70 degrees F.) having a specific gravity of 1.82 to 1.83. For this purpose use a graduate jar and pour the acid into the test bottle, the latter to be held in a slanting position so that acid may run down the side and under the milk.

5. Keeping the neck of the bottle open, mix the milk and acid thoroughly by a gentle circular motion.

6. Place bottles in the machine, being careful that they are properly balanced, and turn for five minutes at speed indicated on the machine.

7. Now add hot water to the mixture to float the fat; replace bottles in the machine and whirl for two minutes longer. Water should be at a temperature of 160 to 170 degrees F.

8. Transfer bottles from machine to a water bath, in which the water should be at a temperature of about 140 degrees F., and also reach the top of the fat. Then take the reading.

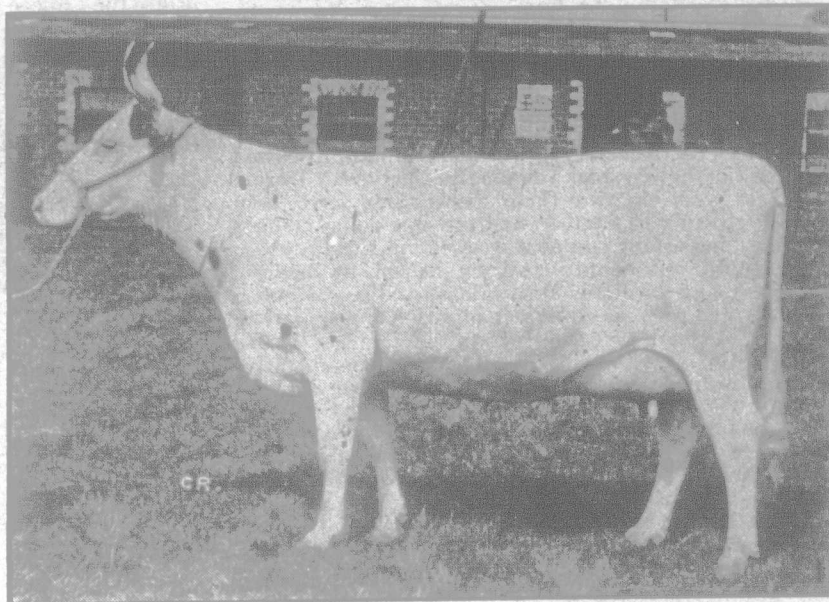
This, in brief, is the method of making the test. A few incidental suggestions in carrying out the operation, however, may be worthy of mention. Accuracy in measurement and cleanliness in all operations are of prime importance. All utensils should be thoroughly cleaned after use. Frozen milk should be heated before being tested, and all milk should be allowed to stand at least an hour after being drawn from the cow. Sour or thickened milk may be tested by adding an alkali such as strong ammonia or lye, and mixing well with sample before testing.

Soft or distilled water should be added to the test bottles. Where water is hard, the addition of 8 or 10 c. c. of sulphuric acid per gallon will soften it.

By observing these principles and using a little care, anyone can make the test on his own farm. The cost is very small, and the operation requires but little time, and this, together with weighing the milk, enables the farmer to determine the value of each individual member in his herd.

W. J. L.
Durham Co., Ontario.

(Note.—Undoubtedly the Babcock test which W. J. L. has fully described in the above article is of great value to the dairyman in ascertaining the quality of milk the various individuals in the herd are producing. However, coupled with the test should be daily records of the milk flow. Quantity must be considered as well as quality in the case of our dairy herds. The scales for keeping individual records are not expensive, and



Overton Lady White.

Champion Ayrshire female at Glasgow, 1919.

should be found in every stable. Weighing and testing go hand in hand in determining the value of the herd. Were it not for these two agencies, many of our present-day noted cows would never have been heard of. Without testing, you cannot tell but that you may have a champion in your herd. Give every individual a chance.—EDITOR.)

Change Necessary in Methods of Buying Milk.

EDITOR "THE FARMER'S ADVOCATE":

One of your recent issues stated how the Ontario Milk and Cream Producers' Association had secured better conditions for testing and grading cream, also that the Government in 1916 passed a law (The Dairy Standards Act) for the sale of milk to be regulated according to the standard of butter-fat contained—yet this law has not been enforced. If such a law would be in the best interests of dairying and afford a positive protection from adulteration to the consumer, why is it not enforced?

Owing to frequent harassings of a number of milk producers in this vicinity, by inspectors, I have been

prompted to go into this matter in detail, not as the squeal of someone who wishes the consumer to pay the standard price for milk which is below that standard, but rather as an appeal for justice to all parties concerned. The standard required by our city markets is 3.25 per cent. butter-fat, and 12 per cent. total solids. All milk shipped to these markets below this standard places the shippers liable to a fine, if the city by-laws are enforced, and in many cases during past years they have been. I make no reference to cases where the milk has been so low in quality as to prove adulteration, but to those cases where the quality has been below the standard required, yet due entirely to conditions over which the producer has no control. When it is a well-known fact that conditions over which the producer has little or no control will affect both the quantity and quality of milk, and that some of the best herds, both grade and pure-bred, in Ontario during fly time and excessive heat will not produce milk over 2.8 to 3 per cent. butter-fat, a product that under existing conditions subjects the producer to a fine, then it is time some change was made in our present system. I have before me the tests by reliable officials for a town requiring the supply of eight of the best herds in the locality, and during four winter months the average is not above 3 per cent. butter-fat, and one test showed 2.6 per cent. What kind of a law is it that fines a man for shipping 3 per cent. milk and allows nothing extra for butter-fat over the standard of 3.25 per cent. required?

Of course, it must be admitted the cities do not ask us to ship them milk over the 3.25 per cent. standard in butter-fat, yet anyone familiar with dairying will admit it is impossible for any shipper to maintain a uniform standard at all seasons of the year. In many instances the tests made by inspectors have been proved to be very inaccurate, yet these tests were sufficient to convict. If the present system of buying milk is allowed to continue, the producers must have representation, and all tests or investigations will have to be made in the presence of at least two parties, one chosen by the consumer and the other by the producers, and, in cases of dispute, a disinterested third party should decide.

If milk is bought by the standard of butter-fat entirely, it removes the possibility of adulteration of any kind, as there would be no gain by such methods, and it would effectively protect the consumer. Dairy-men would be encouraged to produce milk of good quality, and, whatever their product exceeded the Government standard, for this they would receive a just remuneration, while those unfortunate enough to be at any time below this standard would suffer only a reduction in their pay cheque in such proportion as their milk proved to be below the standard required. Further, it would put the fine and police decoration entirely out of the question.

In a nutshell, the farmer would get pay for exactly what he produced, and the consumer would not have to pay for something he was not getting. The sale of milk, according to the method suggested, has its difficulties, such as the number of tests required monthly to establish the standard of milk shipped by producers, also the sliding scale for payment of milk according to quality, but when we know of many good dairymen put out of business by the constant harassing of inspectors under present conditions, and at the same time the apparent shortage of dairy products to supply the ever-increasing demand of the urban population, in the interests of all concerned, it is time we milk producers demanded better conditions.

To bring these conditions about we must have united action, as individuals we are helpless. Let our producers' associations in the Province take the matter up and petition the Government to enforce the law they have already passed.

However, this article only represents the humble opinion of one person, yet I am firmly convinced that the present system for buying and selling milk has outlived its usefulness, and, as a producer, I would like to hear the views of others, and hope they will take up the matter in the near future.

Wentworth Co.

SUBSCRIBER.

HORTICULTURE.

Cultivating and Harvesting Raspberries.

Thorough and clean cultivation is essential for raspberries, and an effort should be made to keep all grass and weeds out of the rows, and the suckers, which are constantly growing up, destroyed. Cultivation should not be very deep, as there is a tendency to injure the roots in this way, with the result that the suckers become more numerous and more difficult to control. It is a good plan to cultivate just deep enough to break the crust and maintain a mulch on the soil. Deep cultivation at first may have a tendency to force the roots growing out to the side, to go down deeper so that later on, when shallow cultivation is practiced, there will be no danger of these permanent roots being interfered with. As a general rule, when the picking is on, cultivation is discontinued, but if it is possible to do so without serious injury to the fruit, it would be a good plan to run through with the cultivator between each picking. It is especially desirable to do this in a dry time. After the fruit is harvested, going through with a cultivator once or twice will loosen the ground up sufficiently to permit a cover crop to be sown, which will check the growth of the plant and protect the roots over winter. Late fall cultivation should never be practiced with raspberries, because

new growth will be induced and liable to severe winter injury.

Harvesting is most important with raspberries, because the fruit is soft and must be carefully handled if it is to reach the market in good condition. Frequent picking is an essential, and the better growers pick at least every other day. To reach the market in good condition the berries should be firm and well-colored, but not over-ripe, although in the home garden, or for a strictly local trade, it is possible to leave the fruit on longer until a higher flavor has developed. The berries should never be picked wet, and, after harvesting, should be kept in a shady place and as cool as possible. Pint boxes for raspberries offer the most attractive package, particularly where a high-class trade is engaged in. The majority of growers in Ontario, however, use the standard berry box which holds four-fifths of a quart.

POULTRY.

Classification of Eggs Before the Candle.

Eggs that are rejected by the candler may be of many different kinds, each of which has its specific name based upon the reason for its rejection. Generally speaking, the edible eggs that are detected by candling are fresh, stale, weak and hatch-spot eggs. Eggs with movable air cells, double yolks, or olive-colored yolks may be edible if there is no deterioration. On the other hand, the inedible eggs are those showing black rot mixed rot, white rot, blood ring, seeping yolk, crusted yolk, yolk which is stuck, heavily-mottled yolk, large embryo, bloody white, blood spots or other foreign body, and mouldy eggs. Sour or musty eggs, or eggs with green whites are inedible, but cannot be detected by candling. The following types of eggs are those which are found chiefly during the warm weather, or during the hatching season:

HATCH-SPOT EGGS.—When candled this type of egg usually shows an enlarged air space with a white that is thin and clear. There is a distinct reddish glow around the germ spot, which is visible, and usually located about the middle of the egg. It is distinguished by this reddish glow on the yolk. When viewed out of the shell, the white shows thin and clear, but does not reflect the light as strongly as a fresh egg. The yolk shows a hatch-spot and is flattened, being especially weak around the embryo.

WEAK EGGS.—The air space is enlarged, the white very thin and clear, and the yolk is whole but very weak, and may also bear a hatch-spot and be mottled. The distinguishing characteristic is the weak condition of the white and yolk. When the egg is taken out of the shell the yolk sac often breaks.

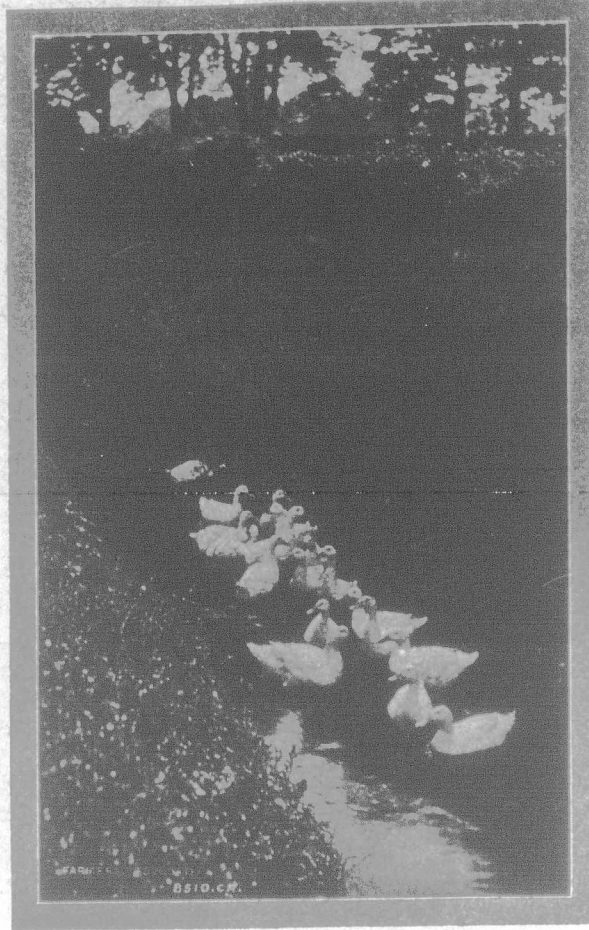
BLACK ROT.—The air space is very much enlarged, with the lower wall either movable in outline or broken. The distinguishing characteristic is that the contents of the shell are gray or black in color. Taken out of the shell the color of the mixture may vary from a gray-green to a dirty yellow. It may contain a decomposed embryo, and will be accompanied by a most disagreeable odor.

BLOOD RING.—The air space may be large or small, the white thin and clear, and the yolk will show a distinct reddish glow on one side, in which will be seen a blood ring or portion thereof. Out of the shell, the yolk will show the germ spot enlarged, and surrounded by a complete or partial blood ring. The yolk will be flattened and often very weak.

LARGE EMBRYO.—The air space will be enlarged, with the white thin and clear. The yolk is covered with a network of blood vessels, in the centre of which the embryo is beginning to take form. The latter is seen as a dark body on the yolk, its size depending upon the period of incubation. The yolk may or may not be broken, and as the egg grows older the blood vessels may become faded. Outside of the shell the white is thin and clear unless the yolk should be broken, and its distinguishing characteristic is the size of the embryo, which is covered with a network of blood vessels.

YOLK SLIGHTLY STUCK.—The air space is enlarged and the white will be thin but possibly streaked with yellow, if the yolk sac is ruptured. The yolk will be attached to the shell by a small area of the yolk sac. When the egg is turned, the yolk waves, and since the yolk sac is weak it frequently may be in a ruptured condition, with contents flowing into the white. Twisting during candling may tear the yolk from the shell, when the appearance before the candle will be similar to that of a mixed rot. If the yolk has just begun to stick when candled, the twisting before the candle may break it loose without injury, and it can be graded as a good egg. The distinguishing characteristic of the egg before the candle is the sticking of the yolk by a small area so that the yolk swings easily when the egg is turned. Out of the shell, eggs of this type will show a broken yolk and a yellow mark on the shell where the egg has stuck.

Sir Thomas White has offered his resignation to Premier Borden as Minister of Finance. His has been a very difficult position during the war, and he is held in high regard by both sides of the House of Commons, both his ability and his serious purpose being well recognized. May his successor be able to bring the same attributes to bear upon the work of the Finance Department.



Ready for a Swim.

FARM BULLETIN.

Annual Conference of Agricultural Representatives.

A very full program marked the annual conference of the Agricultural Representatives of the Ontario Department of Agriculture, which was held at the Ontario Agricultural College, Guelph, July 14 to 18. Nearly every important feature of County Representative work was discussed, but the conference was probably not as valuable as it might have been had fewer subjects been placed on the program, and more discussion by the Agricultural Representatives allowed. A representative of "The Farmer's Advocate" attended the conference on Wednesday and Thursday, the two most important days, and listened to the discussion. On Wednesday morning several of the representatives, as well as E. G. Gordon, of the Co-operation and Markets Branch, Department of Agriculture, Toronto, discussed the question of live-stock shipping associations. During the past year or two these associations have been rapidly growing in number, and are now doing perhaps the most important co-operative work in the Province. Agricultural representatives have helped to organize a great many of these associations, and a discussion was based on their successful organization and operation. A very interesting feature of the session was a discussion, by J. B. Fairbairn, of the Vineland Co-operative Fruit Growers' Association. Mr. Fairbairn thought that profits from sidelines in the co-operative association should not be divided on the basis of the total business done, since a grower might sell \$5,000 worth of fruit through the association, but do no business with it in the way of buying supplies. Another man might sell \$3,000 worth of fruit through the association and buy \$1,000 worth of supplies, upon which there would be a greater profit. Mr. Fairbairn contended that the latter man should receive the benefit from the greater profit on the supplies which he purchased. The profits from this association are paid out on the basis of fifty per cent. on the stock held by members, and fifty per cent. on the amount of business done through the association.

J. W. Noble, Agricultural Representative for Essex County, discussed the methods practiced by the Erie Co-operative Company, Leamington. This Company is a one-man, one-share, one-vote association, having a business manager and a general manager, and about 250 members. The association ships from Leamington, Ruthven, Harrow and Kingsville, and owns about \$14,000 worth of property. The members get a dividend only on the amount of business done through the association, and in 1918 it cost 2 3/4 per cent. to market the produce. In addition to this, 1 3/4 per cent. was allowed for a sinking fund. Shares are sold at \$100 each, and 25 per cent. must be paid up. Members get a delivery receipt for each day's product, and payment is made every two weeks, members always having one week's payment due them from the Company. When a member resigns from the association his share of stock must be sold at par either to a new member approved of by the executive, or it is returned to the treasury.

R. H. Ashton, Manager of the Dundas Co-operative Company, Morrisburg, reported a membership of 350, and a capital of \$350. Each member is required to take out one share of stock at \$20 per share, of which only five per cent. is required to be paid. The associa-

tion does, therefore, a credit business, borrowings at the bank being guaranteed by influential members. This year a large export business in eggs is being done by the association, and at present 3,000 cases of extra eggs are being held in storage for fall shipment. At the end of each quarter a co-operative dividend is calculated, but is not paid until the end of the year. Patrons are paid the regular current market price, but in January and February of 1918 the profit above store price amounted to fifteen cents per dozen, while for the remainder of the year the profit varied from three to six cents per dozen above the store price. J. E. McCrostie, in charge of co-operative egg circles, Live Stock Branch, Department of Agriculture, Ottawa, reported that there are approximately 19,000,000 hens in the Province of Ontario, and that so far only about one-half of one per cent. of Ontario eggs are marketed through egg circles. He thought that there was a splendid opportunity to work up a large export trade in eggs from Canada, and that the egg circle is a splendid way of securing both quality and quantity for the market. H. A. Dorrance, Dufferin County, reported the prospective organization of the Orangeville Marketing Company Limited, chiefly for the marketing of potatoes, and a man is now touring several of the United States, looking for the best ideas for an up-to-date warehouse. F. C. Hart, Director, Co-operation and Markets Branch, Toronto, thought the trend of events was toward larger organizations, and thought the smaller ones should be organized on a uniform basis. He thought agriculture could best be built up on co-operation as a foundation. He also strongly urged that the representatives keep away from actually handling the business of the co-operative associations.

A splendid afternoon was put on by the Live-Stock Department of the College, when the work with the various kinds of stock was gone over by Professor Wade Toole and Professor J. P. Sackville. It was reported that a new piggery is to be erected and that next year, if the appropriations can be secured, a new judging pavilion and a small abattoir are to be erected. A great deal of the best stock kept at the institution was paraded before the representatives, each animal being briefly commented on by Prof. Toole. The Professor pointed out that the College was primarily a teaching institution, and said that the work done by his Department had nearly all to be carried out with this in view. Among cattle, Holsteins and Shorthorns will be kept in largest numbers, but representatives of all other breeds that are at all common will be kept for class-room purposes. A 3,800-lb. team of five-year-old Percheron mares has recently been added to the stock of horses, while among sheep, Leicesters and Shropshires will be kept in fair numbers for the actual breeding work. Imported rams of these breeds will be maintained. Among swine, more Yorkshires will be kept than any other breed. Dr. McGilvray, President of the Ontario Veterinary College, spoke briefly, and urged that the representatives should utilize the College in any way that would be of assistance to the farmers.

On Thursday the forenoon was taken up with a discussion of horse breeders' clubs, elimination of the scrub bull, and boys and girls' club work. A very strong campaign is being put on for the elimination of the scrub bull, and the result of a census taken in each of the counties showed that of 19,492 bulls reported, 47.02 per cent. were grades. Of the various breeds, 29.6 per cent. of the Shorthorns were grades; Holsteins, 54.8 per cent.; Herefords, 27 per cent.; Angus, 13.2 per cent.; Ayrshires, 57.4 per cent.; Jersey, 24.7 per cent. In the dairy district in Eastern Ontario, the percentage of grades ran from about 54 per cent. in Northumberland County to 80 per cent. in Hastings County, nearly all of the counties being over 60 per cent. In the beef districts the percentage is much less. Professor Wade Toole has charge of the publicity campaign, which it is expected will be launched shortly. Most of the representatives were enthusiastic about boys' and girls' live-stock club work, and at present there are twenty-two clubs in Ontario; twelve pig clubs, seven calf clubs, one sheep and two miscellaneous live-stock clubs.

