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THE FARMER'S ADVOCATE

AND HOME MAGAZINE



Director Central Exp. Farm
g. dec. 31, 16

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VOL. LI.

LONDON, ONTARIO NOVEMBER 16, 1916.

No. 1260

Five Points that spell S-e-r-v-i-c-e

- Full Gauge One-Ton-Strain Wire
- Good and Lasting Galvanizing
- Give & Take Coils In Laterals
- Hold Tight Lock
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HENDERSON FARMERS' LIME CO., WOODSTOCK, ONT.



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—but it wouldn't be a Reo!

Are you one of those who, just because you can't get a Reo on the minute, are thinking of accepting as a substitute a car that is your "second choice"?

Or are you one of those who think perhaps you can get as good value in some automobile of lesser reputation?

If you are in doubt on any point, let us just say this:

Take a Reo, and have it made in any other factory—and it wouldn't be a Reo.

It isn't design alone—there are no radical features of design in Reo cars.

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That's why we say that if you took Reo design and Reo specifications and had the car made up in some other plant, still it would not be a Reo.

It's the Reo spirit—that indefinable but still tangible thing that pervades the whole Reo organization from General Manager down to the Last Man in the Shops, that gives to this product the quality that has come to be known as Reo.

We like to call it good intent—for after all that is the determining factor.

It is the desire of the Reo Folk to make the best automobiles it is possible to make.

Not the most, but the best. Not quantity, but quality, is the Reo goal.

And every Reo man—from the Chief Engineer to the Final Inspector—is imbued with that spirit, is actuated by that desire to make good, dependable automobiles. Better than others.

Visit the Reo plant. You will be welcome—the doors are always open. Reo Folk, proud of their work, are glad to show you through. Note the atmosphere of the place. Watch the workers—listen to the remarks you'll hear.

No one asks—"How many did we make yesterday?" as you hear in so many factories nowadays.

For that isn't the thought uppermost in the minds of Reo workmen.

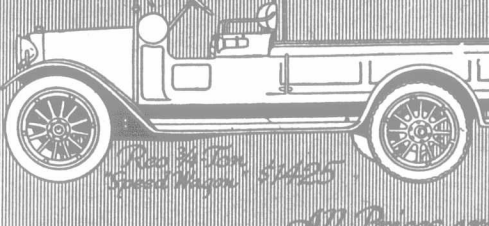
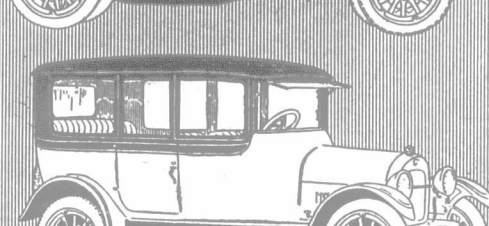
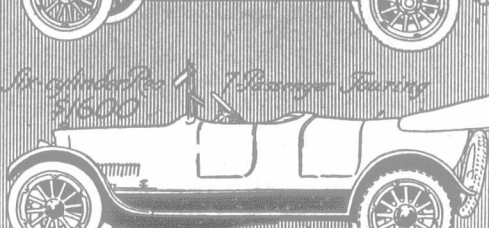
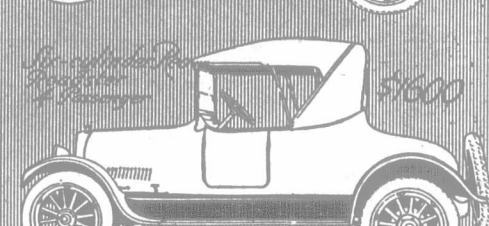
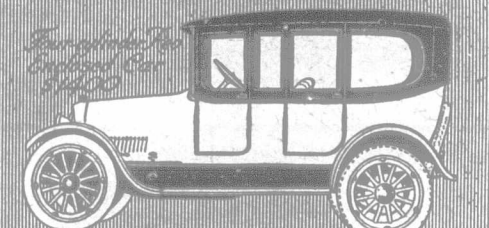
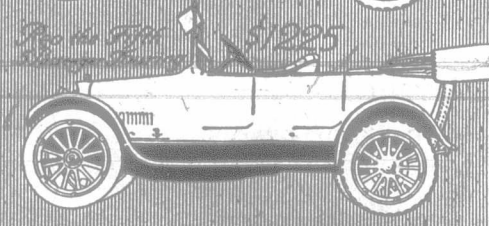
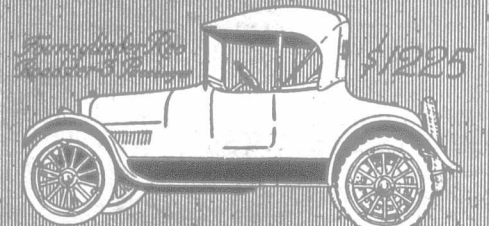
It's how many parts were discarded, turned back by the inspectors—because of some error so slight it would "pass" in most plants.

There's no secret—no necromancy—about Reo quality or how it gets into the product.

It's the result of that fervent desire of the Reo Folk to make Reo cars excel—and the eternal vigilance that results from that desire—that is responsible for Reo quality, Reo stability, Reo low cost of upkeep, and finally, Reo preference—Reo demand.

Is it any wonder that Reo cars are known as "The Gold Standard of Values"?

Reo Motor Car Company
Lansing, Michigan, U. S. A.



All Prices are factory price for Lansing, Michigan





Model 85-4

So much more for the money

This car sells itself to anyone who starts out to get the most for his money in a good, big, roomy, five-passenger car.

You get greater comfort—long, 48-inch cantilever rear springs and 4-inch tires.

Comparison proves a plain case to anyone who cares to know.

You get greater convenience—electrical control buttons on steering column.

You don't have to be an expert or have any special knowledge to determine the big extra value you get in this car.

You get bigger, safer brakes—service, 13 3/8 x 2 1/4; emergency, 13 x 2 1/4.

Its advantages stand out so boldly that they cannot be overlooked in a comparison with any car selling for \$1115—or for a great deal more.

You get better cooling—you never heard of an Overland overheating.

You get more power—35 horsepower motor—more than 250,000 in use.

This is the biggest and best car we have ever been able to sell until now for less than \$1400.

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In fact, it's a fourteen hundred dollar car which the economics of our enormously increased production enable us to sell for \$1115.

CATALOGUE ON REQUEST. PLEASE ADDRESS DEPT. 759

Willys-Overland, Limited

Head Office and Works, West Toronto, Canada

5 Passenger Touring Car

\$1115

f.o.b. Toronto



Model 85-4

No argument is possible here

If you want the most for your money in a big, comfortable, roomy, five-passenger car of long-proven mechanical superiority — here it is — no argument possible—you can determine the facts for yourself.

And back of the car is the largest and most successful automobile concern in the world that produces cars of this size and class.

And back of it also are the best established, most successful automobile dealers to be found.

You can't beat such a combination—a car that everyone knows is 100% right mechanically—a car that is priced so low that extra value sticks out all over it—a big, strong,

thoroughly established concern back of the car and a successful, enterprising local dealer to do business with.

See the Overland dealer in your nearest town—he will gladly show you the car—demonstrate it—give you a prompt delivery—and render prompt, efficient service as long as you own it.

Now is the time to buy—when you've time to enjoy your car and lots of good driving weather.

And when things freeze up, put on your curtains and go anywhere comfortably in any kind of weather all winter long.

Same model, six-cylinder—35-40 horsepower—116-inch wheelbase, \$1295.

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Willys-Overland, Limited

Head Office and Works, West Toronto, Canada

5 Passenger Touring Car

\$1115

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A Tireless Worker Wants a Job

HE will get up at 5 a.m. and work through till bed time without complaint.

Give him a sawing outfit and he will cut wood all day long. He feels just fine when he's driving the thresher, the grain elevator, straw cutter, fanning mill or hay press.

He seems to really smile when turning the sausage grinder, green-bone cutter or grindstone. And then when his boss' wife wants the separator, churn or washing machine run he is happy to oblige her.

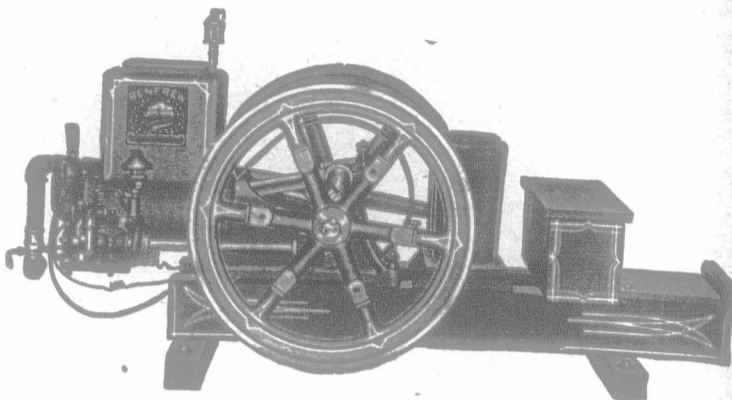
He doesn't eat much. Just feed him a little gasoline, and some oil to keep his working parts limbered up, and he's your faithful servant. His name is

Renfrew Standard

and some have nicknamed him the "Big Boy"—because the Renfrew Standard is built extra large and strong. The 6 h.-p. Renfrew Standard, for example, being almost as large as the average 8 h.-p. engine.

The "Big Boy" sure is a whale for work and a friend worth his weight in gold to the farmer whose son has gone to the war or who cannot get enough hired help—and that's most every farmer.

The "Big Boy" is right up to date, too. He has two complete and independent ignition systems—batteries and high tension magneto. He is thus doubly reliable.



He has an economical carburetor that saves gasoline. He has a fly-ball governor, just like his brother, the steam engine. He starts without cranking—and stays at his job until you tell him to stop.

He can lift an awful burden of work off your shoulders. He can save you precious hours of time. He can come right up to you from Renfrew by first train after he knows you will give him a job.

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If you knew what some farmers know

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Standard Reliance Mortgage Corporation Debentures provide an absolutely safe investment—with surety of principal and regularity of interest. This assurance is provided by \$6,732,581 of assets.

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With our Barn Equipment you can handle 25 to 40 head of cattle for fattening or dairying without hiring winter help. We can equip your barn to save over one-half the actual hand and back work so that you can really do twice as much and make bigger profits. Write us—we will send you our Barn Equipment Book. Hundreds of Farmers have found prosperity in the use of our famous farm equipments.