In the afternoon the session was held at the wool-grading warehouse of the Ontario Sheep Breeders' Association. An explanation was given of the various grades of wool, and the necessity for each. R. W. Wade, Director of the Live-Stock Branch, Toronto, and Secretary of the Sheep Breeders' Association, put on a competition for the representatives in wool grading. This was won by R. M. Tipper Ontario County. At the conclusion, Mr. Wade announced the prices which had been received for Ontario wool this year, which are as follows: fine medium combing and medium combing, 67 cents; fine medium clothing and medium clothing, 62 cents; low medium combing, 60 cents; low combing, 52 cents; coarse, 43 cents; rejects, 15 to 40 cents.

National Dairy Council Wins.

Information received from D'Arcy Scott, General Counsel and Secretary of the National Dairy Council, indicates a victory for the National Dairy Council in its first case before the Canadian Railway Commission. Some months ago the express companies asked for a substantial increase in all express rates. The rates on cream are special commodity rates and, whereas an increase of approximately one hundred per cent. was requested, the Board of Railway Commissioners has dismissed the application for increased rates on cream. Some changes have been made in the regulations respecting pick-up and delivery service, and the Express companies are now relieved of the obligation to cart cream empties. The Board is to consider the classification of ice-cream in the near future.

An excellent medium for a stock of fifty cents level of weighty steady, and those of the bought fre markets, locally for addition, purchases, were on totaling twelve hundred sold at \$1 shipped in Ontario. butchers hundred. ten hundred sold at per week's close averaging pounds twenty-two pounds a eleven hundred equal price were hundred. heifers hundred, between new spread balance, a handy-weight of proper heavier load of light pounds so quality for and those from \$9 changed to \$11.50 those of were low grades of the best of mon and \$9. A few stockers fairly lib United S Included few loads New Jersey feeders hundred, Over fifty across the them going toward the 50 cents the best Lamb demand; from \$20 prices were Hogs mand, at lished du hogs is \$24.25 watered

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending July 17. 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	
Toronto (Union Stock Yards)	8,226	4,146	7,168	14.25	14.25	14.50	1,551	1,037	1,337	22.00	16.75	22.00
Montreal (Pt. St. Charles)	1,160	700	837	14.00	13.00	14.00	2,064	1,897	1,794	17.00	15.50	16.50
Montreal (East End)	1,348	682	828	14.00	13.00	14.00	1,222	777	1,132	17.00	15.50	16.50
Winnipeg	2,273	4,500	2,252	13.25	15.00	12.50	502	309	287	16.00	15.00	16.00
Calgary	4,099	4,342	388	12.50	13.65	11.25				8.50		9.50
Edmonton	1,326	7	792	10.50	12.00	12.00	209		163	9.00	12.00	12.00

	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	
Toronto (Union Stock Yards)	6,390	5,836	7,297	24.75	18.60	24.40	2,534	1,813	2,207	21.00	23.00	22.00
Montreal (Pt. St. Charles)	3,038	1,277	2,626	24.00	19.25	23.75	1,624	775	934	19.00	21.00	20.00
Montreal (East End)	2,699	575	1,910	24.00	19.25	23.75	1,398	319	1,293	19.00	21.00	20.00
Winnipeg	6,871	6,971	7,667	23.50	17.75	22.50	799	908	594	16.00	18.50	16.25
Calgary	1,589	3,947	899	22.75	17.50	22.25	13	1,102	1,657	12.50		13.00
Edmonton	445		895	22.50	17.25	21.75	345		1,227	13.00		13.50

Market Comments.

Toronto (Union Stock Yards).

An exceptionally heavy offering of medium and common cattle was responsible for a slight decline in prices, most of the stock moving from twenty-five to fifty cents per hundred below the closing level of the previous week. Choice heavy cattle, however, held fairly steady, and moved at values equal to those of the previous week. Speculators bought freely for shipment to American markets, three hundred head were handled locally for shipment to Belgium, and, in addition, outside abattoirs made generous purchases. A few loads of heavy cattle were on sale, and of these two loads totalling thirty-four head, averaging twelve hundred and seventy-five pounds, sold at \$14.75 per hundred; these were shipped in by L. Campbell, of Shedden, Ontario. Several other loads of heavy butchers sold from \$14 to \$14.25 per hundred. Steers between the weights of ten hundred to twelve hundred pounds sold at prices steady with the previous week's close; one load of twenty-one head averaging eleven hundred and eighty pounds went to the bidder at \$14.35; twenty-two head of eleven hundred pounds at \$13.50; forty-two head of eleven hundred and twenty pounds at an equal price, while a considerable number were bought from \$13 to \$13.25 per hundred. Handy-weight steers and heifers were cut fully fifty cents per hundred, thereby widening the spread between light and heavy cattle. This new spread gives the market a better balance, as during the past two weeks handy-weight butchers were selling out of proportion to the sale prices of the heavier grades of cattle. An extra good load of light cattle averaging nine hundred pounds sold at \$13, most of these of good quality for \$12 to \$12.75 per hundred, and those of common to medium quality from \$9 to \$11. Choice heavy bulls changed hands at steady prices, as high as \$11.50 per hundred being paid for those of export quality. Medium bulls were lower in price, as also were all grades of cows, \$10.75 per hundred taking the best quality of the latter, while common and medium stock sold from \$7 to \$9. A fair demand existed locally for stockers and feeders, and in addition fairly liberal shipments were made to United States markets on speculation. Included with stocker shipments were a few loads of butcher cattle destined for New Jersey. Quotations on stocker and feeders ranged from \$10 to \$12.50 per hundred, according to weight and quality. Over fifteen hundred head were shipped across the line during the week, most of them going to the Buffalo and Lancaster market. Calves were a shade easier, and toward the end of the week prices were 50 cents to \$1 per hundred lower, with the best veal realizing \$21 per hundred. Lambs were a little easier in price and demand; those of top quality moving from \$20 to \$21 per hundred. Sheep prices were unchanged. Hogs continued to be in strong demand, and new high records were established during the week. A \$25 price for hogs is now a probability. On Monday \$24.25 was the figure quoted for fed and watered selects, while on Wednesday and

CLASSIFICATION	No.	TORONTO (Union Stock Yards)		MONTREAL (Pt. St. Charles)	
		Avg. Price	Price Range Bulk Sales	Avg. Price	Price Range Bulk Sales
STEERS					
heavy finished	169	\$14.19	\$13.50-\$14.50		
STEERS					
good	703	13.50	13.00-13.75	68	13.25-14.00
1,000-1,200	118	12.22	11.50-12.50		
STEERS					
good	377	12.78	12.25-13.25	90	12.50-13.25
700-1,000	448	10.52	9.50-11.75	92	9.00-10.00
HEIFERS					
good	856	12.91	12.25-13.25	27	11.00-12.00
fair	775	10.50	10.00-11.00	45	10.00-10.50
common	374	9.00	8.50-9.50	104	8.00-9.00
COWS					
good	637	10.00	9.50-10.50	150	10.00-10.75
common	1,805	8.64	7.75-9.25	229	8.25-9.00
BULLS					
good	105	10.50	10.00-11.00	11	10.00-10.50
common	113	8.32	7.75-9.50	239	8.00-9.00
CANNERS & CUTTERS	117	5.04	4.50-6.00	41	6.00-6.50
OXEN	11			9	8.00-9.00
CALVES					
veal	1,551	17.50	15.00-19.00	1,587	12.00-16.00
grass				477	7.00-7.50
STOCKERS					
good	676	10.91	10.50-11.50		
450-800	457	9.60	8.75-10.00		
FEEDERS					
good	865	12.25	12.00-12.75		
800-1,100	120	11.85	11.50-12.00		
HOGS					
selects	5,381	24.37	24.25-24.75	2,136	23.75-24.00
heavy	8	24.24	24.25	89	22.25-22.75
lights	628	22.25	22.25	222	23.75-23.75
(fed and watered)	362	21.31	21.25-21.50	563	18.75-18.75
sows	11	19.34	19.25-19.50	28	16.75-16.75
stags					
LAMBS					
good	1,706	20.15	19.00-21.00	405	18.00-19.00
common	140	18.00	17.00-19.00	735	16.50-17.00
SHEEP					
heavy	235	9.16	8.50-10.00		
light	270	10.88	10.00-12.00	135	10.00-10.00
common	183	6.29	5.00-7.00	349	9.00-9.00

Thursday a few decks sold at \$24.75, and the bulk of the sales made at \$24.50. Of the disposition from the Yards for the week ending July 10, Canadian packing houses purchased 250 calves, 5,148 butcher cattle, 178 hogs and 1,167 lambs. Local butchers purchased 457 calves, 554 butcher cattle, 192 hogs, and 2,126 lambs. Canadian shipments were made up of 26 calves, 19 milch cows, 121 butcher cattle, 311 stockers, 116 feeders and 228 hogs. Shipments to United States points consisted of 782 calves, 212 butcher cattle and 175 stockers. The total receipts from January 1 to July 10, inclusive, were 154,961 cattle, 35,731 calves, 18,675 hogs and 34,582 sheep; compared with 134,354 cattle, 37,311 calves, 200,780 hogs, and 19,254 sheep, received during the corresponding period of 1918.

Montreal.

Receipts of stock actually for sale on the two yards amounted to twenty-four hundred cattle, thirty hundred and eighty-five calves, three thousand and twenty sheep and lambs, fifty-six hundred and fifty hogs; there was a steady demand, and most of the offering sold at firm prices. The few good steers offered sold at values equal to those of the previous week; one lot of seventeen steers, averag-

ing eleven hundred and seventy-five pounds, being weighed up at \$14 per hundred, twenty-four steers averaging ten hundred and thirty pounds at \$13.25, and one lot of rough steers at \$12. The majority of the steers offered were of light weights, and some of them very thin; these sold, in most cases, from \$8 to \$10. Good quality cows were weighed up at prices ranging from \$10.75 to \$11, and most of the cows, which were of fairly good quality, from \$8 to \$9; canners sold at \$5. Very common small bulls weighing from four hundred and fifty to seven hundred pounds sold from \$6.50 to \$7, bulls weighing from eight hundred to ten hundred pounds at prices ranging from \$8 to \$8.50 per hundred, and up to \$10.50. Veal calves were even firmer than during the previous week, small lots averaging one hundred and thirty pounds, selling at \$17 per hundred, a number of the best veal lots at \$16.50, and the majority of these of good grading from \$14 to \$16. Common calves sold in car lots within a range of \$9 to \$11, many sales being recorded at \$9.50. Small yearling and grass calves sold from \$6.50 to \$8. Lambs were about \$2 per hundred lower than on the previous week's market, selling at \$18, and choice lots at \$19. Sheep of good grading sold at \$10.

One or two small lots of select hogs sold for \$24.25 per hundred, weighed off cars, but the ruling price of selects was \$24. Mixed lots, containing a large percentage of sows and roughs sold, in many cases, around \$22.50 and \$22.75 off car weights. Sows went at \$5, and stags at \$7 per hundred, below the price for selects.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending July 10, Canadian packing houses purchased 1,592 calves, 52 canners and cutters, 96 bulls, 669 butcher cattle, 2,626 hogs, and 934 sheep and lambs. Canadian shipments were made up of 20 milch cows. Shipments to United States points consisted of 102 calves.

The total receipts from January 1 to July 10, inclusive, were 16,239 cattle, 43,105 calves, 40,934 hogs and 9,450 sheep; compared with 17,982 cattle, 44,443 calves, 33,553 hogs, and 8,471 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from the Yards for the week ending July 10, Canadian packing houses purchased 1,028 calves, 828 butcher cattle, 1,646 hogs and 1,293 sheep and lambs. Canadian shipments consisted of 264 hogs. Shipments to United States points consisted of 104 calves.

Cil Wins.

...y Scott, General ... Dairy Council, ... Dairy Council in ... Commission. ... asked for a ... The rates on ... and, whereas an ... red per cent. was ... Commissioners has ... ed rates on cream. ... the regulations re- ... e, and the Express ... obligation to cart ... sider the classifica-

The total receipts from January 1 to July 10, inclusive, were 18,383 cattle, 31,314 calves, 22,743 hogs, and 10,202 sheep; compared with 16,792 cattle, 34,381 calves, 21,196 hogs, and 8,222 sheep, received during the corresponding period of 1918.

Winnipeg.

There was a slight increase in the volume of cattle receipts compared with those of the previous few weeks, and under a keen demand trading was strong on all classes of butcher cattle. On the closing market, however, prices showed slight declines. Trading received considerable impetus through the purchasing by one large firm of one hundred and ninety-six medium grade steers averaging around eight hundred pounds, at prices ranging from \$7.50 to \$8.50 per hundred; these steers were exported to Belgium via Bridgeburg and New Jersey. During the week heavy steers of good quality sold from \$12.50 to \$13.52 per hundred, and the majority, which were of medium grading, from \$11 to \$12. Choice butcher steers weighing from ten hundred to twelve hundred pounds were weighed up from \$11.50 to \$12.50, while steers of similar quality, but weighing under a thousand pounds, sold from \$11 to \$12; medium quality steers of the latter weights sold from \$9.50 to \$10.50. Heifers sold from \$8.50 to \$11.50, according to quality. Stockers and feeders sold well at the previous week's closing price range; choice feeders realizing from \$10 to \$11.50, and stockers from \$8 to \$9.

Buffalo.

Cattle.—Cattle market on native shipping steers last week showed a very heavy decline, prices being advanced from a dollar to a dollar and a half, placing real prime shipping steers on the weighty order up to \$17.75. Canadians were rather liberal, there being pretty close to a hundred loads for the week, and while there was quite a sprinkling of steers, there were very few on the better-finished order, as a result of which around \$14 to \$14.50 took the best offered. Choice dry-fed butchering cattle generally showed stronger prices, but on the light, thin grassy grades, of which there was a liberal proportion, trade ruled lower and slow. Bulls showed a half dollar advance generally, stocker and feeder market was slow and weak, and only the better kinds of milk cows and springers showed steady prices, medium and common grades ruling lower. Dry-fed cattle generally are selling to considerably better advantage than the grassers, unless the grassers are real fat and very desirable in quality. Sellers generally are prepared to expect a continued high trade on dry-feds, but possibly prices working to a somewhat lower level on grassers, if they continue to be as plentiful as for the past week or so. Offerings for the week totaled 6,575 head, as against 4,400 for the previous week, and compared with 6,125 head for the corresponding week a year ago. Quotations:

Shipping Steers, Natives.—Very choice heavy, \$16.75 to \$17.75; best heavy, over 1,300, \$15.75 to \$16.25; fair, over 1,300, \$15 to \$15.50; best, 1,200 to 1,300, \$15.50 to \$16; good, 1,200 to 1,300, \$15 to \$15.50; good, 1,100 to 1,200, \$14.75 to \$15.50; plain, \$13 to \$14.

Shipping Steers, Canadians.—Best heavy, \$14 to \$15; fair to good, \$13 to \$13.50; medium weight, \$13 to \$13.50; common and plain, \$12 to \$12.50.

Butchering Steers.—Yearlings, fair to prime, \$15 to \$16; choice heavy, \$15.25 to \$15.75; best handy, \$14.50 to \$15.25; fair to good, \$13 to \$13.50; light and common, \$10.50 to \$11.

Cows and Heifers.—Best heavy heifers, \$13 to \$14; good butcher heifers, \$13 to \$12; light, common, \$8.50 to \$9; very fancy fat cows, \$11 to \$11.50; best heavy fat cows, \$10.25 to \$10.75; medium to fair, \$7.75 to \$8.50; cutters, \$7 to \$7.50; canners, \$5.50 to \$6.50.

Bulls.—Best heavy, \$11.50 to \$12; good butchering, \$10.50 to \$11; sausage, \$9 to \$10; light bulls, \$8 to \$8.50.

Stockers and Feeders.—Best feeders, \$11 to \$11.50; common to fair, \$10 to \$10.50; best stockers, \$10.50 to \$11; fair to good, \$9.25 to \$9.75; common, \$8.75 to \$9.

Milchers and Springers.—Good to best, small lots, \$100 to \$135; in carloads, \$90 to \$100; medium to fair, small lots, \$80 to \$85; common, \$50 to \$55; in carloads, \$70 to \$75.

Hogs.—As a result of liberal receipts at western markets, prices were on the decline last week. Monday good hogs sold generally at \$23.75, few made \$23.80 and \$23.85, and pigs landed in the same notch as the better weight grades, bulk going at \$23.75. Tuesday good hogs sold at \$23.55 and \$23.60, while pigs ranged down to \$23.25; Wednesday most of the good weights moved at \$23.60, with pigs \$23.25, and Thursday the top was \$23.40, bulk moved at \$23.35, and pigs went as low as \$22.75. Friday prices were still lower, best grades landing at \$23, while pigs were down to \$22.25. Roughs the fore part of the week sold at \$21 and \$21.50, and Friday the majority had to take \$20.50. Stags went from \$18 down. Receipts the past week were 15,200 head, as compared with 12,177 head for the week before, and 14,400 head for the same week a year ago.

Sheep and Lambs.—Receipts last week were exceedingly light, and market showed little change from day to day. Lambs on the tippy order sold at \$18 and \$18.50, few made \$19, and the culls ranged from \$15 down. Best yearlings brought from \$13.50 to \$14.25. Sheep were scarce. Wethers were quoted up to \$10, and good to choice ewes ranged from \$8 to \$9. For the past week receipts totaled 2,600 head, being against 2,579 head for the week previous, and 2,200 head for the corresponding week a year ago.

Calves.—Last week opened with top veals selling at \$23.50, and culls brought up to \$21. After Monday, however, the trade was slow, and before the week was out prices showed a break of from \$3 to \$4 per cwt. Tuesday the top was \$22.75, with bulk going at \$22.50; Wednesday none brought above \$22, and Thursday and Friday the range on best lots was from \$20.50 to \$21.50, not many selling above \$21. Cull grades the latter part of the week sold from \$17 down, heavy fat calves landed around \$12 and \$14, and grassy kinds ranged from \$8 to \$12. Receipts the past week totaled 4,900 head, as compared with 4,480 head for the week preceding, and 3,800 head for the same week a year ago.

Toronto Produce.

Receipts at the Union Stock Yards, Toronto, Monday, July 21, amounted to 224 cars, 4,240 cattle, 851 calves, 2,004 hogs, 930 sheep and lambs. Quality of cattle very bad. Trade slow. Good steers, heifers, cows and bulls steady; balance fully 50 cents lower. Top, \$14.40 for 22 head, average weight 1,440 lbs. Calves 50 cents to one dollar lower. Sheep steady. Lambs 50 cents to one dollar lower. Hogs, \$24.50 to \$25, fed and watered.

Breadstuffs and Feeds.

Wheat—Ontario (f.o.b. shipping points, according to freights)—No. 1 winter, per car lot, nominal; No. 2 winter, per car lot, nominal; No. 3 winter, per car lot, nominal; No. 1 spring, per car lot, nominal; No. 2 spring, per car lot, nominal; No. 3 spring, per car lot, nominal. Manitoba (in store, Fort William), No. 1 northern, \$2.24½; No. 2 northern, \$2.21½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.11.

Oats—Ontario (according to freights outside)—No. 3 white 78c. to 80c.

Barley (according to freights outside)—Malting, \$1.21 to \$1.25.

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

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

Corn—American, (track, Toronto, prompt shipment), No. 2, 3 and 4 yellow, nominal.

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

Flour—Manitoba (Toronto)—Government standard, \$11; Ontario (prompt shipment, in jute bags). Government standard, \$10.50 to \$10.75, Montreal and Toronto.