Abolish hand work in chores. Our litter and feed carriers, stanchions, water basins, tanks, pump-jacks, and farm engines will help you do twice as much work as ever before. Write us.

TORONTO GRINDERS



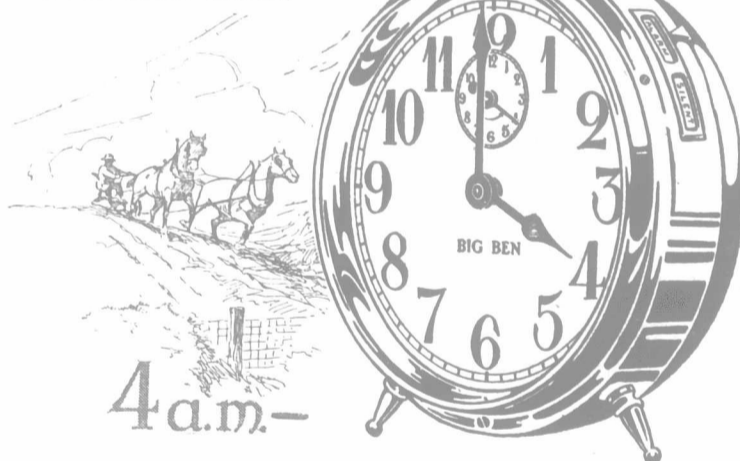
Ontario Wind Engine & Pump Co., Ltd., Liberty St., Toronto

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BOOK FREE

Big Ben

A Westclox Alarm



4 a.m.—

The Gift of Time

BIG BEN'S the only time-clock the modern farmer knows—he helps the farmer beat the sun to work.

Four a. m., in growing time, starts the farmer's day—brings a bumper crop of hours, for chores and in the field.

That's why Big Ben goes to the farm, at Christmas every year—to lend a hand in preparing for planting days. Now days there's businesslike system on the farm. Where Big Ben's wound up every night, the farm cannot run down.

So it's Big Ben for Christmas, wherever you go—the gift of time that means good-will all year.

You'll like Big Ben face to face. He's seven inches tall, spunky, neighborly—downright good all through. He rings two ways—ten half-minute calls or steadily for five minutes.

Big Ben is six times factory tested. At your dealer's, \$2.50 in the States, \$3.50 in Canada. Sent prepaid on receipt of price if your dealer doesn't stock him.

Westclox folk build more than three million alarms a year—and build them well. All wheels are assembled by a special process—patented, of course. Result—accuracy, less friction, long life.

La Salle, Ill., U. S. A.

Western Clock Co.

Makers of Westclox

Other Westclox: Baby Ben, Pocket Ben, America, Bings, Sleep-Meter, Lookout and Ironclad

This Fall

will probably see more persons apply for Life Insurance than ever before.

The reason is clear. During the past few months thousands have had it brought forcibly home to them that the wise course is, in years of prosperity, to set aside a sufficient portion of their gains in the safest of all investments—an investment that attains its greatest value at the time of greatest need—LIFE INSURANCE. A Life Policy offers the one sure way of making certain provisions for an uncertain future.

Full particulars of the Company's Policies will be mailed on request. State age.

THE GREAT-WEST LIFE ASSURANCE COMPANY

Dept. "Y"

Head Office: WINNIPEG

The Farmer's Advocate and Home Magazine

PERSEVERE
AND
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ESTABLISHED
1868

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LI.

LONDON, ONTARIO, NOVEMBER 16, 1916.

1260

EDITORIAL.

Give the boy a calf to feed this winter.

It is time to start fattening the feeders.

Rush the work; winter is approaching.

Buy seed grain this fall and be sure of a supply.

Oil the harness before hanging it away for winter.

A bad year never discourages the successful man.

Keep the plow going until frost finally shuts it out.

Put the final touches on the stables the next wet day.

Fences riddled in the fall must be repaired in the spring.

The plow left in the ground at night may be there all winter.

Be saving on the feed at first that it may hold out until spring.

If you are "married" to a party you cannot be the most intelligent voter.

You have an excellent opportunity to study the relative values of feeds furnished in this issue.

It takes a man with courage to feed turnips to cattle when they are selling at from 40 to 55 cents per bushel.

This paper will help you compound rations for your stock this winter. Look up the tables elsewhere in this issue.

The small tractor may soon prove a large factor in Eastern Canada agriculture. Do not forget its value on the belt.

Labor is too scarce to permit the exclusive use of the single plow. Add another furrow and make up for the hired man you haven't got.

Let every Canadian farmer and manufacturer work for quality in his products and help establish Canadian goods in the markets of the world.

Do you go to church on Sunday and take a general interest in church work? If not, where is the blame, with yourself or with the church? This is a point worth looking into.

Uniformity is important. Let every side of bacon produced in this country conform to one standard. Canadian bacon is sought by the British market. Improve the quality and uniformity.

The Government could very well appropriate a sufficient sum of money to carry good plowing to more farms. What has the Agricultural Department done toward better plowing, the basis of good cultivation?

Legislation should be enacted at the next session to preclude any chance of American thick-fat hogs coming in to be cured and then passed on to the British market as "Canadian cured" bacon. Our market should be preserved to the Canadian producer.

Legislation Necessary to Safeguard Canadian Bacon.

Canada's best customer for bacon and hams has always been the United Kingdom, and it is the Old Country market for these products in which Canada, having established a place, must in the future find an outlet for hog products. But that market demands high quality and uniformity in its bacon. Denmark and Ireland were noted for the uniformity of their bacon and so topped the market, but Canadian bacon is always bought on the Old Country market in preference to a similar grade of United States bacon. The war has cut off a large portion of the supply of Danish bacon. There is a scarcity of hogs in Ireland. Canada has a grand opportunity to improve the standing of her bacon in the eyes of the Britisher. But to do so breeders must have a single purpose constantly in view—the long, neat side with the trim ham. No attention is to be paid to the stories of packers that we require a thicker hog. And packers must put up a uniform product all to be branded "Canadian bacon." And here is where legislation is necessary to prevent thick-fat hogs, fattened on corn and killed in the United States coming in here to be cured and sent to the Old Land as Canadian-cured bacon. The lard hog would soon irreparably injure the standing of Canadian bacon in the British market. The brand "Canadian" should mean produced in Canada. It is a trade mark not to be infringed upon and our Government would do well to see that it is properly preserved. In 1903 Canada sent 137,230,048 lbs. of bacon to Great Britain. The annual export of this product fell off yearly until 1914 when it was down to 23,859,754 lbs. For the year ending March 31st, 1916, it was up to 144,918,867 lbs. the highest in the history of the trade, and for the first four months of the present fiscal year 55,534,771 lbs. were exported. This shows the way the trade is going. To hold it after the war Canada must put out the very best. The American would like to get Wiltshire side prices for his fat bellies if he could bring them in here, singed, and cure them here for export as Canadian-cured bacon. They would ruin the market for Canadian bacon and the Government at the next session should pass legislation which would preclude any possibility of such happening.

The All-Round Farm Power.

In last week's issue we published an account, with illustrations, of the big Tractor Demonstration recently held near Whitby, Ontario. Thousands of farmers saw the Demonstration and thousands more read the report mentioned and are weighing in their own minds the tractor question, and, provided they can get a tractor small enough at a reasonable price—a machine that will do the work they have for it—they are ready to buy. Eastern Canada, a mixed farming country, requires a form of farm power which may be put to the greatest variety of uses. Cultivation and reaping crops are not the only work the stock farmer has for the tractor. In fact they represent only a comparatively small part of it. There is a great deal of work around the barn and house on the average Ontario farm for power such as the modern tractor supplies. Mixed farming means farming with live stock of some kind as the basis of operations. Live stock makes silo filling, feed grinding, straw cutting, milking, and much other power work necessary. Wood must be cut and water pumped on every farm and the day of power lighting on the farm is fast approaching. The small thresher is coming and with it will be necessary power for its operation. The tractor, easily moved from place to place under its own power, would solve the whole problem and the prospective buyer as well as the

manufacturer and salesman should weigh well the importance and value of the tractor as a belt machine. We would be inclined to put this value first and then to size the machine up according to its value as a power for cultivating and harvesting purposes. And the small, handy tractor has a real value here also. Provided it will do the work, the smaller and handier the machine is the better. Ontario fields are small and turns are all too frequent. This must be remembered. Also it is important that the machine be not too heavy. Packing of clay soil is sometimes not in the best interests of the crop to follow. The small tractor is about to emerge from the experimental stage. Wonderful improvements have been made in the past two years. More will follow on their heels. Every farmer would be well advised to watch the development of the small tractor as an all-round farm power.

The Good Horse is Secure.

Quite recently many farmers have been heard to remark that the horse was doomed as a factor in Canadian agriculture. We would not care to go so far as to give utterance to such a belief. True, the automobile, and rightly so, has replaced hundreds and hundreds of light horses, but it cannot replace them all. The farmer who rides in his "car" in summer is mighty glad to draw the lines over the back of his trusty "driver" and tuck himself comfortably in his high-bodied cutter when the snow is two feet deep on the concession and piled fence high on the side lines. For winter country transportation the automobile isn't in it. For the good roads in summer the horse is fast becoming a back number. Folly is it for the man interested in "cars" to claim that the horse must go for good. Just as foolish is it for the horsemen to say that the motor has no effect upon the horse business. There is and always will be a market for cars and horses both, and both must be improved as the years go by. A high-class saddle horse, the best of the carriage class, and the fleet-footed roadster will always be in demand in limited numbers for riding, driving and show-ring purposes. The point for the horseman to realize is that nothing but high-class stock will do. The automobile has driven the cull into oblivion. The best is the only light horse that will meet ready sale.

But what of the heavy horse? The small tractor is coming, yea, is here to stay, and there are those who at its introduction grow nervous for the heavy horse business, and say the horse is going and will soon be gone. Not so. As with the horseless carriage the tractor will displace a number of horses on many farms, no doubt, but it will replace the poor horses, not the best. It cannot, even if it fulfills all the expectations of the manufacturers, drive all the horses off any real farm. Every farm has work for horses that the tractor cannot do. Winter, with its teaming makes the horse secure. Certain farm work all the year increases this security. The only question is, how many horses will tractors replace. Time will tell. The tractor, as explained in another article, is likely to prove a valuable power, and, like the automobile, is here for good, but this need not "scare" any horseman who breeds the right kind of horses. Canada is a new country. In the next few years thousands of new farms will be brought under cultivation, requiring more horses, for every farm must have them no matter what other power is available. There is a scarcity of horses in Europe, which will surely increase the demand here eventually. The United States has sent hundreds of thousands to the war zone, and demand is keen in that country.