Millfeed.—Car lots delivered, Montreal freights, bags included)—Bran, per ton, \$42; shorts, per ton, \$44; good feed flour, \$2.90 to \$2.95.

Hay.—(Track, Toronto)—No. 1, per ton, \$21 to \$23; mixed, per ton, \$18 to \$19.

Straw.—(Track, Toronto)—Car lots per ton, \$10 to \$11.

Hides and Wool.

Prices delivered in Toronto: City Hides.—City butcher hides, green, 36c.; flat; calf skins, green, flats, 80c.; veal kip, 42c.; horse hides, city take-off, \$11 to \$13; sheep, \$2.50 to \$3.50; lamb skins and shearings, 75c. to \$1.50.

Country Markets.—Beef hides, flat, cured, 34c. to 36c.; part cured, 30c. to 32c.; deacon bob calf, \$2.50 to \$3; horse hides, country take-off, No. 1, \$10 to \$11; No. 2, \$7 to \$8; No. 1 sheep skins, \$2.50 to \$3.50; horse hair, farmer's stock, 33c. to 35c.

Tallow.—City rendered, solids, in barrels, 9c. to 10c.; country solids, in barrels, No. 1, 7c. to 8c.; cakes, No. 1, 11c. to 12c. Wool, unwashed, coarse, 42c.; medium, coarse, 50c.; fine, 59c.

Wool, washed, coarse, 65c.; medium, 70c.; fine, 75c.

Farm Produce.

Butter.—Trade was firm with dealers selling creamery, fresh-made pound prints at 53c. to 55c.; a few lots at 56c. per lb., and creamery solids at 52c. to 54c., while choice dairy butter is selling at 45c. to 48c. per pound.

Oleomargarine is steady at 34c. to 37c. per lb.

Eggs.—New-laid eggs have again advanced, and are selling as follows: new-laid in cartons, 53c. to 54c.; new-laid, ex-cartons, 50c. to 51c.

Cheese was a steady trade, new selling at 32c. to 32½c., and old at 37c. per lb.; Pure lard tierces per lb., 36c.; tubs, 32½c.; pails, 32½c.; pound prints, 33c.

Shortening, tierces, 31½c.; tubs, 32½c.; pails, 32½c.; pound prints, 33c.

Poultry.—There has been a good demand for all kinds, especially, fat hens. The following prices being quoted for live weight, delivered, Toronto: Chickens, good farm stock, 25c.; old hens over 6 lbs., 30c.; old hens, 5 lbs., 30c.; old hens, 3½ to 5 lbs., 27c.; old roosters, over 5 lbs., 20c. Broilers, 2 to 3 lbs., each 33c.; ducklings, 3½ lbs. and over, 28c.

Wholesale Fruits and Vegetables.

Apples.—Receipts were larger and prices slightly lower. They sold at \$2.75 to \$3.75 per hamper.

Blueberries are arriving quite freely, and sold at \$1.50 to \$2.50 per 6-qt. basket.

Cherries, sours sold at 60c. to 75c. per 6-qt. and \$1.30 to \$1.50 per 11-qt. basket; sweets ranging from \$1 to \$2.25 per 6-qt. basket.

Red currants sold at \$1.50 to \$2.00 per 6-qt. basket.

Black currants at \$1.25 to \$1.75 per 6-qt. basket.

Gooseberries at 90c. to \$1 per 6-qt. basket, and \$1.75 to \$2 per 11-qt. basket.

Pears at \$6.75 to \$7 per box.

Oranges, \$5.75 to \$6.50 per case.

Lemons, \$7.25 to \$7.50 per case.

Peaches, \$3 to \$3.50 per 6-basket crate.

Raspberries, 25c. to 28c. per box.

Tomatoes, No. 1, \$2.50 to \$3 per 11-qt. basket, and \$2 to \$2.25 per 11-qt. basket.

Beans, 85c. to \$1 per 11-qt. basket.

Beets, 25c. to 30c. per doz. bunches.

Carrots, 20c. to 30c. per doz. bunches.

Cabbage \$1.50 to \$5.25 per large crate.

Potatoes, new, No. 1, \$7 to \$7.50, and No. 2, \$4.50 to \$6 per bbl.

Montreal.

Horses.—Demand for horses continued exceptionally light, and very few animals were changing hands. Quotations remained unchanged with heavy draft horses, weighing 1,500 to 1,700 lbs., quoted at \$250 to \$300 each; light draft horses, weighing 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75, and fine carriage and saddle horses, \$150 to \$250 each.

Provisions.—Dressed hogs continued to advance from week to week, and quotations last week were probably the highest on record, being 33½c. to 34c. per lb. for fresh-killed abattoir hogs. With dressed hogs selling at such a high price, it was not surprising to find smoked and cured meats unusually firm. Up to last week prices continued steady, being 44c. to 45c. per lb. for light hams; 42c. to 43c. for mediums, weighing 12 to 15 lbs. each; and 40c. to 41c. for heavies. Picnic hams were 32 to 34c. per pound. Breakfast bacon was firm, but unchanged at 46c. to 56c. per lb.; Windsor selected bacon being 50c., and Windsor boneless being 54c. to 55c. per lb. Lard was unchanged at 39c. to 40c. per lb. for pure, and 27½c. for compound.

Poultry.—There were no new developments in the market for poultry, and choice turkeys were still quoted at 48c. to 50c. per lb., this being for cold-storage stock. Chickens ranged from 36c. to 47c. per lb.; fowls from 36c. to 37c.; ducks, from 40c. to 48c., and geese from 30c. to 31c. per lb.

Potatoes.—For the time being quotations on potatoes seem to be practically unaltered, though it was said that some old stock was available at around \$1.50 for Green Mountains, and \$1.25 for Quebec Whites, ex-store. American new stock fluctuated considerably in price, and the range last week was from about \$4 to \$6 per barrel.

Maple Products.—Maple sugar was quoted at 30c. per lb., and maple syrup at \$2.50 to \$2.60 per 13-lb. tin.

Eggs.—The price of eggs continued to advance, and the market was exceptionally strong. During last week the price jumped several cents per dozen, making quotations for strictly new-laid eggs, 64c. per dozen, while selected stock was 58c.; No. 1 stock, 52c.; and No. 2 stock, 45c. per dozen. It was said that 45c. and 46c. was being paid to shippers, while some holders were asking considerably higher than this.

Butter.—During the week the market for butter advanced fractionally several times, and the tone continued quite firm. Pasteurized creamery was quoted at 54½c. to 53½c. per lb., while finest creamery was 55½c. to 53½c., and fine creamery, 53c. to 53½c. Dairies ranged from 48c. to 49c. per lb.

Cheese.—Quotations on finest Western cheese were about 24½c. here. The best bid at Peterborough was 24c., and this was refused.

Grain.—The local market for oats was firm, with car lots of No. 3 Canadian Western and of extra No. 1 feed quoted at 98½c. per bushel, ex-store; No. 1 feed, 96½c.; No. 2 feed, 92½c.; Ontario No. 3 white, 95½c.; barley was steady with car lots of No. 3 extra Ontario at \$1.44; No. 3 at \$1.43, ex-store, and No. 4 Western, to arrive by water, \$1.41.

Flour.—Prices were unchanged, with Government standard Manitobas at \$11 per barrel in jute, ex-track, Montreal freights. Ontario flour, in new cotton bags, was \$11.40 to \$11.50, ex-store. Sales of white corn flour in jute bags, delivered, were taking place at \$10.60 to \$10.70.

Millfeed.—Prices were steady with broken lots of bran in mixed cars at \$43 to \$43.50; shorts being \$45.50 to \$46. Pure barley meal and mixed grain mouille, \$64, and dairy feed \$50, including bags, delivered.

Hay.—Supplies were coming forward more freely, but prices were steady with No. 2 timothy at \$30 per ton, and No. 3 at \$28, while clover mixture were \$25 per ton, ex-track.

Hides and Skins.—The market continued to advance. Steer hides jumped to 42c. per lb., and cow hides have gone up 7c. during the week, to 42c. per lb., also. Bull hides were up 8c. at 30c. per lb. Veal skins were up 8c. at 90c. per lb. and some quoted higher. Kips were up 10c. at 40c. Spring lambs were up 15c. each at \$2.55 each, clipped lamb skins being \$1.25. Horse hides jumped \$2.00 each, going to \$10 and \$11 each.

Chicago.

Hogs.—Heavy weights, \$20.65 to \$22.35; medium weight, \$20.65 to \$22.50; light weight, \$20.65 to \$22.50; light lights, \$20.25 to \$21.75; heavy packing sows, smooth, \$19.75 to \$20.20; packing sows, rough, \$18.50 to \$19.50; pigs, \$19.50 to \$20.50.

Cattle.—Strictly good to prime corn-fed steers, 50c. to \$1 higher; the best she stock, steady; medium and common grass steers and she stock, unevenly to \$1.50 lower. Bulls, 50c. lower; calves, most 50c. lower.

Sheep.—Compared with a week ago native lambs steady; Western mostly 20c. higher; scarce and 25c. to 50c. higher, with choice wethers showing more gains; feeder lambs, 50c. to 75c. higher; breeding ewes, mostly 50c. higher.

Cheese Markets.

New York, flats, specials, 32½c. to 33c.; average run, 31½c. to 32c.; twins, specials, 32c. to 33c.; average run, 31c. to 32c.; St. Hyacinthe, Que., 20c.

Clarice.—"Well, aunt, how do you like your new doctor?" Aunt.—"Oh, immensely! He's so thorough! He never comes to see me without finding some little thing the matter with me."



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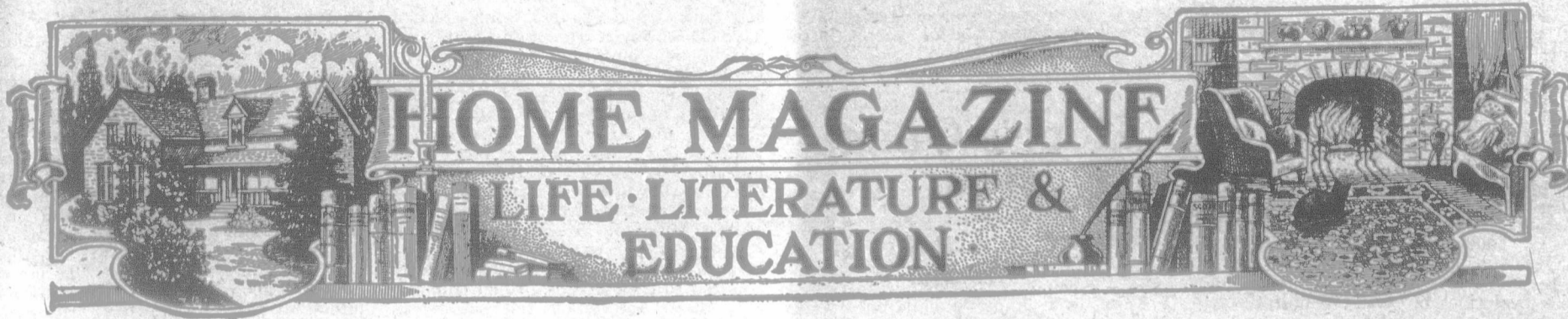
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Holiday.

BY BRENDA DUNCAN.

Come out! for summer has filled
And the breath of the morning's sweet,
And I must follow the love in your eyes,
And the lilt of my dancing feet.
The same blithe spirit is calling us
Who piped at the birth of man—
For see on the shimmering sands the track
Of the little goat-feet of Pan!
He beckons us over the far, blue hills
Adown to the shining sea—
Go up!—come follow him, follow him,
Follow him—follow the trail with me!

The little fauns giggle behind the rocks—
Brown bodies flash in the sun—
For Arcady opens when great Pan knocks
Where beauty and truth are one.
As, piping a melody ever new,
He beckons us over the sand.
To follow the lure of his Pagan joy
Away to a Pagan land.
So, tho my home is upon the shore,
And yours on the rolling sea—
Come up!—come follow him, follow him,
Follow him—follow the trail with me!

Perhaps he will steal on us, unawares,
And carry us far away,
And when we come back on our home-
ward track,
We shall find we are old and gray.
Who knows?—but the lure of the sea and
the sun

Is one that we can't withstand.
I would fain explore in the faerie lore—
So give me your guiding hand.
For Pan is piping a mad, June song
And calling to sky and sea:
“A man and a maid from earth have
strayed
As of old into Arcady.”
So up!—come follow him, follow him,
Follow him—follow the trail with me!
—In *The Bookman*.

Cupboards and Closets.

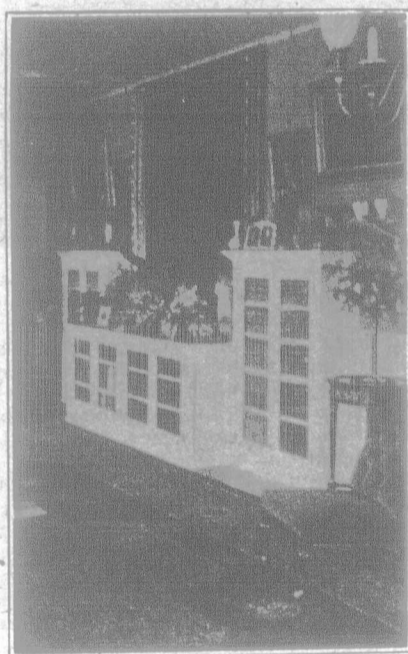
A series of pictures in an architectural magazine was entitled, “The House of a Thousand Closets.” There were cupboards and closets—built-in—or built-on,—for almost everything one could think of,—cookery utensils, dishes, clothes, linen, hats, boots, books, and many other things, even to one for the broom and one for the ironing-board. Surely a house in which everything could be easily kept in its place because there was a place for everything! It made one think of the old joke about the man who was asked if his new house was nearly finished. “Yes,” he said, “just about. My wife has all the cupboards and closets arranged for.”

Without joking, however, the merits of plenty of closets and built-in cupboards are so many that they should never be lost sight of by anyone who wants to build a new house or fix over an old one.

Closets.

Every bedroom should have its own dust-proof place for clothes. If one likes a large bedroom the closet does not need to be very large; from 24 to 30 inches will be quite deep enough if a rod or pole is run along the centre to hang the clothes from on hangers, exactly as they are in the stores. It is wonderful what a number can be hung up in this way. Besides the clothes are much less likely to be crushed than when piled on top of one another as in the ordinary closet, and one can get at them so much more easily. A curtain pole makes a very good support for the hangers, as it does not bend as readily as a metal rod; when using it, however, it may be necessary to bend the hooks of the hangers to make them large enough to fit. A smooth, strong slat, put up firmly, edgewise, will also do, but it must not be too deep or it will interfere with the hangers.

In many new houses nowadays, particularly in the United States, where modern building has become an art, as it should be, the bedrooms are small and the closets large and light. It is argued that with cross-ventilation (a window or other ventilation on each of two sides) the sleeping room does not need to be large, and that, since washstands and dressers are cumbersome pieces of furniture, awkward to move when one sweeps, it is better to do without them altogether, at least so far as the bedroom is concerned. Hence the furniture of the bedroom is very meagre indeed, although the room is daintiness itself. The main piece, of course, is the bed, with a wooden or enamelled iron frame—for glaring brass bedsteads are not liked nowadays. The bed may be covered with a chintz spread matching the inside curtains at the broad windows. There is also a little couch, for how



Built-on Book-case.

The center section is deep for large volumes. If preferred, end sections might be deep and center narrow.

often one wishes to throw oneself down in the bedroom, but hates to rumple the bed! Two or three fine, but rather small and dainty pictures adorn the walls. A little double-decker table for the sewing basket or writing materials stands somewhere in a convenient spot, with the necessary chair, and on the closet door there is a full-length mirror, built into the door. Beside it, on an open or closed wall bracket, may be any toilet articles one cares to keep in this spot.

And now to the closet. As said before it is large and light. Somewhere in it there is a large built-in wardrobe, with close doors, in which the clothes, hung on a rod, are kept. Adjoining is a similar contrivance, also with close doors but furnished with shelves instead of a rod. One door, for instance, may open upon shelves given over to hats and other large articles, while the other may open upon those on which are placed underwear of all kinds, sheets, towels, etc. Anyone who has ever known the comfort of taking things from shelves rather than digging them up from drawers will go back with reluctance to the old plan. But the built-in clothes-press is not entirely without drawers. A large divided one runs across the foot, one compartment being for shoes, the other for anything else one chooses to put there.

At one end of the little room is a built-in washstand. A mirror, with a bracket near it for combs and brushes, may hang over.

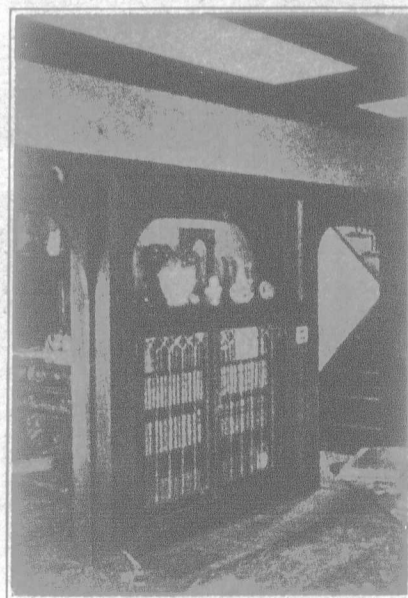
Some people choose to have, in ad-

dition to the bedroom closets, a linen closet somewhere in the upstairs hall, in which the sheets, towels, etc., for all the rooms may be kept.

The Delight of Built-in Cupboards.

HAVE you ever thought of the delight of owning built-in cupboards? If not then let us point out the advantages. In the first place, since they go right down to the floor, they require no sweeping beneath, as do those apart from the floor; also, dust cannot collect behind them. On every count they are more sanitary than separate pieces of furniture. . . . In the second place, they occupy much less space, usually, than separate furniture. Built back into the wall, and especially if built into an inside wall, they need project, in many cases, but little into the room, and so they save space, no small consideration in a room of small or moderate size. . . . In the third place they are economical. The price of building one is not nearly that of buying a separate piece of furniture plus the expense of finishing the wall-space, as would have to be done if the cupboard were not built in. Of course, it is necessary to consider well, so as to have the built-in furniture in the very right spot; it cannot be shifted about. . . . Where the wall will not permit of the furniture being built “in” it may be built “on,” and that is just as good, except that it occupies a little more space.

In a previous article, “The Ideal Kitchen,” the kitchen cupboard was dealt with. In addition to it a house may contain others, especially a china cupboard in the dining-room (or “dining” end of the kitchen), and a bookcase in the living room. Even though a union cupboard is put in between kitchen and dining-room, with doors opening into each, another will be needed in the dining-room for fine pieces of china that are not in every day use, flower holders, etc.



Built-in Book-case.

How much better than the movable kind!

It may be placed in a side-or end of the dining-room, or across the corner, and should be of convenient height, so that no stooping will be required when taking out the dishes. Since the doors are of glass, cleats should be provided for putting the plates in rows, and hooks beneath the shelves for suspending the cups. The cupboard thus becomes somewhat ornamental. The one containing the dishes for every day use should have wooden doors, and the dishes should be put in piles; this saves time both when putting them away and taking them out. . . . “Plate rails,” by the way, are no longer favored. They were found to be

somewhat a nuisance, because high up and hard to reach with the dusting cloth. Where they already exist their sole adornment is likely to be, nowadays, a couple of blue china plates and perhaps a jar or two that has been found decorative yet unsuitable for flowers.

The bookcase in the living-room may be built precisely like the dining-room china cupboard, only it may be much broader. Glass sliding doors may be provided to protect the books, or, if preferred, thin silk or linen curtains suspended to a brass rod, which may be drawn across at sweeping time. The bare books look better, but obviously the glass doors give the better protection.

Some think a more artistic effect is achieved if the bookcases reach the floor, extending upward to a height of not more than 5 feet. In any case the shelves should never be higher than can be conveniently reached, and they should in part, at least, be deep enough to hold the largest books to be placed on them. If the books are drawn well forward, almost to the edge of the shelves, they look much better than when pushed back.