The heavy horse is a necessity, so is the tractor. There is work for both, and each will make the other

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.
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12. **WE INVITE FARMERS** to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
13. **ADDRESSES OF CORRESPONDENTS ARE CONSIDERED AS CONFIDENTIAL** and will not be forwarded.
14. **ALL COMMUNICATIONS** in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.
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more work. Again we say the horse will stay, but breeders must remember that the day of the "scrub" is past. Breed the right kind and do not worry about sales or about tractors either. This is saying nothing disparagingly of the tractor, a great and coming machine for the work it can do and the conditions under which it can be used to advantage, but it cannot do all the work, neither can it overcome all obstacles. The tractor man and the horseman must each realize that the other has a necessary and useful commodity.

Have Governments any Money for Better Plowing?

Better plowing generally means better farming. The man who plows well farms well, in so far as cultivation is concerned, and he who plows carelessly generally cultivates, harrows and sows in the same happy-go-lucky manner. No one can estimate the value of good plowing to Canadian agriculture or the loss caused by carelessly "blacking it over." It is to stimulate a desire to do better work with the plow that plowing matches are held and in so far as they do increase interest in better work with the plow they are of value. We have pointed out many times during the past few years the shortcomings of the plowing match as carried on in this province where the competitors in sod, plow at the rate of one acre every 20 hours and those in the jointer class and in stubble at the rate of one acre in 14 hours, and where all are allowed to tramp their strike-out marks and set up their crowns by hand and also to finish with one horse. This is plowing for show purposes and not for practical results. No farmer could spare the time to do so much unnecessary "wrestling" with his plowing. Sod is set up instead of the better method of turning down. And, worst of all, the plowing is all done on one farm in one place. This fall we suggested that the value of prize plowing be carried to the various farms of the competitors by a scheme which would greatly increase the number taking their place in the line-up for better plowing. The scheme is simple and entirely practicable. It could be worked out on a basis very similar to that upon which the Field Crop Competitions,

so familiar to all, are held. Each farmer entering the competition should be obliged to plow five or ten acres, more or less as thought advisable, but preferably the larger acreage. Scarcity of labor would make it necessary for competitors to do a day's work each day and the whole could be judged on its merits. Thousands of acres would get the best plowing they ever had and plowmen and farms would be improved. We have had many letters and verbal expressions of approval of the scheme from practical farmers and men connected with agricultural work. Canada's young farmers are interested in it. There is only one thing lacking—the money to carry out the scheme. Governments have done very little, financially, to encourage good plowing. Now is a good time to start and there is no surer means of increasing production than by appropriating sufficient funds to encourage good plowing by taking the plowing match to the plowman's own farm.

Thoughts for Fair Boards.

In another column, under the heading: "Side-lights on Fall Fairs," a correspondent gives Fair Boards and others a few reasonable hints regarding ways and means of increasing the educational value of their annual Fall events. With what our correspondent says we most heartily agree. A Fall Fair, to fill its place in the life and agriculture of any country community, should first of all be recognized as a place to exhibit the farm and other products of that community. We have no quarrel with the man who enjoys a horse race or a fake show. The majority of humans are thrilled by close trials of speed and we are sorry to say too many seem to enjoy being humbugged by the fakir, but the point is well taken: Is the Fall Fair the place for fakirs and horse races? If so there is something wrong with the country districts. Either they get too little amusement and must have these "attractions" at the fairs, or the remainder of the show is not worth very much. The Fall Fair at which the races and fakir row are the main features deserves to die.

One point more. Our correspondent mentions a horse race at a school fair. Such a mistake as staging a horse race at the annual event for school children is scarcely excusable. If this is the aim of any of those managing school fairs they had better change their minds very quickly else the school fair will degenerate.

Nature's Diary.

A. B. KLUGH, M. A.

Not long ago the Dominion Government received complaints that the Salmon fisheries of the Gaspé coast were being damaged by the depredations of the Double-crested Cormorant, the complainants desiring legislation which would reduce the numbers of these birds. P. A. Taverner, of the Victoria Museum, a most efficient field ornithologist, was sent to Gaspé to investigate the charges against the Cormorant, and his report which embodies the results of this investigation is of much interest and importance.

The Double-crested Cormorant is a rather large bird, about the size of a large domestic duck, but slimmer in build and more graceful in outline. When sitting on the water it has quite a loon-like appearance. The adult is solid black with green reflections over most of the body plumage. The back feathers are vaguely margined with brown, making each feather appear to stand out as if in relief. Spaces about the eyes, and at the base of the bill, and the small throat pouch, are bare of feathers and colored bright orange. The younger birds are dull brown, a little lighter below, and have the facial colors much reduced in brightness. The Cormorants nest in colonies on isolated rocks along the sea-coast. They lay from three to four eggs, but there is a great mortality in the early stages of the nestlings. The eggs hatch one by one at considerable intervals of time and the eldest is a large strapping youngster before the youngest is out of the egg.

Mr. Taverner found that the Cormorants of the Gaspé Basin fed almost entirely on fish, that a full meal for a Cormorant consisted of about a pound and a half of fish. He estimated the number of these birds feeding in the basin at 700, and allowing two full meals per day for each bird, it would require 600 pounds of fish to feed them one day, or 45 tons would be consumed in the five months, from May to September, which they spend in the basin. This, as Mr. Taverner says, would show "that should the Cormorants of Gaspé seriously turn their attention to fish of economic importance their possibility for damage would be considerable." Mr. Taverner found that the Cormorants, however, instead of feeding in the fresh water of the river where the young Salmon live, feed in the tidal waters of the river's mouth, or along the coast. In order to see exactly what the Cormorants were eating he collected thirty-two of the birds and examined their stomach-contents. Of these five were empty,

one so nearly so as to make the contents unrecognizable and two were from nestlings, which having been fed by regurgitation from the parent's throat, contained doubly digested and therefore unrecognizable material. Of the remaining twenty-five, sixteen contained Sculpins, five Herring, one each Capelin and Eels, and two Tom-cod. The Sculpin, which is thus seen to form the main food of the Cormorant, is entirely unimportant economically, as it is not used at all as food by man. Mr. Taverner sums the matter up as follows:—"From the evidence on hand it is, therefore, evident, that the Cormorants in the fresh waters of the river are few, that those in the tidal mouths feed on bottom-haunting fish, and that as a whole the influence of Cormorants upon the number of Salmon can be disregarded as too slight to be of economic importance."

It is not, however, the result of this particular investigation which interests us mainly, but the general considerations which underlie it. The thing which stands out clearly as a guiding principle is the fact that here we have a case of charges brought against a species, and legislation against that species demanded, and when these charges are investigated by an expert they are proved entirely false. Mr. Taverner very wisely concludes his report with a very lucid discussion of the general principle involved in legislating for the destruction of species supposedly harmful, in the course of which he says "innumerable examples can be cited where disturbing the balance of nature has resulted disastrously, in cases of both adding to and removing from a fauna. Under changed conditions, some of the most innocent seeming species have developed unsuspected harmful traits, and others apparently the most worthless have been seriously missed when removed. The balance of nature is too delicately adjusted to warrant our interference, until after exhaustive investigation and careful weighing of evidence pro and con. Even then, the problem is too complicated for any one to confidently predict the final result, and a certain amount of doubt always remains until practical result test the conclusions."

Leaving out the practical economic questions altogether, common humanity prompts us to destroy life only when necessary. Man having great power for good or evil has consequently great responsibilities. It is not enough that a species is useless to justify its persecution; it must be proven actively harmful before such a course is justified, not in a slight degree, but in a manner that seriously threatens our welfare. Even then the edict of extermination should only be pronounced when all other remedies fail. The neglect of this responsibility invariably reacts upon our heads.

As it is, the slaughter of non-game life that goes on in certain parts of our country is deplorable. The sight of hundreds of dead and wounded Gannets shot near Percé during the summer of 1913 for sport(?) and left to lie where they fell, indicates not only a wanton and unnecessary waste of innocent life but looseness of moral fibre among certain people that is a danger to the country at large and should be curbed. The attitude of our laws should instil a wholesome regard for the rights of lower life and the taking of it uselessly should be discouraged in every possible way. This does not mean that a sentimental quixotic stand should be taken. Whenever the end justifies it, no weak sentimentality should be allowed to stand in the way of human welfare; but the spirit of our laws and people should be such that no creature should be destroyed without a good, sufficient and well-considered reason."

THE HORSE.

Suggestions for the Coming Winter Feeding.

In most districts fall work with the team is almost completed, and for the next five months many horses will practically remain in idleness. There is not so much teaming to be done as there used to be, consequently wintering of horses comes to be a problem that requires serious consideration. Horses are an absolute necessity during spring, summer and fall, and one team must be kept in condition for trips to town, hauling manure, wood, etc., during the winter. Probably there is sufficient work so that they earn their board. The other horses are wintered for their services during the seven or eight months of the year. On the average 100-acre farm, four horses are kept besides one or two colts. The young animals grow into money and thus pay their way the year round, but how can work horses be most economically fed and cared for during the period of enforced idleness? With the present price of feeding stuffs there is greater need this winter than previously to devise a ration that will be adequate, but at the same time economical. Some horsemen seem to keep their horses in good condition on a smaller quantity of feed than others. A good deal of the success in feeding and caring for all classes of live stock, horses in particular, depends on the art of the feeder. Some men are born horsemen and experience little difficulty in keeping their favorite class of stock healthy and in condition. Others, in spite of their best endeavors, are a failure at looking after horses, but have greater success with the bovine or porcine classes of stock. However, there are certain points regarding feeding that should be considered in order that the requirements of the animal body may be met.

Feed consumed undergoes changes in the digestive tract which prepares it for absorption into the system,

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and finally for use in building up new tissues, repairing body waste, supplying energy for digestion and for work. Thus, the growing colt and work horse require more feed than does the mature idle horse. Crude protein, carbohydrates and fat are the generally recognized nutrients or feed constituents which aid in the support of life. If the best results would be obtained it is necessary that these nutrients bear a certain relationship to each other. A growing animal requires a feed containing a higher percentage of protein, the substance which builds and repairs tissue, than does the mature horse. Likewise a horse performing heavy work must receive more energy producing nutrients than an idle horse. To meet these requirements, feeds can be combined in certain proportions so as to constitute what is known as a balanced ration, or the amount of each nutrient necessary to nourish the animal properly without excess of any one. The idle horse can be wintered on approximately a maintenance ration, but the work horse requires feeding in accordance with the extent of work he performs.