A quite pretty arrangement, if there is a fire-place in the room, is to have two bookcases, one on each side. Or a single bookcase may occupy the space between two windows. Convenience and the contour of the room, the furniture to be placed in it, etc., must, however, determine the location.

Built-in seats are not to be so freely recommended. They are usually uncomfortable, and seldom chosen out of preference for resting upon. The only excuse for one in the living-room seems to be in some out-of-the-way corner, where, if fitted with a hinged lid, it forms a convenient receptacle for old magazines. Another, near the fireplace, may, if lined with gavanized sheeting, be used for the supply of fuel immediately needed. . . . In the hall, however, a built-in seat is quite in place. It also should have a hinged lid, and will be found a convenient place for rubbers. A piece of linoleum, which can be easily taken out for cleaning, may be placed in the bottom, or the receptacle may be lined with zinc.

Speaking of halls—we have forgotten that every hall should have a closet, placed beneath the stairs or in any convenient corner. This will prevent the untidy appearance of coats and hats hung about uncovered.

Among the Books.

How to Live on 24 Hours a Day.

[How to Live on 24 Hours a Day, by Arnold Bennett. McClelland and Stewart, Toronto, Publishers. Price 50 cents.]

FREQUENTLY a time arrives when one wishes to give a little gift, something that can be enjoyed and kept as a keepsake but does not cost much money. For all such occasions a book fills the need better than anything else,—and excellent, readable books can be bought at prices ranging from fifty cents up to two or three dollars. The distinctiveness of the gift will depend, of course, on the selection, and so upon this must be expended the taste and care which will make the offering a real gift.

Among little volumes that can be unreservedly recommended is Arnold Bennett's “How to Live on 24 Hours a Day.”—Arnold Bennett, you will remember, is the English author who made himself famous through the “Five Towns” novels, “Clayhanger,” “Old Wives’ Tale,” etc., but who, of late, seems to be drifting off, as so many novelists eventually do, into philosophical essays and plays.

The little book with which we deal to-day, is decidedly a volume of philosophy, written in such a familiar and intimate way that one loves to read it for the style as well as the ideas. In short, Bennett has come to the conclusion that the great majority of people literally squander the most precious possession we have—Time—and so he sets out to show how one can make the best of it, and thus learn really how to live and be truly happy. "You have to live on this twenty-four hours of daily time," he says. "Out of it you have to spin health, pleasure, money, content, respect, and the evolution of your immortal soul. Its right use, its most effective use is a matter of the highest urgency and of the most thrilling actuality. All depends on that. Your happiness—the elusive prize that you are all clutching for, my friends!—depends on that."

And so he passes on to consider many things psychologically: "The wish to accomplish something outside their formal programme" that is "common to all men who . . . have risen past a certain level."—The "glaring, dazzling truth" that we shall never have more time than just now.—The need to feel a "passion" for one's work.—The joy of mental endeavor.—The changing of habits ("and habits are the very dickens to change!")—Mind control, which is "the first element of a full existence."—The attainment of happiness.—And many other things.

All this does not presuppose much giving way to that *dolce far niente* that almost forces itself as an accompaniment of these summer days; yet an investigator has declared the "light summer reading" idea to be largely a myth. Perhaps to the accompaniment of a hammock and a shady tree *How to Live on 24 Hours a Day* may engender ideas that will result in action when the thermometer falls a bit.—The hammock and shady tree provide the leisure for getting hold of the ideas, and *then*—but let us quote Bennett himself: "I think it is rather fine, too, this necessity for the tense bracing of the will before anything worth doing can be done. I rather like it myself. I feel it to be the chief thing that differentiates me from the cat by the fire."

Such books as this invite scores of quotations. The following may give some indication of the philosophy of the one in hand:

"And yet you are in search of happiness, are you not? Have you discovered it? The chances are that you have not. . . . But men have attained it. And they have attained it by realizing that happiness does not spring from the procuring of physical or mental pleasure, but from the development of reason and the adjustment of conduct to principles. . . . All I urge is that a life in which conduct does not fairly well accord with principles is a silly life."

"The less we reflect the less reasonable we shall be."

"It is not a crime not to love literature. It is not a sign of imbecility."

"The great convenience of masterpieces is that they are so astonishingly lucid."

"The second suggestion is to think as well as to read. I know people who read and read, and for all the good it does them they might just as well cut bread-and-butter. They fly through the shires of literature on a motor-car, their sole object being motion. They will tell you how many books they have read in a year. . . . Unless you give at least forty-five minutes to careful, fatiguing reflection (it is an awful bore at first) upon what you are reading, your ninety minutes of a night are chiefly wasted. This means that your pace will be slow.—Never mind. Forget the goal; think only of the surrounding country; and after a period, perhaps when you least expect it, you will suddenly find yourself in a lovely town on a hill."

"A prig is a pert fellow who gives himself airs of superior wisdom."

"It is a fine thing to be a walking encyclopaedia of philosophy, but if you happen to have no liking for philosophy, and to have a liking for the natural history of street-cries, much better leave philosophy alone and take to street-cries." "People say: 'One can't help one's thoughts.' But one can. The control of the thinking machine is perfectly possible. . . . Without the power to concentrate—that is to say, without the power to dictate to the brain its task

and to ensure obedience—true life is impossible. Mind control is the first element of a full existence."

A. N.

Hope's Quiet Hour.

The Responsibility of Privilege.

¶ Moses said unto the children of God and to the children of Reuben, shall your brethren go to war, and shall ye sit here?

And they came near unto him and said . . . We will not return unto our

last long. The chapter from which I have chosen my text shows us two tribes with a great multitude of cattle. The whole fighting force of Israel had conquered their enemies east of the Jordan and taken possession of the land. It was "a place for cattle," and the tribes of Reuben and Gad had a very great multitude of cattle." Having riches of cattle they thought they had a right to more wealth—real estate—so they came to Moses and asked to have the land already won given to them for a possession. It is not surprising that Moses indignantly objected to their proposal to sit comfortably down and enjoy the possessions which all the tribes had fought for, leaving their brethren to fight alone for the rest of the promised inheritance. "Shall your brethren go to war, and shall ye

to take their place in the forefront of Israel's army. Their wives and children were safe on the east side of Jordan, and they considered that the privileges granted them were a call to wholehearted service on behalf of their less favored brethren. The promise made to Moses was willingly renewed to his successor. They said to Joshua: "All that thou commandest us we will do, and whithersoever thou sendest us, we will go." They gave him full permission to execute all rebels and deserters among their ranks, pleading with him to "be strong and of a good courage." They did not intend to be either quitters, slackers or discouragers. Full of hope, and inspired by a sense of gratitude for their privileges, they were not only willing but eager to take their place in the van and fight until their brethren's privileges equalled theirs.

The readiness of the people of Reuben, Gad, and half the tribe of Manasseh to look on their worldly advantages as opportunities for greater service, should be an inspiration to us all. Privilege is always a responsibility. Health, money, leisure, education, are not given to anyone for his own selfish enjoyment, but constitute a call to more effective service.

When St. Paul was trying to rouse the Christians of Corinth to send generous assistance to the poor in Jerusalem, he pointed to the example set by their Master: "For ye know the grace of our Lord Jesus Christ, that, though He was rich, yet for your sakes He became poor, that ye through His poverty might be rich." The Corinthians were reminded that their abundance should be a supply for the want of their brethren, and that when—as might some day happen—they were in want, the abundance of others would overflow for their benefit.

The "sympathetic strikes," which are a modern novelty, may cause much inconvenience to the public; yet they are inspired by the recognition of brotherhood. Those who have no personal grievances are willing to fight until their brethren are in as satisfactory a position as themselves. Many men who refuse to call themselves Christians are blindly struggling to carry out Christ's commands. They can't rest while their brethren are crushed under a load of underpaid work. Perhaps it is our fault that they fail to see the beauty of Christ. We Christians, in our selfish indifference to the crushing wrongs of many of our brethren, are very poor representatives of our Master. And yet His surpassing beauty of love still shines like a pillar of fire to enlighten the darkness of this world. Many, who refuse scornfully to join the ranks of the Christian Church—because they think it is self-satisfied and self-seeking—still claim Christ as their Ideal.

Roosevelt gave this message to the men of New York: "I would teach the young men that he who has not wealth owes his first duty to his family, but he who has means owes his to the State. It is ignoble to go on heaping up money. I would preach the doctrine of work to all, and to the men of wealth the doctrine of unremunerative work."

That was exactly the position of Reuben and Gad. Their own families were provided for, therefore they were free to do their utmost for the wellbeing of less privileged people. All this friction and fighting between Capital and Labor will cease when men discover that the strong should eagerly place their advantages where they can help the weak.

The man whose barns were full and running over, and who only saw one way to mend matters and that was to build larger barns, so that he could pile up treasure for himself, was a "fool"—our Lord Himself said so. To live for self alone is to miss all the joy of life here, and to go out into darkness beyond. "There is one thing better than making a living and that is making life," as I heard a man say the other day. And we have no right to rest satisfied with seeking to make our own lives, we must each pray and work to help in uplifting other lives. We are called to follow One who came to save the world. He will not rest from His work until all His brethren have inherited every man his inheritance. The Good Shepherd did not come to save Himself but to save His sheep. When He came to give His own life to restore humanity He did not fail. His Life is surging through the world now. It was He who carried up help to the wounded on the battlefield; and even the worldwide "unrest," which makes us almost forget to rejoice at the coming of the longed-

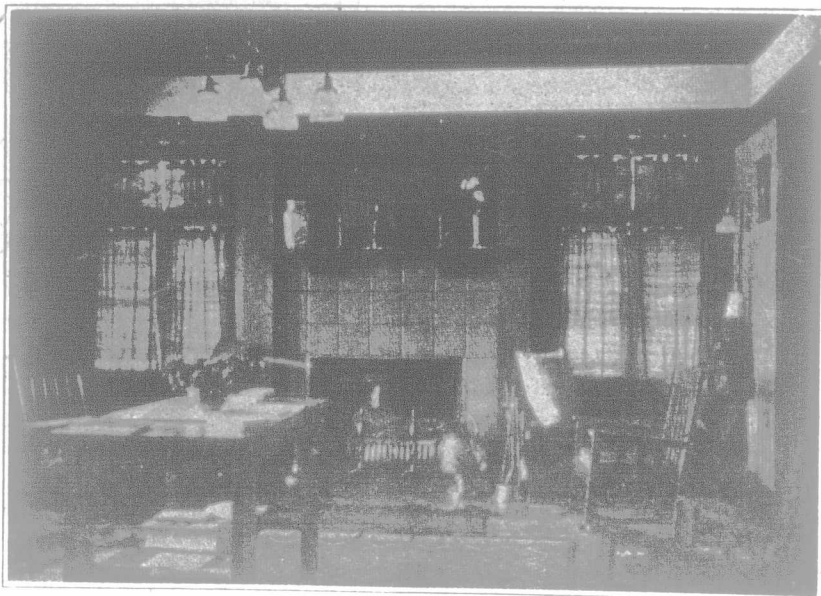


Note Fireplace at End, Book-case in Corner, and Long Built-in Seat.

houses, until the children of Israel have inherited every man his inheritance. Num 32 : 6, 16, 18.

We live in a world of inequality. Some have easy lives, while others—who are perhaps far more deserving—are forced to struggle against poverty, sickness, or other hard things, from childhood to old age. There did seem a time when the present sharp division between the "privileged class" and "the submerged class" was entirely obliterated. When the nation of Israel escaped from slavery

sit here?" he said. He also warned them that their want of patriotism would discourage the heart of the children of Israel, as the spies had discouraged them long ago. If Israel grew fainthearted, through the defection of Reuben and Gad, and gave up his struggle to coin the Promised Land, Moses warned the two tribes that it would bring down the fierce anger of the Lord toward Israel, "and"—he said sternly—"ye shall destroy this people." To live only for selfish profit is to seriously injure other people.



Built-in Seats on Each Side of Fireplace, also Answer for Fuel Receptacles.]

in Egypt, and started on that famous journey through the wilderness, the people fared alike. "They did all eat the same spiritual meat; and did all drink the same spiritual meat," says St. Paul; and they shared alike in physical sustenance as well. If anyone tried to store away more than his daily allowance of manna, it spoiled in a few hours. There were no rich and no poor. It was a nation in its infancy, with all needs provided by the Father.

But this condition of things did not

The two tribes saw that Moses was right, so they made a solemn promise to fight with the rest of the nation until every man had won his inheritance. Moses at once agreed to their proposal, and gave them the land they asked for, telling them that if they failed to keep their pledge they would be sinning against the Lord. Such sinning is dangerous folly; he said warningly: "Be sure your sin will find you out."

When the time came to redeem their pledge all their mighty men were ready

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for Peace, may be caused by His Life in the souls of men which makes them unwilling to endure wrongs in society which can and should be cured. Let us face present problems fearlessly, and pray for the great gift of Love; so that we may not be interested only in our own personal welfare, but may seek also the welfare of our brethren—all of them.

Aren't you glad that you live in this age, when men of privilege—of wealth and position—are wide awake to their responsibilities, and eager to help their fellows? But it was not the man with many talents who buried them idly, it was the man who had only one. Each of us has at least one talent—don't let us waste our lives in selfishness!

"To be alive in such an age! With every year a lightening page Turned in the world's great wonder book, Whereon the leaning nations look. When men speak strong for brotherhood For peace and universal good, When miracles are everywhere And every inch of common air Throbs a tremendous prophecy Of greater marvels yet to be."

Yes, I am glad, in spite of the street car strike, (which is now on) with all its inconveniences.

DORA FARNCOMB.

For the Needy.

A gift of \$2 from "Another Friend," Dundas, Ont., went out the day it reached me to a poor sick woman.

There have been no papers from readers this week. Did you know that the street-car strike had cut me off from the hospital? I was feeling disappointed because (for the first time for months) there were no papers to take with me on Sunday morning; and then the explanation came,—for I could not go there myself.

DORA FARNCOMB, 6 West Ave., Toronto.

For the Needy.

"One who cares," Palmerston, Ont., sent two dollars for the needy, which went out next day to help two sick women. Our old friend,—Mrs. J., Perth, Ont.,—also slipped a generous donation (five dollars) into the Quiet Hour purse. That gift only arrived yesterday, and I have not yet had time to pass it on. Papers for the "shut-in" have arrived from several readers. My thanks go out for all kindness received.

DORA FARNCOMB, 6 West Ave., Toronto.

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 a stamped envelope ready to be sent on. (4) Allow one month in this Department for answers to questions to appear.]

Some Pointers From a Health Institution.

A friend of mine not long ago spent two weeks at Battle Creek, with a sister who was a patient at the famous sanitarium at that place. During that time my friend took her meals in the institution and attended the lectures.

The other day she dropped into the den and told us all about it.

"They insist very much on healthful living conditions," she said, "especially the need of lots of fresh air and sunshine, and healthful food. Since coming home I've greatly changed our meals."

"How?" we asked. "Oh, I try to serve the same things served there," she said. "They use a great many vegetables of all kinds, and especially green vegetables. They have so many salads, and they advise people to eat the roughage, for instance the strings of celery."

"Sounds indigestible." "Indigestible?—Yes. But the idea is that a great deal of roughage is needed to secure intestinal action, and prevent the digested food from staying there too long and putrefying;—'preventing constipation' we call it."

"Do they talk about vitamins?" "Oh yes; they insist on foods that contain them,—butter, milk, cheese, and

of course, the green vegetables we have just been talking about."

"What about meat?" "Well, you know, they don't believe much in meat. They use protein vegetable foods instead, chiefly beans and nuts. They serve both of these in many ways, and have them every day. I mustn't forget to tell you that they have some sort of soup twice a day,—begin meals with it to start the stomach juices flowing. That brings us back to roughage again. They put bran in soup and also add it to porridge."

"What about cheese?" "They use a fair amount of it in various ways, sometimes grated on salad."

"Do they taboo tea and coffee?" "Almost absolutely. They use milk and postum instead."

"But postum is manufactured there," remarked someone, quickly. She smiled.

"That's true. I suppose there's 'method in their madness.' All the same, I swear by postum. We use it nearly altogether now. It seems to make us sleep better."

"Well, whatever is the reason, you are looking remarkably well," said one of us. JUNIA.

Saving the Meat.

MEAT may be reduced to a minimum during warm weather, but substitutes in food values must be served in place of them. Dairy cheese, containing both protein and fat, is an excellent meat substitute, and may be made a part of many dishes, especially if grated, when, for example, it may be mixed with potatoes beaten to a fluff with cream and butter, then baked; or it may be mixed in pastry to form cheese straws, nice to eat with soup; also it may be sprinkled over any kind of vegetable salads. Cottage cheese is richer in protein than meat, and should be seen on the table more frequently than it is.

The legumes, dried peas and beans, contain a vegetable protein that is very similar to that of meat, but, as they are deficient in fat, butter or other fat must be introduced in their cookery. The soy bean, however, contains so much fat that it is not necessary to add either fat or butter, although a little of the latter will add to the flavor. The juice of soy beans, by the way, is in some places used to make an artificial milk. All of the ripe legumes should be soaked in water over night. In the morning they should be drained, covered with boiling water, to which a little soda is added (about ¼ teaspoon to the pound of beans), and parboiled for an hour, when they may be introduced into "mixture" dishes or boiled until tender in fresh water and served by themselves. Eggs, fish, nuts and milk, are also, of course, good meat substitutes, and it should not be forgotten that any mixture of eggs and milk, in puddings, etc., is quite as nutritious as a regular meat substitute dish.

Another fact to remember is that as too much protein will cause illness, dishes in which the protein foods, (meats, beans, peas, eggs, etc.) are padded out with other more bulky foods are very much to be recommended. Among the best foods to be added thus are corn-meal, hominy, potatoes, barley, and all winter vegetables, such as turnips, carrots, parsnips, pumpkin, squash, etc., which may be cooked separately and served at the same meal, or incorporated in "mixed" dishes, as one chooses.

A Few Meat Saving Dishes.

Mexican Pie.—Rub a baking dish with dripping fat and in it place an inch layer of cold cornmeal porridge. Next put in a thick layer of chopped, left-over cooked meat, seasoned. Pour over this some thick tomato sauce, and top off with another layer of the cold porridge. Smooth with a knife dipped in hot water, dot with butter or drippings and bake half an hour in a moderate oven. Hominy (cooked) may be used instead of the cornmeal, and, if liked, chopped onion may be added to the meat.

Meat Mush.—Prepare cornmeal porridge as usual, allowing ¾ cup of meal to 1 quart boiling water, well salted. While hot stir in 1 to 2 cups of any left-over meat, minced fine. Pour into a bread pan and let stiffen. When needed cut in slices, dip in flour and fry. Will keep a couple of days in a cold place or even longer in the refrigerator.

Codfish Cakes.—Mix 2½ cups boiled



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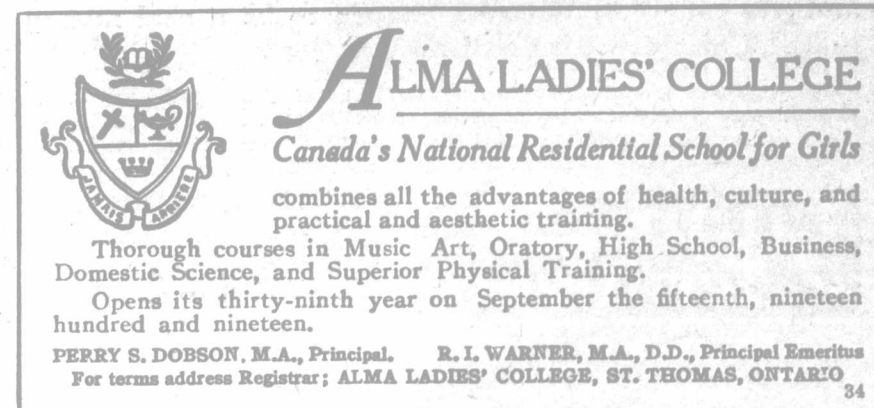
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rice (brown, or uncoated, if you can get it) with 1 cup scalded, shredded codfish, 2 tablespoons flour, $\frac{1}{4}$ teaspoon pepper, and an egg. Chill, form into cakes, roll in flour and brown in drippings.

Eggs Scalloped with Potatoes.—Take 4 hard-boiled eggs, 3 cups cold potatoes in fine dice, $2\frac{1}{2}$ cups white sauce, fairly thick. Slice the eggs thin and place in layers with the potatoes and sauce in a baking dish. Cover with crumbs mixed with a little melted butter and brown in a moderate oven.

Potato Omelet.—Cut a little salt fat, pork into bits and try out the fat in a drying pan. Mix together 2 well-beaten eggs, $2\frac{1}{2}$ cups nicely seasoned hot potatoes mashed, and a little milk or thin cream. When the fat scraps are brown remove them, press the potato mixture down into the pan and gradually let it brown. Sprinkle with the cooked salt pork, fold carefully over and slide onto a hot platter. Serve plain or with cream sauce poured over, and green peas or beans all about.

Potato and Nut Loaf.—Mash 3 cups hot potato until very creamy, seasoning it with salt, pepper and peanut butter. Stir in 1 cup chopped nuts of any kind. Grease a baking dish and dust it with fine, ground, dry bread-crumbs. Pack in the potato mixture and bake $\frac{3}{4}$ hour in a moderate oven. Turn out on a hot platter and serve surrounded by creamed onions.

Corn and Tomato Pie.—Fill a buttered baking dish with alternate layers of corn and tomatoes, seasoning each layer with butter, pepper and salt to taste. Put a pie-crust over the top and bake in a moderate oven for half an hour, keeping a plate over the top for 15 minutes at first. Breadcrumbs and dots of butter may be used instead of the pie-crust.

Vegetable Chowder.—Four cups sliced raw potatoes, 4 cups shredded cabbage, 4 cups sliced onion, 2 tablespoons butter, chopped eggs, 2 cups milk, 1 tablespoon flour. Melt the butter in a saucepan and add the onions, allowing them to cook, for ten minutes. In the bottom of a large buttered casserole, or baking dish, put a layer of the sliced potatoes, then a layer of the cabbage and then one of onions, seasoning each layer well with salt and pepper, and sprinkling it with some of the finely-chopped egg. Continue the layers until the dish is full. Mix the flour with the milk and pour over; then set the casserole in a shallow dish of water and bake in a moderate oven for 1 hour, adding more milk during the cooking if necessary.

Vegetable Hash.—Take cooked potatoes, beets, carrots and turnips, as many potatoes as of all the other vegetables combined. Chop all rather fine. There should be about 3 pints when combined. Cut a generous slice of salt pork in very small bits, and cook in an iron frying pan until the fat is well tried out. Put in the vegetables, season with salt and pepper, and add about $\frac{1}{2}$ cup broth or boiling water. Mix all together thoroughly, make smooth on top, cover and let stand to become slightly browned on the bottom. Fold like an omelet and turn upon a hot serving dish.

Bean Loaf.—One cup roasted and shelled peanuts, 1 cup cooked beans, 1 cup toasted breadcrumbs, $\frac{1}{4}$ teaspoon salt, $\frac{1}{4}$ teaspoon pepper, 1 cup milk. Press the beans through a sieve, add the nuts, ground fine, and other ingredients. Mix thoroughly, shape into a loaf, set in a greased pan and bake slowly about 2 hours, basting often with butter and hot water mixed together.

Nut Cutlets.—Three-quarters cups hot cooked cream of wheat or other fine porridge, $\frac{1}{4}$ cup soft breadcrumbs, 2 cups finely crushed nut meats, $\frac{1}{2}$ teaspoon salt, $\frac{1}{4}$ teaspoon pepper, $\frac{1}{2}$ teaspoon powdered thyme, 1 egg, beaten light. Mix together, form into outlet shapes, place on a buttered pan and bake about 20 minutes. Or egg and breadcrumb and fry in deep fat. Nice with bananas floured and fried.

Cucumbers are Cookable.

Boiled Cucumbers.—Pare good sized cucumbers and cut them in two crosswise. Drop them into salted water and boil gently until done. Lay each piece on buttered toast and split it. Put a piece of butter in the split and sprinkle lightly with salt and pepper. Must be served very hot, for breakfast or supper.

Creamed Cucumbers.—Pare cucumbers and cut into eighths. Cook about 20

minutes or until tender in boiling salty water; and serve on toast with a rich cream sauce poured over. A splendid supper dish.

Cucumber Gratines.—Pare and cut in thin slices. Sprinkle with salt and let stand for a while, then drain. Meanwhile slice tomatoes very thin. Put into a baking dish alternate layers of tomatoes and cucumbers. Sprinkle the top with salt, pepper, minced parsley and bread-crumbs. Dot with butter and bake in a moderate oven for one hour.

Browned Cucumbers.—Pare the cucumbers, halve crosswise and divide in two lengthwise. Roll in flour and fry in butter with some sliced onions until browned. Next add some broth or good gravy and stew gently until done. Serve with meat at dinner.

Stuffed Cucumbers.—Pare large cucumbers, cut in two lengthwise and fill with a stuffing made as though to stuff a fowl. Set the pieces in a baking dish in which has been poured a little salty water, and bake in a moderate oven until lightly browned.

Cucumber Jelly.—Pare 2 cucumbers and cut in slices. Add a slice of onion, stalk of celery, $\frac{1}{2}$ teaspoon nasturtium seeds, slice of green pepper if you can get it, and a scant half teaspoon of sweet herbs. Put in water to cover and let simmer until the cucumber is tender, then press through a fine sieve. Season with salt and pepper. For each pint of liquid take one generous tablespoonful of granulated gelatine softened in $\frac{1}{2}$ cup of cold water and dissolved over hot water. Tint with a little spinach water to make the jelly green, and turn into moulds to harden. Serve with salad dressing as a cold meat addition.

Creamed Cucumbers With Lemon.—Peel the cucumbers, cut them into thick slices, and let them stand in ice-water for half an hour. Boil for fifteen minutes, drain and cover with fresh boiling water; add a tablespoonful of butter, salt and pepper, and boil slowly for five minutes. Serve the cucumbers on buttered toast, first squeezing a little lemon juice over them, and then covering them with cream sauce.

Salads to Attempt Flagging Appetites.

Tomato Salad.—Prepare tomatoes by peeling them. This may be done by plunging them first into boiling water, or by rubbing them all over first with a silver knife. Scoop out part of the pulp, which may be saved for tomato sauce or soup, then fill up with any cooked or raw vegetable liked, taking care that it is one that looks pretty with the red of the tomato. Cold boiled corn is good, also cooked green beans cut fine, boiled or raw cucumbers, cooked beans mixed with chopped celery or onion, etc. Put a spoonful of mayonnaise on top of each and serve on lettuce leaves.

Fruit Salad.—Cut a piece off the end of oranges and scoop out pulp. Mix the pulp with any kind of raw fruit—berries, chopped banana or pineapple, etc., sweeten with sugar or honey, fill the orange-skins, put a spoonful of cream, whipped stiff, on top of each and serve on lettuce.

New Beet Salad.—Boil the beets until tender, take off skins and serve cold with mayonnaise dressing. Serve on white or blue plates.

Cucumber Sticks.—Peel the cucumbers and cut into strips lengthwise. Let stand in cold water to crisp and serve at once with salt or mayonnaise dressing.

Mixed Salad.—One head lettuce, 2 lemons, 3 sour apples, 1 stalk celery, $\frac{1}{2}$ cup coconut, mayonnaise dressing. Pare, core and cut the apples in small pieces. Slice the lemons in shavings. Chop the celery. Mix all together with the dressing. Sprinkle the coconut over the top and serve on crisp lettuce leaves.

Waldorf Salad with Coconut.—Mix 1 bowl each of sour apples, chopped nuts and celery, chopped fine. Mix either with salad dressing or whipped and salted cream. Sprinkle top with shredded coconut and serve on lettuce leaves.

Mayonnaise of Fish.—Separate about $1\frac{1}{2}$ lbs. any fresh cooked fish into flakes, while hot. When cold pour over it 4 tablespoons oil, 2 tablespoons vinegar, $\frac{1}{2}$ teaspoon each of salt and pepper, $\frac{1}{2}$ teaspoon grated onion, all mixed together well. Mix into the salad with two forks, very lightly, that the flakes be not broken. Put in a mound on a serving-dish, and

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over the top spread about $\frac{3}{4}$ cup mayon-
naise dressing. Surround with lettuce
hearts, and decorate on top with chopped
pickled beets or slices of cucumber.

Egg and Tomato Salad.—Cut hard-
boiled eggs in quarters, almost through,
after removing a slice from one end so
the eggs will stand level. On individual
plates set slices of ripe tomato, with 2
or 3 leaves of lettuce. On each slice of
tomato set one of the prepared eggs
held together with a ring cut from a
slice of tomato. Put mayonnaise dress-
ing around.

The Scrap Bag.

Hard-Boiled Eggs.

Do not drop hard-boiled eggs into cold
water to cool them as it will toughen them.

Cooking Greens.

When cooking greens such as spinach
or chard, which are very watery, do not
add any water except what clings to the
leaves after the last rinsing. Heat very
slowly at first, keeping the vessel covered,
until the juice has come out, then cook
more rapidly until done, drain off if
necessary, and re-heat, adding butter,
pepper and salt. Firmer or older greens
may need a few tablespoonsful of water.

Economical Lemonade.

One lemon run through the food
chopper, rind and all, will make a quart
of lemonade, the rind giving it a dis-
tinctive flavor.

Making Use of Scarlet Runner Beans.

Scarlet runner beans, cooked when
the pods are young and crisp make very
excellent "green beans". The old beans
also are as good as any others when
boiled. As green beans are very delicious
enough should be canned to last during
winter.

To Prepare Cucumbers.

Pare the cucumbers, then score quite
deeply lengthwise with a silver fork and
chill. This will prevent a bitter taste
and add to the appearance. If the ends
seem very bitter cut them off.

To Make Stockings Last.

Rub the heels of your stockings well
with a cake of paraffine. This will
reduce friction and help to keep them
from rubbing into holes.

Frankie's Yellow Butterfly.

BY KATHERINE O'NEILL.

One sunny afternoon in June, a
little, curly-headed boy named Frankie
was sitting pensively on a bench in his
grandmother's garden.

He should have been a very happy little
boy, for all the flowers he loved were
everywhere around him, nodding and
dancing in the breeze, and inviting him
as eloquently as flowers could, to come
and frolic with them.

The birds, too, were singing very
sweetly, and flitting playfully from bough
to bough in the tree over Frankie's head.

Something seemed to tell them, how-
ever, that all was not well with their
little friend who always shared his cakes
and cookies with them, and in his concern
Robin Red Breast hopped to the grass at
Frankie's feet and peered up at him
sympathetically.

But Frankie did not notice Robin
Red Breast, even when he chirruped and
chirruped, and ran to and fro on the
grass at his feet, looking up at him all
the while out of one bright little eye, and
then the other, in his anxiety to discover
why his little boy was so unusually quiet.
So Robin Red Breast flew to his bough
again, for he knew by the look in Frankie's
eyes that he would not notice if fifty
little robins hopped and chirruped at his
feet, so far away and busy were his
thoughts.

Presently Frankie heaved a little
sigh, and if Robin Red Breast had been
watching he would have seen a big bright
tear steal down the little boy's cheek.
Then just as another big tear was getting
ready to come Frankie looked up, and
he was just in time to see a beautiful
yellow butterfly flit over the garden wall,
and make its way to the bush, all covered
with deep pink roses, that scrambled
over grandmother's arbor.

"A butterfly!" cried Frankie, "A lovely
yellow butterfly," and the tear that was

getting ready to drop glistened in his
eyes instead, making them very, very
bright.

For a long time he watched the pretty
butterfly as he fluttered from rose to
rose. Then his dreamy expression gradu-
ally gave way to one of determination,
for he was making up his mind to follow
Yellow Butterfly!

Yes, he would follow him, and follow
him, until at last he came to his dear
Mamma. Grandma said she had gone
away to God, and that if he were a
good boy he would go and join her some
day, but he was so lonely and sad this
afternoon he felt he must see her right
away.

They were sitting on that very bench,
he remembered, when Mamma told him
that all the pretty flowers and birds and
butterflies came from God, so he would
follow Yellow Butterfly when he flew
home that night, until he came at last
to his dear Mamma.

No sooner had he made up his mind
to do this than he jumped quickly from
the bench, eager to be off on his journey.

But Yellow Butterfly seemed in no
hurry away. He fluttered from rose to
rose, and from peony to peony, then
darted over to the bleeding-hearts and
pansies. From there he must have
spied the syringa bush, for he settled on it
and seemed to like it so well that Frankie
was beginning to think he never would be
off when presently, to his great delight,
he spied him making towards the gate.
Quickly Frankie followed.

Through the gate, and down the white
road went Yellow Butterfly, and through
the gate and down the white road went
Frankie. Sometimes he had to run
to keep up with Yellow Butterfly who
fluttered along quite quickly, but when he
stopped so often by the wayside to swing
on a red clover, or rest on a wild-rose
bush, or even settle in the middle of the
road with his wings lifted high from the
dust, that Frankie could always keep
pretty well up with him.

Once, it is true, when they were passing
a hay field where men were busy with
the hay, Yellow Butterfly flew over the
fence, but just as Frankie was climbing
the fence to follow him he fluttered back
on the road again, and it was well there
were so many buttercups just there by
the wayside to detain Yellow Butter-
fly, or he might have gone sailing on out
of Frankie's sight before he could climb
back again.

On and on they went, and after awhile
Frankie began to feel so very warm,
and so tired too, that he was wishing
Yellow Butterfly's home might be some-
where in the cool woods on the side of the
road just ahead of them.

But when they came to the woods
Yellow Butterfly fluttered on past the
first trees as though he did not know how
cool their shelter might be, and Frankie
was feeling ready to cry with disappoint-
ment, for they were nearly past the woods
and out on the hot white road again when
suddenly Yellow Butterfly turned in
where a path led through the trees.

Frankie lost no time in following him,
and oh! how delightful it was to chase
Yellow Butterfly along the cool winding
path. Pretty blue violets peeped shyly
out here and there along the way, but
Yellow Butterfly seemed in such a hurry
Frankie didn't dare stay to pick any.
Once a black squirrel catching sight of
them, scampered off up a tall tree for
dear life, and a little farther on a red-
headed woodpecker made as much noise
with his beak as Frankie could with his
wooden hammer. Caw! Caw! went the
black crow as they chased along, and
again and again he repeated it Caw! Caw!
Caw! Caw!

Presently Frankie could see a bright
patch of sunlight ahead, and when he
caught up with it he fairly cried out with
delight, for there in an opening in the
woods were such daisies and buttercups
and honeysuckles as he had never beheld
in his life before. Yellow Butterfly seem-
ed just as delighted, for he settled down
on a honeysuckle as though he intended
to stay and enjoy it all for a while.

Frankie was rather glad to see him
do this, for he wanted to rest too, so
he found a mossy stump nearby and sat
down to wait for Yellow Butterfly.

He didn't realize until he sat down how
tired he really was, and he felt sleepy too,
so he hoped Yellow Butterfly wouldn't
linger too long. He looked over at him,
but he was still on the honeysuckle,
and as he watched Frankie couldn't
help thinking what a lot of yellow God
must need to make butterflies and honey-



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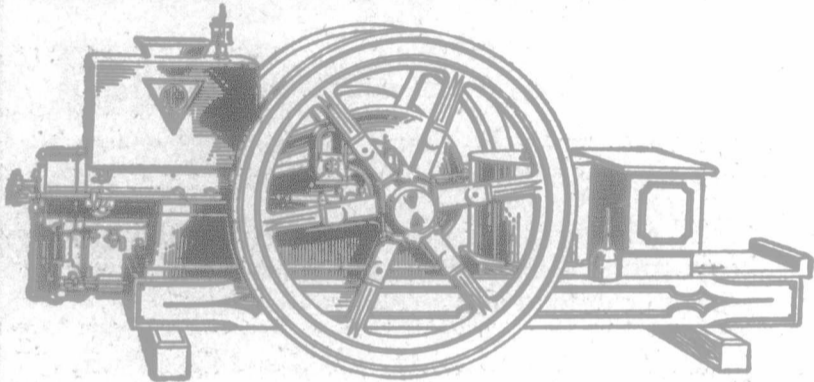
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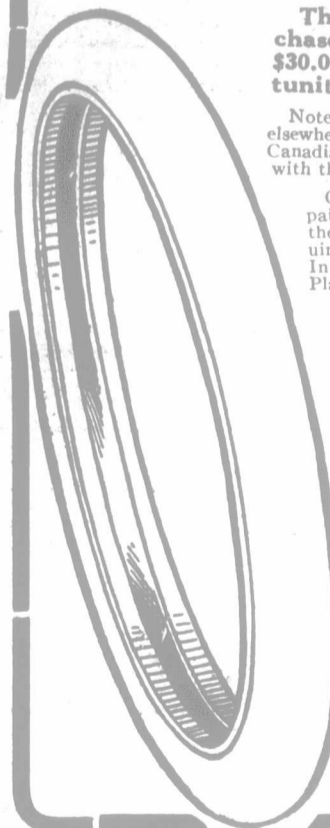
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suckles and daisies, yes, and sunlight too. So many things were yellow, and there was so much yellow everywhere he looked that even when he closed his eyes he still saw everything for a minute in a sort of yellow blur. * * * *

When grandma had spread the tea-table that afternoon and put everything in order for the evening meal she went into the garden to wait with Frankie until his Daddy should come home and they would all have tea together.

But how surprised she was when Frankie was nowhere to be seen. She called and called, but there was no answer, and she was just wondering what next to do when Daddy came in at the gate.

"Where's my little boy, Grandma?" cried he, for sometimes Frankie teased Daddy by hiding behind Grandma's skirts, and Daddy had to look and look before he could find him.

But Grandma looked worried to-night when she said she didn't know where Frankie was, and Daddy knew then that he was not being teased, but that his little boy must have run off somewhere and perhaps got lost.

"He came out to play after dinner," said Grandma, "and I was sure he was still in the garden, but when I came out a few moments ago he was nowhere to be seen. I've called and called, but he does not answer."

"Oh well, don't worry, grandma," said Daddy. "He's likely gone over to his cousins. I'll just go and see."

But no, Frankie was not over at his cousins'. Neither was he at any of the neighbors' houses, for Daddy inquired at every one of them.

And then not only Daddy, but all the neighbors became alarmed, for they feared some accident had befallen the little boy, or else that he had run away and got lost, so they all turned out to help Daddy find him. Some of the men went up the road, others went through the fields and across the commons, others took the opposite direction, while Daddy with two friends decided to follow the white road that led towards the village—the very road, fortunately, that Frankie had taken.

As they went along Daddy and his companions asked everyone they met if they had seen anything of a little curly-headed boy, and when they came to the hayfield they called to the men who were still working there, although the sun had almost set and only a red rim of it was to be seen still peeping up above the far horizon of the field.

One of the men said, yes, he had seen a little boy. He remembered noticing him on the top of the fence as though he intended climbing over into the field, but he had evidently changed his mind, for he climbed back again and had gone on down the road. So Daddy and his friends kept on their way, for they felt sure the little boy must be Frankie, and after travelling along for a time they came in sight of the woods.

Daddy suggested they should separate when they reached them, and each searched a different portion before going farther down the road, and this is what they did. They were to call to one another should anyone find any trace of Frankie, and they arranged a meeting place by the roadside when the search was over.

It was almost dusk when the three men turned in among the trees, and Daddy was beginning to feel quite anxious, for he knew how terrified his little boy would be if he had lost his way in the woods and had to spend the night there. The underbrush, too, was so thick and tangled that he couldn't hurry, and he was afraid night would overtake him and his friends before they could search the woods.