Horses require exercise during the winter, and on many farms this is given in the form of work. One team is taken to town to-day, the other team is used for drawing manure the next day, etc. This gives irregular exercise but necessitates that both teams be more or less hardened to endure the strain put upon them. In reality the four horses must be fed a production ration when doing a minimum amount of work. Under this system it is more difficult and much more expensive wintering horses than if one team is working regularly and the other allowed to run in the yard for exercise. Regular work, or exercise, and regular feeding are essential in keeping horses healthy and in proper condition. It is the spasmodic work without proper preparation that keeps many horses thin and their coats harsh during the winter, when the feed is sufficient to fatten them. If there is not work enough to keep all the horses busy, then feed one team for work and use them all the time. The other team can be kept in good condition very cheaply, and for exercise turn them in the yard for several hours every day. It will be greater kindness to both teams than working them irregularly, and the feed bill will be greatly reduced.

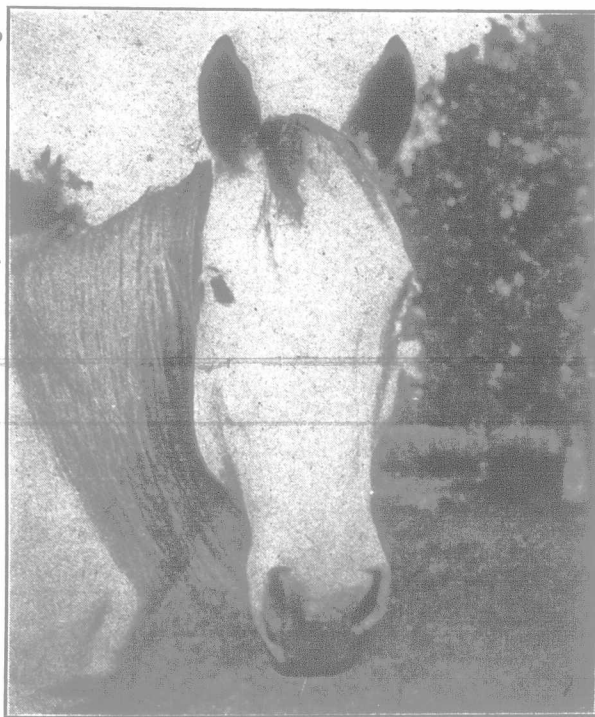
When feeding horses the capacity of the digestive organs must be considered. The stomach of a horse holds about nineteen quarts, whereas the four stomachs of a mature cattle beast have a capacity for about 266 quarts. The ruminant can digest roughage to much better advantage than can the horse. It is in the stomach where feed is softened and prepared for further digestion and absorption in the intestines. The horse is so constituted that it cannot digest properly a large quantity of roughage at once. Many feeders fail to realize this and pile the manger full of hay three times a day. In fact, we have been in stables where it was considered that horses should always have something to pick at. Some horses continue to eat if feed is before them, but sooner or later they are subject to disorders of the system. Heavy feeders of hay are literally killing their horses with kindness. It is much better for the horse not to be continually eating when in the stable. It has been estimated that one pound of hay to each 100 pounds weight is sufficient for a work horse. A rule followed by some is to feed what will be cleaned up in one and one-half hours. For heavy work less roughage and more concentrates should be fed than for light work.

Idle horses will maintain their weight on hay and straw, but there is a limit to the amount of hay necessary. Seven pounds of digestible nutrients per 1,000 pounds weight with exercise by walking or running in the yard, will maintain the horse. About one pound of this material must be digestible proteins, the remainder carbohydrates and fat.

Fibrous feed is more difficult for the horse to digest than it is for the ruminant. Nevertheless, a certain amount of it must enter into the ration. It seems necessary to the health of the animal. Oats are the most satisfactory grain for horses, but they will not live and thrive on oats alone as satisfactorily as on good meadow hay alone. Fifteen pounds of clover and timothy hay per day, mixed, give 13.1 pounds dry matter; .6 pounds protein; 5.9 pounds carbohydrates, and .16 pounds fat, or sufficient protein for maintenance but barely enough carbohydrates. An addition of 5 pounds of oat straw or a couple of pounds of hay would give a ration on which an idle horse could winter. Hay was a bountiful crop this year, while grain was light. Hay will suffice for idle mature horses, and the grain can be diverted into other channels. The point to remember is that it is possible to over feed on hay. If desirous of feeding more straw and a few roots, the following ration has been tried and proven satisfactory, the horse gaining a little during the winter. For a 1,200-pound horse 12 pounds each of turnips, oat straw and mixed hay were fed. Last winter hay was scarce but grain was more plentiful. One man wintered a number of horses and kept them healthy on a daily ration of four quarts of oats, six pounds of silage and what cut straw they required. During the day they had the run of a yard and a sod field. If ten pounds of cut straw were eaten each horse would consume 13.48 pounds of dry matter, of which 8.03 pounds were digestible, .52 pound being protein. Thus it will be seen that, theoretically, the horses should gain a little although the protein required to maintain the system was just on the margin. If the horses had been subjected to work occasionally, they could not have been wintered so

cheaply. Bearing in mind that an idle horse requires 7 pounds of digestible nutrients per 1,000 pounds of weight, and that from one-half to one pound must be protein, rations can be figured out, using other feeds, by consulting the table on another page of this issue.