But Daddy's Angel must have been guiding him, for, after stumbling along for some time he suddenly came upon a path, and he had only followed it a short distance when it brought him out into a little clearing.

It was bright in the clearing after the dusk of the woods—in fact it was filled with a rosy light from the after-glow, and Daddy, in spite of his anxiety, thought how lovely it was. He was dimly conscious of the myriads of flowers too, although he was too preoccupied to really notice them. His thoughts were all for his little boy, and he glanced eagerly around in the hope of finding him, but alas! he was nowhere to be seen.

There was nothing to do then but cross the opening and search in the woods beyond, and Daddy was just about to do this when something seemed to tell

him to look on the other side of the mossy stump.

"But he cannot be there," he said to himself, "for I could surely see him from here if he were. Still I suppose it will do no harm to look," he concluded, as he went over.

Not to the end of his days can Daddy be glad enough that he did so, for when he looked his eyes fairly bulged for joy at the sight that greeted them—the sight of a little boy seated on the grass, with his back propped against the stump, and his curly head fallen forward on his chest. It was little Frankie fallen fast asleep! And on his shoulder, to Daddy's great surprise, was perched a Yellow Butterfly! It fluttered away when Daddy stooped to pick up his darling boy, and soon disappeared down the path in the woods.

"O Daddy," Frankie exclaimed, when Daddy's kisses and caresses had awakened him, and he opened his blue eyes, "O Daddy, I've just seen my Mamma."

"Your Mamma, Frankie?" Daddy inquired.

"Yes, my Mamma," Frankie repeated, "and do you know she told me I was a foolish little boy to follow Yellow Butterfly so far to find her, because she said she was always right beside me and watched over everything I did, even though I couldn't see her."

"Why of course Mamma is always beside her little boy, and watches over him all the time," Daddy answered, "so why did he run away with Yellow Butterfly to find her?" he asked.

Then Frankie told Daddy how lonely he had felt for his Mamma that afternoon, and why he had followed Yellow Butterfly in the hope of finding her. And when he had told him all Daddy's eyes looked very bright as though they had tears in them, and he kissed his little boy ever so gravely and tenderly.

"But I don't know where Yellow Butterfly's gone," said Frankie. "I don't see him anywhere."

"Well," Daddy said, "I shouldn't be surprised if he were half way home by now, for that's the way he went when he flew off your shoulder."

And that pleased Frankie so much that nothing would do but that he and Daddy should chase off down the path in the hope of overtaking him, but he was still out of sight when they reached the roadside where Daddy's friends were waiting, for Daddy had called to them some time before that his little boy had been found.

So together they went down the road towards home, and although it was almost dark when they got there Grandma was still waiting by the gate.

Nobody could be gladder to see anyone than she was to see Frankie, but I think Daddy must have seen a little scold in store for the little boy who had run away and caused them all so much anxiety, for he shook his head at Grandma over Frankie's shoulder, and put his fingers on his lips as though to warn her not to be cross.

And Grandma was glad afterwards that she had been warned, for when Daddy told her why Frankie had followed Yellow Butterfly she said, after wiping her spectacles dry and blowing her nose very hard,

"God bless his poor little lonely heart. I'm glad I didn't scold, for I wouldn't for the world add to his wee troubles."

And that evening when she had tucked him in his little cot, and all her anxiety was forgotten, Grandma felt rather glad that Frankie had run off with Yellow Butterfly, for it was well for him to know, she thought, that his Mamma still loved and watched over him even though she had gone away to God.

Not in all the country did any little boy sleep more soundly that night than did Frankie after his travels, but when he awoke next morning he remembered that he and Daddy had not overtaken Yellow Butterfly on the way home, and he felt ready to cry with disappointment, for he didn't expect now to ever see his good friend again.

Imagine then, how surprised and delighted he was when he went into the garden after breakfast to find Yellow Butterfly there before him, perched on a big pink peony, and looking as though he intended to stay all morning!

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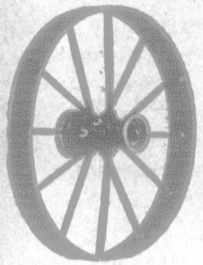
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Gossip.

The herd of milking Shorthorns at Weldwood Farm is giving a very good account of itself this summer, and the young stuff is thrifty and doing well. Anyone wishing to secure a young herd sire might do well to visit the farm and look over a son of "Cherry" 90409, a cow with a record of 9,265 lbs. milk testing over 4 per cent. This calf is about eleven months old and is ready for light service. He is dark red in color and of good conformation. He is sired by "Dominator," whose two nearest dams averaged 12,112 lbs. milk in a year. There are several male calves ranging in age from three to five months; some of these are out of cows with records, and others from heifers in their first lactation. The fall litters of pigs will be coming in the next few weeks. As all the orders for spring litters could not be filled, it is advisable to order early if desirous of securing some good young breeding stock.

R. N. Libby, of the Eastern Townships, Quebec, writes, that unless something serious happens between now and harvest time the crops throughout the Eastern Provinces of Quebec will be particularly good. He believes there will be a larger production than has been harvested for several years.

Coinage.

Many people become confused over the question of coinage, and do not understand the relation that exists between silver and gold coins. Others do not understand how it is that coins get into circulation, and who controls the making of money so that it retains as nearly a standard value as possible. The following paragraphs explain this very clearly and plainly, and are quoted from "Canadian Industry, Commerce and Finance," by J. J. Harpell.

"The privilege of coining money has always been retained by the governments of all civilized countries, each of which at the same time endeavors to eliminate from circulation the coins and currencies of other nations. In this matter Canada has always been very liberal. The coins and bank notes of the United States pass almost as readily in Canada as they do in their own country. (This was written before the present unfavorable rate of exchange developed for Canada.—Ed.) In Great Britain and Canada it is not possible to have coins struck anywhere except at the Royal Mint in London or at its branch at Ottawa. But at either of these places anyone can have gold bullion converted into coin free of charge. In English practice, however, it rarely happens this way, because the person would have to wait until his gold was coined, whereas the Bank of England will pay him within 1 1/2 pence in the pound sterling as much as he would get at the Mint. Moreover, few people have refined gold to offer, and the Royal Mint in London accepts only the refined article. The person with unrefined gold is therefore compelled to sell to refiners. The United States Mint at Washington accepts unrefined gold, and makes a small charge for refining it. By a recent amendment in the Coinage Act of Canada the mint at Ottawa is also authorized to accept unrefined gold.

"London is the market to which the surplus of yellow metal, from whatever part of the world it is mined, goes, and the price of such of it as does not go thither is also set by the London quotation. The producer takes his gold to London with the assurance that no matter how much or how little he has to offer he will receive a price there of not less than £3 17s. 9d. per ounce, because this is the price which the Bank of England is authorized by statute to pay irrespective of the quantity offered. The price is paid in Bank of England notes. On the other hand, 'The Old Lady of Threadneedle Street'—as the Bank of England is often called—cannot pay more than the above-mentioned price, so that when gold is selling at a premium the Bank of England gets none of it. In fact, when there is a demand for gold the Bank of England runs the risk of losing much of what she already has by her own notes being presented for redemption. When the withdrawals of gold from the bank in this way are so heavy that they require to be checked, the directors do so, not by raising the price of gold, but by increasing the rate of discount.

"Silver coinage is on a different basis from that of gold. It is used only for small change, and is not legal tender for more than 40 shillings in Great Britain nor ten dollars in Canada. By this is meant that the largest amount of silver a creditor can force his debtor to accept in payment of a debt must not exceed the above-mentioned amounts. Standard silver, from which coins are made, consists of thirty-seven parts of pure silver and three parts of copper. Its fineness is represented by 925. There is considerable profit to the Government in coining silver. An ounce of fine silver costs about fifty cents, and will make over a dollar's worth of silver coins. Gold coins cease to be legal tender when by use or otherwise their weight is reduced. For instance, a sovereign ceases to be legal tender when its weight is less than 122.5 grains. But in the case of silver there is no weight fixed below which a silver coin ceases to be legal tender. It is sufficient that its denomination is decipherable. Of course all silver coins of the same denomination are of a certain standard weight when they come from the mint, but after they have been in circulation for a while they become worn.

"Bronze is an alloy composed of 95 parts of copper, 4 parts of tin and 1 of zinc. As in the case of silver coins the value of bronze coins is very much greater

Prompt Returns From Shipments

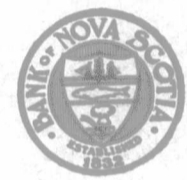
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WHEN a man insures his life he does well. When he insures his PURPOSE he does better. A man ordinarily takes insurance to protect his family. When he sees to it that the Policy is drawn to most surely effectuate that purpose, he renders his family the soundest possible service. That implies benefit in the form of an INCOME, the most valuable type of protection. Write for information concerning the attractive Monthly Income Policies of

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Opportunity Shuns Those Unprepared To Grasp It.

Start a Savings Account to-day, in the Molsons Bank, and be ready for opportunity when it comes along.

than the value of the metal in them, and hence their manufacture is also a source of profit."

Cash Value of Corn Silage.

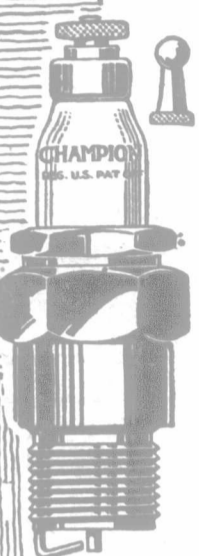
From experiments with steers conducted by G. E. Morton and T. E. Leiper of the Colorado Experiment Station, the following table was made and gives the value of corn silage per ton when fed with barley and alfalfa, as indicated by these experiments, when barley and alfalfa cost varying amounts.


Table with columns: When Alfalfa costs per ton, When Barley costs per cwt., Value of corn silage per ton. Rows show values for alfalfa costs from \$10.00 to \$20.00 and barley costs from \$5.21 to \$8.25.

For example when alfalfa is selling at \$20.00 per ton and barley at \$2.75, then corn silage is worth approximately \$9.46 per ton.

No Motor is Better Than its Spark Plugs

You may have the best motor in the world, but it cannot produce maximum power without efficient spark plugs. On the same principle a spark plug is no better than its insulator which although a seemingly insignificant part of your motor or engine, must withstand the same hammering blows of gas explosions and the same rapid expansion as the steel cylinder in which it is placed. That is where 3450 insulators in





Champion Dependable Spark Plugs

demonstrate their Superiority

3450 separate experiments have produced in Champion insulators a material so much like steel in its ability to take the hardest kind of punishment that it is practically indestructible! Do you wonder that four out of five gasoline motors and engines have Champion Plugs as standard equipment? There is a type of Champion Plug that will enable your motor or engine to maintain its highest efficiency no matter what its make or what it is used for. Any spark plug with "Champion" on the insulator is guaranteed to give you satisfactory service.

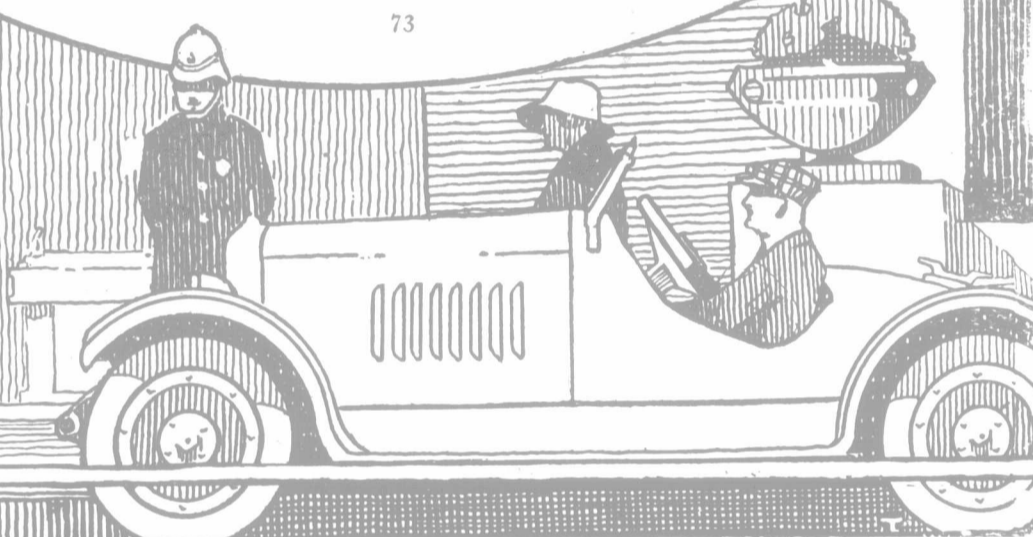
Sold wherever Motor Supplies are sold.

Champion Spark Plug Co., of Canada Limited
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"Heavy Stone" B 13, 1 1/2 in. B 43, 1 1/2-18. B 53, 1 1/2-Long, Price \$1.25

Ball terminal when specified, otherwise regular knurl nut.

73



250,000 Satisfied Ford-owners answer "YES!"

GUARANTEE
If, after 30 days' use, you are not entirely satisfied with H & D Shock Absorbers, take them off and get your money back.

TO THE question you might ask yourself: "Shall I have H & D Shock Absorbers put on my Ford?" a quarter million of people who know and use them on their Fords would enthusiastically say "Yes!"

You cannot *imagine* the difference a set of H & D's make to Ford travel—you must experience it. They give you big-car comfort over rough roads, save tires, engine, frames and springs.



PRICES
Single-Arm Style—Set of 4.....\$10.00
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Easily attached—no holes to bore. Earn their cost the first season; and last as long as the car itself.

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Do not underestimate H & D's on account of their low cost. No other device at any price gives such splendid satisfaction.

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Gossip.

A Pleasing Shorthorn Offering.
Quite a number of our readers during the past year have made several purchases from the herd of Chas. Graham, of Port Perry. These, as well as others who are interested in Shorthorns, will be pleased to learn that Mr. Graham's herd, as seen recently by a representative of this paper, is at present showing in the best of condition, and includes many more good things which are priced for sale. Among the breeding females, the more outstanding ones are cows like Gloster Star 8th, a four-year-old Gloster cow, by Nonpareil Victor, which has a red bull calf at foot by the 13,599-lb. R. O. P. sire, The Duke. This bull, it will be remembered, is the chief sire in service in Thos. Graham's, Mardella herd, and is perhaps one of the strongest breeding dairy-bred bulls in Ontario to-day. Another good breeding matron in the herd is the five-year-old Lavinia cow, and she also has a bull calf which is deserving of a place at the head of some good herd. This calf is sired by Scottish Boy, one of the best breeding sons of that good sire Minto. There is also in the stable a good bull calf from a Henrietta heifer, sired by Scottish Boy, and he is offered, with his dam, who is again referred to The Duke. Other families appearing in the list of breeding cows are Mayflowers, Louisas, Wild Dames, etc., all of which backed by good sires, and being mated with The Duke, should prove excellent breeding propositions. A full sales list may be had on application. Address Charles Graham, Port Perry, Ont., mentioning this paper.

Graham's Mardella Herd of Milking Shorthorns.

As evidenced by the splendid youngsters now coming on in the Mardella herd of pure-bred Shorthorns, owned by Thomas Graham, of Port Perry, Ontario, there are but few dairy-bred sires in Canada that are siring more good individuals than the present Mardella herd sire, The Duke. The half dozen young bulls (all the get of this sire), as seen recently at the farm by a representative of this paper, are all of the sort that would do credit at service in even many of the stronger Scotch herds of the Province. Combined with this, the dam of their sire is Lily Archer, a 13,599-lb. R. O. P. cow with 475 lbs. of fat in a year, and sired by Archer. For the most part the dams of these calves have never been run in official test, but in many instances they are 40 and 50-lb.-a-day cows, and descended from one of the several noted sires that have been used in the Mardella herd during the past few years. Of the more outstanding breeding females, there are a dozen descendants of the great Duke of Hillside 17th, a bull which left a greater impression on the herd than that shown by any other one sire. The cows referred to, aside from being far above the average in individuality, are all exceptional milkers, and many of the best calves now in the stables are from these good-milking dams. It is certain that Mr. Graham was favored with a goodly portion of good luck, as well as much foresight when he chose The Duke to head these good milking females. Among the more recent of the season's past sales, Mr. Graham reports the sale of two good heifers, one from a Mountain Hero dam and the other from a Rosalea dam, to Wm. R. Henwood, of Napanee. The latter heifer was sired by The Duke, and Mr. Graham stated she was one of the most promising heifers he had sent out for some time. To W. G. McCullen, of Perth, he shipped a six-months son of The Duke, from a Hermosa dam, and to Geo. W. Drinkwater, of Gravenhurst, one cow and a twelve-months bull, while F. C. H. Bent, of Onemee, purchased another Henrietta bull calf, sired by The Duke, and from one of the best milking Red Rose cows ever retained at the farm. In passing, we might add that crop conditions at Mardella are this year unusually bright. Mr. Graham stated that he was fortunate in getting his seed in early, and the crops, getting away to a good start are at present showing very little effect of the continued dry weather.

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Kennelworth Farm Angus Bulls The strongest offering we ever had, all are sired by Victor of Glenora and a number are ready for service. Prices reasonable.
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When writing please mention The Farmer's Advocate.

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It is penetrating Sore or Wound Boils, Carbuncles application is equal. Removes Price \$1.75 per by us express pro The LAWRENCE-

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The present string some classy herd selves and sired Angus, write you G. C. CHANNON Railway connecti

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A choice lot of Edward. Coll
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For sale: B English bred right kind to crease profits prices and up Pigs. A gr deep, thrifty.
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I HAV SHORTE
All are of service Dams. They ar Gift herd sire v Prince. Also ha sire Primrose D him. Inquiry in thing in Tamwo A. A. COLWIL (phone.) Newc

Guaranteed
service, sired by calves and femal CHAS.

DANGEROUS
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WILL RELIEVE YOU.

It is penetrating, soothing and healing and for all Sores or Wounds, Felons, Exterior Cancers, Burns, Boils, Carbuncles and all Swellings where an outward application is required CAUSTIC BALSAM HAS NO EQUAL. Removes the soreness—strengthens the muscles. Price \$1.75 per bottle. Sold by druggists or sent by express prepaid. Write for Booklet L.

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Meadowdale Farm
Forest Ontario.

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SUNNY ACRES
ABERDEEN-ANGUS

The present string of young bulls for sale includes some classy herd bull prospects, winners themselves and sired by champions. If interested in Angus, write your wants. Visitors welcome.

G. C. CHANNON, Oakwood, Ontario
P. O. and phone
Railway connections: Lindsay, C.P.R. and G.T.R.

Sunny Side Herefords—Heifers to calve in Sept., some calves at foot. A few bulls ready for service. All priced to sell.
ARTHUR F. O'NEIL & SONS
Phone Granton. Denfield, Ont.

Alloway Lodge Stock Farm
ANGUS, SOUTH DOWNS,
COLLIES

A choice lot of Angus cows in calf to Queen's Edward. Collie puppies—A litter now ready.

ROBT. McEWEN, R. 4, London, Ont.

Conclusive Proof
can be furnished that the use of good Shorthorn bulls on the farm or on the range increases the size and improves the feeding qualities of the produce of the herd.

A Shorthorn bull is a profitable investment.

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Dominion Shorthorn Breeders' Association
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Brooklin, Ont. Box 285, Guelph, Ont.

Shorthorns

English Dual-Purpose Shorthorns

For sale: Bull calves and young bulls. English bred for milk and beef. The right kind to head Canadian herds to increase profits. From very moderate prices and up. English Large, Black Pigs. A great bacon type, long and deep, thrifty. Come or write.

LYNNORE STOCK FARM
F. Wallace Cockshutt
Brantford - Ontario

I HAVE FOUR CHOICE SHORTHORN BULLS
All are of serviceable age and from good milking dams. They are sired by my former Wedding Gift herd sire which was a son of Broadhocks Prince. Also have younger calves by present herd sire Primrose Duke as well as females bred to him. Inquiry invited. Write me also for anything in Tamworths.

Guaranteed Shorthorns—I have one bull ready for light service, sired by The Duke. Also have younger calves and females safely bred. Prices right.
CHAS. GRAHAM, Port Perry, Ont.

The Man Behind the Cow.

A. and B. had farms adjoining. Both were milk producers and sold their milk to the same dealer. Both produced about the same amount of milk and they received the same price. But there was a decided difference in their farms, their barns and their premises in general and also in the quality of milk produced.

A. never seemed to get into trouble with the milk inspectors. He never had milk returned and he had been selling for the past ten years. He was not bothered by letters of warning requesting him to clean up. In fact, he got along quite well. He was well satisfied both with the price he received and the dairy laws he operated under. The opposite seemed to be true in the case of B. He had all kinds of trouble. Quite frequently he had a can of milk returned from the city because it was too warm. He did not think it necessary to cool it. Occasionally he found one of his cans painted red with the word "rusty." His milk cans usually could be found by the road side several hours after the truck returned from the city. He frequently received warning that his barn was dirty, that his cows were plastered with manure, and their flanks and udders were filthy; and he was told repeatedly that he could not produce clean milk unless he remedied these conditions.

But B. did not seem to understand it. He wondered why it was that his milk was condemned so often and his neighbor's was not. Unlike some milk producers, B. did not get peeved. He was reasonable about it and was determined to find out what the real trouble was, and why he could not get the same results as his neighbor. For that reason he made a visit to his neighbor's farm to inspect his dairy, and this is what he found:

A. had only an ordinary cow stable, nothing elaborate whatever. It had a good tight ceiling and substantial concrete floor, plenty of windows and the stable was kept very clean. A fresh coat of whitewash made the place look bright and clean. He explained to his neighbor B. that he endeavored to keep the stable very clean at all times. It was very noticeable among other things that the cows were clean, healthy and appeared to be in excellent condition. A clean, dry barnyard surrounded the rear of the building. This prevented the cows from becoming covered with dirt in rainy weather. A clean basin with water, soap, and clean towels were accessible to the milkers and used previous to milking.

After inspecting the stable the two men walked over to the milk house which was situated about 75 feet from the stable. It was a cool spring day, and B. was greatly surprised when he noticed the milk coolers set up and ready for use, and upon questioning found that it was the custom the year round to immediately cool the milk to a low temperature. A. explained to him that this cooling process removed the animal heat, gave the milk an excellent flavor and kept the bacterial count low. Outside the milk-house, inverted on sticks were the milk cans and covered milk pails. It was explained to B. that the covered milk pails which were used in this dairy, played an important part in the production of clean milk and that these pails cost only a trifle more than the ordinary open top pail. B. also noticed that a clean jacket hung in the milk-house ready for use at the next milking. It was apparent that it was the methods A. followed that really determined the grade of milk he was producing.

B. went home a much wiser man and to-day he is one of the most prosperous, successful and cleanest milk producers in this section. His barns, stables and cows are the pride of the neighborhood, and needless to say he is never bothered by the inspectors.

In looking over the report of the recent Carpenter & Ross sale at Chicago, many Ontario breeders will, no doubt, have noticed that a white heifer, Augusta O.A.C. 5th, sold for \$2,500. This heifer was bred at the O. A. C., Guelph, and was sold as a yearling in their last October sale. The heifer is by Proud Diamond, and out of Augusta O. A. C., a roan cow by Loyal Scot Imp. The price which this heifer brought indicates the quality of stock left by the herd sire at the O. A. C. The dam of this heifer now has a particularly promising bull calf at foot.

Imported Shorthorns
SIREs IN SERVICE;

Imp. Collynie Ringleader (Bred by Wm. Duthie)
Imp. Clipper Prince (Bred by Geo. Campbell)
Imp. Orange Lord (Bred by Geo. Anderson)

We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

J. A. & H. M. PETTIT - **Freeman, Ontario**
Burlington Jct., G.T.R., half mile from farm. Phone Burlington.

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, ONT. Myrtle, C.P.R.; Brooklin, G.T.R.; Oshawa, C.N.R.

Beach Ridge Shorthorns and Yorkshires—Shorthorn herd headed by Sylvan Power 95871, a junior champion on Canadian circuit in 1915, and sire of the G. Champion bullock at Guelph Winter Fair, 1918. Young stock of all ages, both sex, for sale; also young cows with calf at foot or in calf to Sylvan Power. We can supply any want in Yorkshires.

R. D. HUNTER, EXETER, ONTARIO

ROBERT MILLER, Stouffville, Ont. Has EIGHT of the best young bulls that he has owned at one time, good ages and beautifully bred. Also several cows and heifers, some of them with calves at foot, others in calf to Rosemary Sultan, the Grand Champion bull at head of the herd. Everything of Scotch breeding. The prices are very reasonable, and though the freight is high, it will be paid.

DUAL-PURPOSE SHORTHORNS
Herd headed by Dominator 106224, whose two nearest dams average 12,112 pounds of milk in a year. Cows in the herd with records up to 13,891 pounds of milk. Cows in calf to Dominator priced to sell.

WELWOOD FARM, Farmer's Advocate, London, Ont.

GRAND VIEW FARM SHORTHORNS
Herd headed by Lord Rosewood =121676= and by Proud Lancer (Imp.). Have a few choice bull calves and heifers left, sired by Escanna Favorites, a son of the famous Right Sort (Imp.).

W. G. GERRIE C.P.R. Station on farm. Bell Phone. **BELLWOOD, ONTARIO**

Spring Valley Shorthorns—Herd headed by Sea Gem Pride =96365= Present offering includes two real herd headers. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and a few females. Write for particulars.

KYLE BROS., R. 1, Drumbo, Ont.
Telephone and telegraph by Ayr.

Shorthorn Bulls and Females—Herd headed by Ruby Marquis, a son of the great Gainford Marquis (Imp.) our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere.

PRITCHARD BROS., R. R. No. 1, Elora, Ont.

Shorthorns Landed Home—My last importation of 60 head landed at my farm on June the 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, Broadhocks, Augusta, Miss Ramsden, Whimble, etc. Make your selection early.

GEO. ISAAC, (All railroads, Bell phone) Cobourg, Ontario

Walnut Grove Scotch Shorthorns Established 1840. Gainford Eclipse and Trout Creek Wonder 2nd in service. We are in a position to supply bulls and females of the best Scotch breeding fit for either show or foundation stock. We invite inspection of cattle. Write your wants. **D. BROWN & SONS, Shelden, Ont.** Long Distance phone. Twelve miles west of St. Thomas, P.M., M. C. R.

SPRUCE GLEN FARM SHORTHORNS
Four bulls (thick mellow fellows) from 9 to 13 months—Reds and Roans. Also a few choice heifers and two grade yearling heifers from heavy milkers. Priced to sell.

JAMES McPHERSON & SONS - DUNDALK, ONTARIO

R.O.P. Dual-Purpose Shorthorns
Herd headed by Brant Hero =113223= with good milk backing on both sides. Foundation Cow Maud =108683= with record of 11861 lbs. milk, 513 lbs. butter fat one year. Have heifers on R.O.P. from this cow doing well. Visitors welcome at farm.

GROVER C. ANDERSON - R.R. No. 1, Waterford, Ont

A 12 MONTHS' OLD ROAN WIMPLE BULL FOR SALE
Others coming on. Also Lincoln lambs, rams and ewes, got by an imported ram, out of heavy shearing ewes.

J. T. GIBSON, Denfield, Ontario

Pure Scotch and Scotch-Topped Shorthorns—We have several choice young bulls of the best of breeding and ready for service. Two are by Rapheal (Imp.), one by Right Sort (Imp.), one by Sittyton Selection, and several by our present herd sire, Newton Cedric (Imp.). Prices right.

R. M. MITCHELL, R. R. No. 1, Freeman, Ontario

Cedar Dale Farm—The Home of \$15,000 Sire—Lakeview Johanna Lestrage, the \$15,000 son of the 38.06-lb. Lakeview Lestrage, is our present herd sire. We have young bulls sired by him and females bred to him—at right prices. Also have bulls of serviceable age by our former herd sire, Prince Segis Walker Korndyke, son of King Segis Walker.

A. J. TAMBLYN, Cedar Dale Holstein Farms, one mile from G.N.R. Station, ORONO, ONT.

Holstein Bulls
15 ready for service, 1 younger. From dams with 32.7 lbs. butter in 7 days to those priced for the most conservative buyer. Females also.

R. M. HOLTBY
R. R. NO. 4, PORT PERRY, ONT.

PIONEER FARM HOLSTEINS
My present sales list includes only bull calves born after Jan. 1st, 1919. These are priced right.

WALBURN RIVERS & SONS - R.R. No. 2, Ingersoll, Ontario

WALNUT GROVE HOLSTEINS
I am offering a choice lot of bull calves sired by May Echo Champion who is a full brother of world's champion May Echo Sylvia; also a few cows just fresh.

C. R. JAMES
(Take Radial Car from Toronto to Thornhill) **Richmond Hill, R.R. No. 1, Ont.**

6 BULLS BY KING SEGIS PONTIAC DUPLICATE
Brother to the \$50,000 bull. Three of these are ready for service and all are show calves. Write us also for females. We are pricing a number of heifers, bred to our own herd sire, Sylvius Walker Raymondale, a grandson of the great May Echo Sylvia. We now have bull calves a few months old by this sire. Let us know your wants. **R. W. WALKER & SONS, Manchester Station, G.T.R. Port Perry, Ont. R.R. No. 4.**

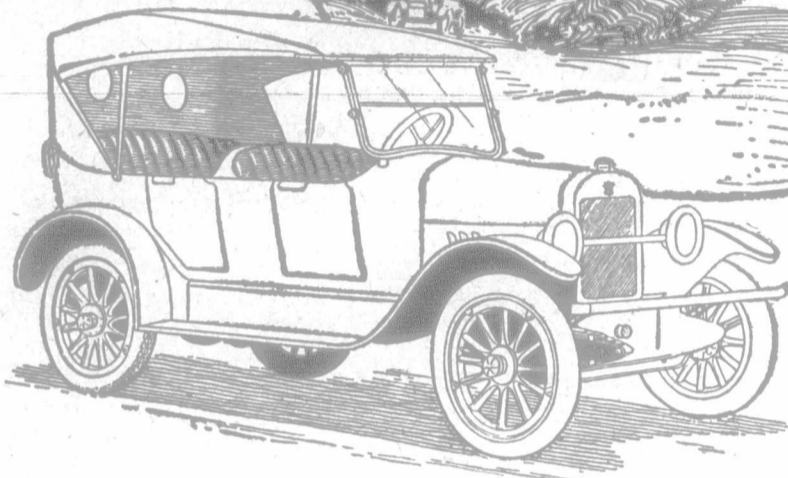
9 HOLSTEIN BULLS
Any age up to 14 months. From high record and untested dams. Sired by May Echo Prince and Gipsy Pontiac Cornucopia; both 30 lb. bulls. Price right.

JOS. FEEL, Port Perry, Ontario.

For Quick Sale—One Bull Eight Months Old—His dam gave 16,388 lbs. milk, and his sister 20,400 lbs. milk. He is a son of Judge Hengerveld De Kol 8th, who is a 32.92-lb. grandson of De Kol 2nd Butter Boy. Write at once for price, or, better, come and see him. Take Kingston Rd. cars from Toronto. Stop 37.

ARCHIE MUIR, Scarboro P.O., Ont.

Briscoe Hill Climbing



It is when you climb a hill like the one here pictured, that your car shows the kind of a heart it possesses.

The average car—slowed down to make a curve half-way up a hill—will not "pick up" again on the final ascent. But the Briscoe will. The Briscoe Motor responds to your call for a spurt—and up, up, up you go—a

steady flow of power answering your foot pressure on the gas lever—and you finish that long climb triumphantly "on high." The efficiency of the Briscoe Motor has been demonstrated in several ten-day, non-stop test runs, in one of which a record

of over 29 miles to the gallon was established. In less spectacular fashion, the Briscoe Motor is proving its economy and efficiency by year-in, year-out service, on all sorts of roads, and under all sorts of conditions.

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ANTICIPATION will be greater than **REALIZATION** if you are not using a **Good Shorthorn Bull**
I have a few imported ones ready for service, as well as several of my own breeding. The price is not high.
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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.
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Port Perry, Ontario.
R. R. No. 5

Dual-Purpose Shorthorns—A grandson of Greengill Victor 2nd 58739, and First Choice 83253; also grandson of Benachie imp. 98057 and Royal Bruce imp. 89909. Priced reasonable, as I am short of help.
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Raymondale Holstein-Friesians
A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pietertje) and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long. Write to-day.
RAYMONDALE FARM
Vaudreuil, Que. **D. RAYMOND, Owner**
Queen's Hotel, Montreal.

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 from good record dams.
Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.
GORDON S. GOODERHAM, Clarkson, Ont.
Stations: Clarkson and Oakville. Farm on Toronto and Hamilton Highway

ORCHARD LEIGH HOLSTEINS
3 young bulls—5 months old—well marked—good individuals. Dam of No. 1. 29.20 lbs. butter in 7 days, 100 lbs. milk in one day. Dam of No. 2. 22.08 lbs. butter in 7 days. Sire's dam 34.98 lbs. butter in 7 days at 4 years old. Write for pedigrees or better come and see them and their dams.
JAS. G. CURRIE & SON (Oxford County) Ingersoll, Ont.

Hospital For Insane, Hamilton, Ontario
We have yearling grandson of King Segis Alcartra Spofford—a splendid individual. Also fine bulls of younger age, prices reasonable Apply to Superintendent.

29 Pounds Butter—103 Pounds Milk
This is the seven day butter record and the one day milk record of the dam of my last bull of serviceable age—an exceptional bred youngster and a choice individual. Also have a month old bull whose dam and sire's dam average 34.36 lbs. of butter in 7 days, 135.07 lbs. of butter in 30 days and 111 lbs. of milk in 1 day. If you want bulls of this breeding I can save you money.
D. B. TRACY
HAMILTON HOUSE
HOLSTEINS OF QUALITY
Cobourg, Ontario.

Silver Stream Holsteins—Choice Bulls—We have six from 7 to 14 months old, sired by King Lyons Colantha, the records of his six nearest dams and from R.O.P. tested dams. Individually as good as their breeding. If interested, write for particulars and prices, or better come and see them.
JACOB MOGK & SON, R.R. 1, Tavistock, Ont.

The Hessian Fly.
EDITOR "THE FARMER'S ADVOCATE":
The Hessian Fly has made its appearance in a number of wheat fields in Western Ontario this year, and a recent survey of fields in the vicinity of Caradoc and Metcalfe Townships indicated that it was present in every field visited. The infestation is not by any means severe, and very little injury has so far resulted, but, in as much as the pest is so generally distributed, prompt measures should be taken at once to prevent its further spread, otherwise the fall wheat crop is very likely to be seriously damaged, if not entirely destroyed. The indications of its presence are so conclusive that farmers generally are urged to carefully survey their wheat fields and adopt every precautionary measure to control the insect. Hessian Fly infestation in midsummer is easily detected. The infested wheat is bent or broken down at the first or second joint, generally just above the second joint. Between the joint and the leaf sheath small brown, flax-seed like objects known as the puparia will be found. If these are present there can be no doubt, but that the injury has been caused by the Hessian fly. Immediate action is imperative, as great danger is likely to follow if precautionary measures are not taken.
The Hessian fly has been responsible for losses totalling many millions of dollars. Possibly no other single insect is such a menace to the grain farmer. Every endeavor should be made to prevent its increase. While it is not possible to give a "fly free" sowing date (this being governed very largely by seasonal conditions), the undermentioned suggestions, if carefully followed, will materially assist in keeping the pest in check:

1. Plough infested wheat stubble as soon after harvest as possible, the ploughing to be at least 5 inches deep, care being taken to cover all the stubble. It is advisable also to roll the ground firmly after ploughing.
 2. If possible, burn the stubble.
 3. Destroy all volunteer wheat.
 4. Burn or feed all screenings as soon as possible.
 5. Do not plant wheat on infested stubble.
 6. Thoroughly prepare the fall wheat ground, fertilize liberally, use clean selected seed, and sow as late as possible.
- The undersigned would be pleased to receive reports of the presence of this insect from farmers resident in Western Ontario.

H. F. HUDSON,
Field Officer, in charge of Dominion Entomological Laboratory, Strathroy, Ontario.

Questions and Answers.
Veterinary.

Cartilagenous Tumor.
I have a pure-bred Holstein cow which has gradually developed a large bony lump about eight inches across, at the end of chest bone between her front legs. It is sore and seems to hurt her when she walks, it seems to be made of gristle, the skin over it is loose with no sign of breaking at all. She has had this for the last four months, and has reached the stage where it does not seem to be getting any bigger. The cow has passed the tuberculin test, is seven years old, and otherwise in good health. Dropped off in her milking when this started.
K. D.

Ans.—This is a cartilagenous tumor, an increase of volume of the cartilage that surmounts the sternum (breast bone). It is usually caused by pressure, as by the cow lying on hard floors without sufficient bedding, or by pressure of the sternum against the manger when feeding, but may have been caused by violent direct injury. In most cases it does not interfere much with the animal, and when the cause is removed it usually ceases to increase in size. It might be reduced to some extent by the daily and long continued application of an absorbent as one made of 4 drams each of iodine and iodide of potassium and 4 oz. each of alcohol and glycerine. A little of this well rubbed in once daily might cause reduction to a more or less marked degree. The quickest and surest method of removal is an operation by a veterinarian.

FS and Stock
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We have bred champions for mail. We bred, grand champion a sire for improvement description and H

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The first cheque son of Lady May over 1,300 lbs., whose dam gave 1. You can't afford a sire. Write: **DAVID Denfield, R. 2,**

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The hardest and sheep of Great B wherever grazing Ram Show and St. Thursday and Fr 1919. Descriptive all information from **A. J. BURROW And 16 Bedford**

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If you want a head of Stud ram first class. Write: **Peter Arkell & S**

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lamb, good size a **JOHN MILL**

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We are now offering April. Pigs of b a few bred sows. **John G. Anness**

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Sows bred, other litters ready. **G. W. MINERS**

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Boars ready for s farrow; extra fine wean. **Leslie Hadden.**

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Boars ready for s also young sows by **JOHN W. TODD**

Maplehurst F
Exhibition and Also three good S service, at reasonab **D. DOUGLAS**

Springbank Sch
Whites we have s well gone with pig **Wm. Stevenson**

Hessian Fly.

THE FARMER'S ADVOCATE: The Hessian Fly has made its appearance in a number of wheat fields in this year, and a recent survey in the vicinity of Caradoc and its surroundings indicated that it was present in every field visited. It is not by any means a new pest, but its injury has so far been confined to such a small area that it has not been much as the pest is so common, prompt measures should be taken to prevent its increase. The fall wheat is being seriously damaged, and the loss is being estimated. The indications are so conclusive that the farmers are urged to take their wheat fields and pastures under a precautionary measure to protect them. The Hessian Fly is easily detected, and if it is bent or broken in the second joint, generally in the second joint. Between the leaf sheath small objects known as the pupae are found. If these are not to be doubted, but that they are caused by the Hessian Fly, action is imperative, and it is likely to follow if the pupae are not taken. The Hessian Fly has been responsible for the loss of many millions of dollars in wheat to other single insects. It is not to the grain farmer. It should be made to the farmer. While it is not a "fly free" sowing date, it is very largely by the farmer, the undermentioned measures, if followed, will keep the pest in check.

Scratches and Stocking

—Are prevalent in cold weather, irregular work and overfeeding induces both. A system tonic and blood purifier, such as **FLEMING'S TONIC HEAVE REMEDY** will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil will quickly cure them. Per box, \$1.

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Westside Ayrshire Herd

The first cheque for \$100 takes the month-old son of Lady May 2nd—42485—, a cow weighing over 1,300 lbs., with a record of 12,107 lbs. milk; his sire is St. Nicholas of Orkney—57087—, whose dam gave 11,140 lbs. milk as a 3-year-old. You can't afford to miss him for your next herd sire. Write:

DAVID A. ASHWORTH, Middlesex Co., Ont. Denfield, R. 2.

City View Ayrshires

Write or come and see. We have them milkers, heifers, and young bulls; all tracing to the best Canadian records. **James Begg & Son, St. Thomas, Ont.**

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, 350 head, Ashford, Kent, on Thursday and Friday, September 25th and 26th, 1919. Descriptive pamphlet, list of breeders, and all information from **A. J. BURROWS, Ashford, Kent And 16 Bedford Square, London, England**

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If you want a Breeding ram buy early. Forty head of Stud rams to select from, they are strictly first class. Ewes of same quality for sale. Write for prices. **Peter Arkell & Sons R.R. 1 Teeswater, Ont.**

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A lot of young ewes in lamb to imp. ram, and ewe lambs, good size and quality, at reasonable prices. **JOHN MILLER, Claremont, Ont.**

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Shropshire ewe lambs and young ewes, two Clydesdale stallions, four Shorthorn bulls. **W. H. PUGH Myrtle Station, Ontario**

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We are now offering Boars farrowed in March and April. Pigs of both sex ready to wean. Also a few bred sows. **John G. Annesser, Tilbury, Ontario.**

Meadow Brook Yorkshires

Sows bred, others ready to breed. Six large litters ready to wean. All choicely bred and excellent type. **G. W. MINERS, R. R. No. 3, Exeter, Ont.**

INVERUGIE TAMWORTHS

Boars ready for service; young sows bred for fall farrow; extra fine lot of little stuff just ready to wean. **Leslie Hadden, Pefferlaw, Ont. R. R. No. 2**

TAMWORTHS

Boars ready for service—a choice lot to select from, also young sows bred for spring farrow. Write: **JOHN W. TODD, R. R. No. 1, Corlath, Ont**

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Exhibition and breeding stock of both sex. Also three good Shorthorn bulls, about ready for service, at reasonable prices. **D. DOUGLAS & SONS, R. R. No. 4 Mitchell Ontario**

Springbank Ohio Improved Chester Pigs and Scotch Shorthorns

In Chester Whites we have sows all ages, including several well gone with pig. Satisfaction guaranteed. **Wm. Stevenson & Son, Science Hill, Ontario**

Questions and Answers. Miscellaneous.

Heifer Failing in Milk.

I have a heifer which freshened a few weeks ago. At first she gave from 8 to 9 quarts of milk at a milking, but last week she dropped to a pint. This morning she gave the usual amount, but at night went down to a pint again. She looks healthy and is in good condition. What is the trouble? **H. C.**

Ans.—It is rather difficult to state what would cause this unusual occurrence. It might be that the heifer is of a nervous disposition, and that being excited at milking time she holds up her milk. Again, the drought may have parched the pastures and the flies so tormented the heifer that milk was not secreted.

The Germ Spot of Eggs.

What is the cause of the yolks of eggs having a white or light spot about the size of a pinhead in them? **E. S.**

Ans.—Of the various parts of the egg, the yolk, albumen, shell membrane and the shell are formed in the order named. The yolk is enclosed in the delicate membrane which is responsible for the yolk maintaining its spherical shape. The white or light spot referred to we take to be the germ spot, which is always found on the uppermost side of the yolk. If an egg is turned upside down, the yolk will gradually work its way upward to the top and the germ spot, where growth of the young chick first begins, will be on the top of the yolk. There is nothing harmful whatever in the germ spot which is, in fact, the most essential part of a fertile egg.

A Countermanded Order.

A man representing himself to be from the Art Co. Ltd. of Ont., has been going around this district; he presents a bundle of envelopes from which he requests you to draw two. If it happens you draw one containing a coupon (most of them are blank) it, he states, is as good as thirty dollars or two enlarged and painted photographs supposed to be valued at forty dollars (\$20 each), the balance, ten dollars, to be paid at time of delivery by victim. A few ladies around here have fallen for this scheme of obtaining pictures. We have heard it rumored that it is a fraud. The pictures are expected to be delivered about July 7. If you can give us any information regarding this company we shall be very grateful to you. I wrote the company requesting them not to paint or enlarge the pictures I had permitted him to take, but heard no word from them. Is there any way of countermanding this order? We have signed for it. **B. S.**

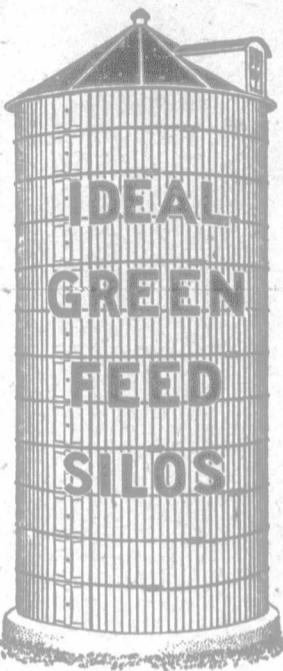
Ans.—We would suggest that you lay the matter before the county crown attorney of your county.

Building Material.

1. How much cement and gravel will it take to build a foundation 32 by 75 feet, and 2 feet high?
 2. How many squares of barn tin will it require to cover the hip roof with the rafters 15 feet and 9 feet?
 3. How many bags of cement are there to a barrel, and what is the price?
 4. Where can the metal for barn roofing be purchased? **J. B.**
- Ans.—1. It will require about 17 cubic yards of gravel and 14 barrels of cement to build the foundation.
2. We are not sure as to how the firms put up this tin. Some building material is put up in 100 square feet to the square. This roof would require about 36 squares. However, it is advisable to submit the dimensions to one of the firms handling this material and have them figure on it.
 3. Four bags of cement make a barrel. The price varies a good deal, depending somewhat on the distance to where the cement is manufactured.
 4. There are several firms manufacturing barn sheeting or roofing which are advertising in our paper. Write these for prices.

Who's Got It?—"What is worrying you now?" "Oh, nothing much," replied the man who is perpetually pensive. "I am merely trying to figure out what has become of all the daylight I saved since we set the clocks forward."

Economy



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MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

WE WILL NOT EXHIBIT at London or Ottawa this year. If you wish something to complete a show herd for either of these exhibitions we have it for sale. Our new importation sailed from Bristol on June 25th. To make room for it—we are offering special bargains in cows and young bulls. **B. H. BULL & SON, BRAMPTON, ONT.**

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CANADA'S MOST BEAUTIFUL JERSEY HERD
Herd headed by Imported Champion Rowner, winner of first prize with five of his daughters on the Island of Jersey, 1914, second in 1916, and again first in 1917. We are now offering for sale some very choice bull calves, ready for service, sired by imported bulls and from Record of Performance imported prize-winning cows. Also some cows and heifers. Prices right. We work our show cows and show our work cows.

The Edgeley Champion Herd of Jerseys
Our present offering is a year-old bull calf, the 20th of May. His two grandams will average 1,100 lbs. butter, and 17,500 lbs. of milk. His sire is a son of Sunbeam of Edgeley, and his dam is Fanny of Edgeley. His two grandams won 1st at Guelph, in aged class, in 1916 and 1918, and on record in 6 months have given 9,000 lbs. of milk, and are giving 47 lbs. a day now. He is a double grandson of the Champion cow, Sunbeam of Edgeley. Anybody interested please write at once. **James Bagg & Son, (Woodbridge, C. P. R.; Concord, G. T. R.) Edgeley, Ontario**

LAKESIDE AYRSHIRES

Our bulls took the Senior Championship, Junior Championship and Grand Championship in Sherbrooke, and first in their respective classes at Quebec, in addition to taking the special prize for the best bull on the grounds any breed. We have others like them. Write for catalogue. **D. McArthur, Manager Phillipsburg, Quebec**

Geo. H. Montgomery
Dominion Express Building, Montreal

A Fourteen Months' Ayrshire Herd Sire

A Show Bull with his four nearest dams averaging 12,590 lbs. of milk and 470 lbs. of fat in R.O.P., beautifully marked and a real herd sire. Price \$225, freight paid in Ontario. Write us about our herd of R.O.P. producers. Visitors welcome. **Wilson McPherson & Sons, St. Anne, Ont.**

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YEARLING EWES AND RAMS
We are offering Ewes and Rams of both breeds fitted for show purposes or in field condition. All are selected individuals, true to type and sired by our Show and Imported Rams.

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Please Mention Farmer's Advocate.

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America's Pioneer Flock
Present offering is between ninety and a hundred shearing and two shear rams. Flock headers a specialty. Also a number of shearing and two shear ewes of the best breeding, and ram and ewe lambs. All registered. Prices reasonable. **HENRY ARKELL & SON, 70 Beatty Ave., Toronto, Can**

BERKSHIRES
My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.

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Shakespeare Station, G.T.R.

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Our School Department.

The Story of Wool.

BY PROFESSOR G. E. DAY.

The next time you visit a fall fair, be sure you do not come away without going to see the sheep. If you are fortunate enough to visit one of our large fairs, such as Toronto, London, or Ottawa, you will find the sheep pens a very interesting place. Here you will see many different kinds of sheep; some large, some medium size, and some small; some with white faces, some with brown or grey faces, and some with black faces; some with their faces so covered with wool that they can scarcely see out through it, and some with no wool at all on their faces; some with horns, and many with no horns—in fact, the longer you look at these beautiful creatures the more you will find to interest you. There is one thing about sheep that makes them look very different from all other farm animals, and that is the warm coat which they wear. This coat is so thick and so warm that the sheep can stay outside in the coldest weather without minding the cold in the least, while a horse, or a cow, or a pig, will shiver and look very uncomfortable indeed. Now, the horse, cow and pig have coats, too; but their coats are made of hair, while the sheep's coat is made of wool, and wool makes a much warmer coat than hair.

Did you ever think of what is the difference between wool and hair? If you part a sheep's wool with your hands you will find that it is made up of a great number of very fine wool hairs, or fibres, which grow out from the skin of the sheep so close together, and so long, that they form a coat which the wind cannot blow through. After handling the wool you will find that your hands are quite greasy. This grease, or oil, comes from the skin of the sheep, and is called "yolk." It keeps the wool fibres soft and smooth, and keeps them from tangling or matting together. It also helps to keep out water, so that a sheep can stay out in quite a heavy shower of rain without getting its coat wet through. Then, again, if you look at these wool fibres closely, you will see that they are not perfectly straight, but that they have a wavy appearance. In some kinds of wool these waves, or bends, in the fibre are much closer together than in other kinds. The finer the fibre is the more waves it has, while wool with coarse fibre has very few waves. These waves, or bends, are called the "crimp" of the wool. When the waves are very close together, the crimp is said to be fine, so that fine wool has fine crimp and coarse wool has coarse crimp.

But there is another difference between wool and hair. If you take a single fibre of wool, and take hold of the end that grew next to the body of the sheep, and then draw the fibre between the finger and thumb of the other hand, you will find that it slips through very smoothly. But if you take hold of the other end of the fibre, and then draw it between the finger and thumb as before, you will find that it seems to catch, and does not slip between the fingers nearly so easily. Why is this? It is because every wool fibre has hundreds of very, very small scales on it, something like the scales on a fish, only so small that they cannot be seen without looking at the wool with a microscope, which makes the wool fibre appear many times larger than it really is. These tiny scales all point towards the outer end of the wool fibre, so that when you took hold of the outer end of the fibre and tried to draw it between the fingers of the other hand, the points of these little scales caught on your fingers and made it hard to pull. Hair also has scales upon it, but the points of the scales on the hair are rounded, and they lie so close to the hair that they do not catch hold of anything they rub against; while the scales on the wool fibre have sharp points and rough edges, so that they catch and cling to everything they touch. This difference in the kind of scales is the most important difference between wool and hair.

Now, when the weather grows warm in the spring, the sheep does not need its

warm coat, and so the farmer clips it all off, or shears the sheep, as we say. The wool is then sold, and is sent to the large factories, where it is made into all sorts of clothing, blankets, yarn and other goods.

Before it is made into cloth the wool is twisted, or spun into yarn. If the wool fibres had no crimp, they would not stay tightly twisted together, and the yarn would be of very poor quality. Then the yarn is woven into cloth by machines, and the way the wool is handled in spinning and weaving causes the little scales, which we have described, to catch into one another and the wool fibres become all tightly matted, or felted together, making a firm, strong piece of cloth. From what has been said you will see the use of the crimp and the scales of the wool. The crimp makes it possible to twist the wool into yarn which will not easily untwist again, and the scales cause the wool fibres to stick together, or felt.

It would take too long to describe all the different things that can be made out of wool; so we shall mention only a few of the principal classes of goods. Wool that is very long, strong and coarse in fibre is often called "braid" wool, because it is from such wool as this that braid is made. Then there is other wool, not quite so coarse as the braid wool, but still quite long and very strong in fibre; this is made into what are called "worsted" goods. Worsteds are used very commonly in making men's clothing. Some sheep produce wool that is quite long and yet very fine in fibre. Wool that is between two and three inches long, and very fine in fibre, usually sells for a higher price per pound than other kinds. It is used very largely for making ladies' dress goods, such as delaines, and is often called "delaine" wool. Wool that is short and fine in fibre is used for making such goods as broadcloth, fine underclothing, tweeds and other goods of that kind. Some wool that is long and coarse has weak spots in its fibres; and any wool that has weak fibres cannot be used for delaines, worsteds, or braid, but is made into cheap tweeds, blankets, coarse underclothing, carpets, coarse stocking yarn, and such like. Thus, you see, there are many kinds of tweed, underclothing, blankets, and such goods, depending upon the quality of the wool that is used in making them.

Such goods as delaines and worsteds have a smooth surface. This is because the wool is put through machinery which stretches the wool fibres out straight, and they are then twisted together in such a way that all their ends are tucked in out of sight. This stretching is called "combing," and the wool fibres must be sound and strong in order that they may not break during the operation. But if you examine a piece of tweed or blanket, you will see the ends of the wool fibres standing out from the surface, making the material look rough. This is because the wool has not been combed, but has been put through a process called "carding," in which the wool is rolled up in such a way that when it is spun the ends of the wool fibres stand out from the yarn and give a rough appearance to the cloth after it is woven. As a rule, wool that is less than two inches long is not combed, but is used for carding; and wool that is weak in fibre will not stand combing, and therefore must also be carded. There are many other interesting things which might be said about wool, but I simply ask that whenever you see a sheep, you will think of what you have learned about the wonderful coat it wears, and remember that we should always be kind to these gentle and timid animals, because we owe them much of the most beautiful and most comfortable clothing which we wear.

"All work and no play makes Jack a dull boy." Give the boys and girls a few days' enjoyment without any work whatever to do. Better still, let them visit an aunt, uncle or cousins in the neighboring town or city for ten days or so. They will come back to the farm with renewed vigor and with a new interest in their daily tasks.

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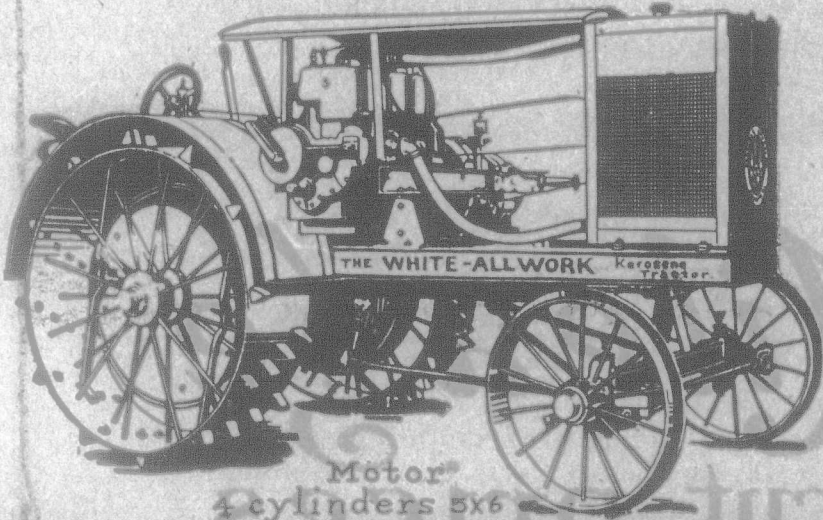
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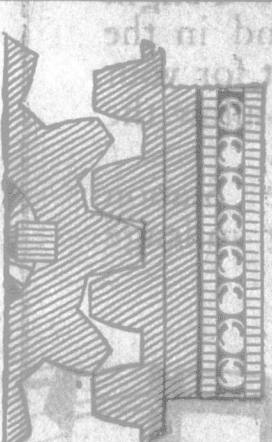
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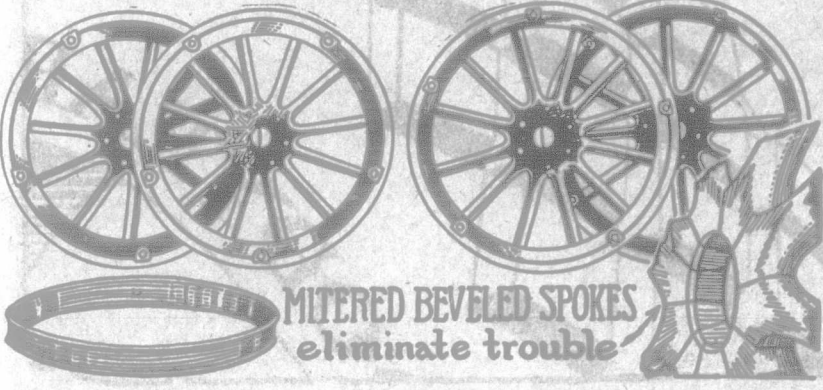
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The Grain-Saving Stacker

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View looking into hopper showing grain trap near separator fan; also auger running from beneath trap for returning the saved grain to separator.

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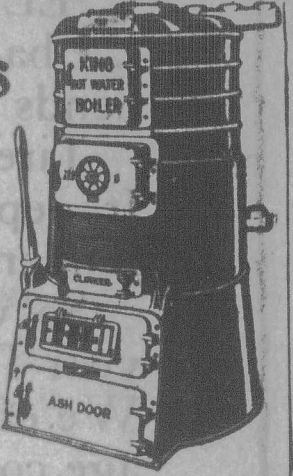
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- Canada**
 - Robt. Bell Engine & Thresher Co., Ltd., Seaford, Ontario
 - Dominion Thresher Co., Ltd., New Hamburg, Ontario
 - Ernst Bros. Co., Ltd., Mt. Forest, Ontario
 - John Goodison Thresher Co., Ltd., Sarnia, Ontario
 - Harrold Bros., Ltd., Mildmay, Ontario
 - MacDonald Thresher Co., Ltd., Stratford, Ontario
 - Sawyer Massey Company, Ltd., Hamilton, Ontario
 - Stewart Sheaf Lander Co., Ltd., Winnipeg, Manitoba
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 - Batavia Machine Company, Batavia, New York
 - Buffalo Pitts Company, Buffalo, New York
 - Cape Mfg. Co., Cape Girardeau, Missouri
 - J. I. Case Threshing Machine Company, Racine, Wisconsin
 - Clark Machine Company, St. Johnsville, New York
 - Ellis-Keystone Agricultural Works, Pottstown, Pennsylvania
 - Emerson-Brantingham Co., Rockford, Illinois
 - Farness Independent Thresher Co., Springfield, Illinois
 - A. B. Farquhar Co., York, Pennsylvania
 - Frick Company, Waynesboro, Pennsylvania
 - Harrison Machine Works, Belleville, Illinois
 - Huber Mfg. Co., Marion, Ohio
 - Keok-Gosman Company, Mt. Vernon, Indiana
 - Minnesota Threshing Machine Co., Hopkins, Minnesota
 - Port Huron Engine & Thresher Co., Port Huron, Michigan
 - The Russell & Company, Maassillon, Ohio
 - Russell Wind Stacker Company, Indianapolis, Indiana
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