The horses that are required to do all the winter teaming must be fed a quantity of concentrates. The standard for a horse doing medium work is 24 pounds dry matter containing about 2 pounds of digestible protein; 11 pounds carbohydrates, and .6 pounds of fat. The dry matter and carbohydrates can be secured in 10 pounds of oats, 2 1/4 pounds bran and 15 pounds straw. However, it is one-half pound short in protein, and a trifle lacking in fat. By adding two pounds of linseed meal to the ration, the protein and fat would be brought up to standard. A number of horses have done the ordinary farm work during winter on the feeds mentioned and looked well in the spring. Hay was scarce, which necessitated feeding straw and bran. A standard serves as a guide and few feeders follow it to the letter, but where any one nutrient surpasses or falls short of it to any appreciable extent, some part of the feed is wasted. A good ration for a partly idle horse, weigh-



Here to Stay.

ing 1,500 lbs., is clover hay 10 lbs.; cut straw, 15 lbs.; bran, 5 or 6 lbs.; oats, 3 lbs. A few roots could profitably be added to this.

Oats are the best all-round grain and the safest for horses, and timothy has been the recognized hay, although of recent years clover and alfalfa are being more generally used with satisfactory results. Corn is used considerably, and of the various grains comes second to oats for horses. When fed, some nitrogenous substance, as bran, linseed meal, or legume hay should also be given. Corn and timothy hay make a poor combination. Barley may be fed in small quantities. The price of wheat generally prohibits its use as horse feed, but even if it were low in price it is not a good grain for horses, as it has a tendency to cause digestive troubles and skin eruptions. Bran is a splendid feed to combine in the ration, and linseed meal is an excellent nitrogenous feed which can be profitably used to increase the protein content. Bran is particularly useful to feed prior to and on a holiday. It is bulky, slightly laxative, and appears to keep the system right. Very often some feed grown on the farm can be used in small quantities to substitute the usual ration. The horse subjected to hard work requires a ration heavy in concentrates. Trotting the horse increases the demand on his system, consequently more grain and less roughage are necessary. It is believed that more horses are injured by over-feeding on roughages than by underfeeding. A saving in the feed bill can be made this winter by keeping only the necessary number of horses in condition for work and allowing the remainder of the mature horses to rough it.

Growing colts are different from idle mature horses. They require heavier feeding, as the system must be maintained and an increase in size made. Bone and muscle are of great importance, and feeds which tend to produce these should be chosen. Oats, legume hay, bran, and linseed meal are good. In Henry's "Feeds and Feeding," the results of several feeding experiments are given. The first winter heavy draft colts were fed 5.8 lbs. daily of a mixture of 5 or 6 lbs. shelled corn, 3 of oats, 2 of bran, and one of linseed meal, and 10 1/2 lbs. hay; the daily gain for the winter was 1.45 lbs. The second winter 9 pounds of grain and 17 of hay were fed, and the gain was 1.3 lbs. Some feed silage to colts and mature horses and find they do very well on it. However, there is a certain risk as mould in corn has a tendency to cause disease in horses. The death of a number of horses has been attributed to this cause. Good, sweet silage, free from mould, may be all right if carefully fed. By use of the table giving the digestible nutrients, figure out a ration, using the feeds on hand,

that comes somewhere near the standard. The standard is merely a guide, common sense must also be used in feeding stock.

Great Britain's Horse Supplies.

Col. H. H. Mulliner, writing in *The Field*, gives some very interesting data and forecasts regarding the horse supplies necessary for the British Army. He goes into some details of the method of bonusing keepers of army horses before the war, showing it to be inadequate. The horse was gradually disappearing from the streets of Old London previous to the conflict. Germany's long-headed agents had purchased 60,000 of these horses. At the same time many army units whose requirements averaged officially 200 to 300 horses were "obliged to content themselves with the occasional use of ten or a dozen. Of the requisite peace establishment of 51,303 horses, 1,275 was the sum total possessed by the Territorials at the outbreak of the war."

At the outbreak of the war Army horses possessed by the War Office numbered only 25,000 in Great Britain. It has been necessary to buy over three-quarters of a million.

Readers will be especially interested in what Colonel Mulliner says of horse prospects and the Army after the war. Remember he is speaking of Britain and from his article we quote.

"As regards what may be termed civilian requirements, horses are a necessity for farming and other purposes where there are few or no roads. Hunting and polo must also be remembered, but with such exceptions, there is hardly a purpose for which horses have been used in the past which is not capable of being fulfilled by motor traction. Until recently a considerable number of people in this country not only preferred horses, but were hostile to the mechanical element. Such prejudices, however, are now fast disappearing. Since the war, many business firms have had perforce to introduce motor traction. It may prove also that the ever-increasing number of those working in the various munition factories will have a marked effect in developing an enhanced taste for mechanics. That similar competition between horse and motor traction is also taking place in other countries is obvious; but the comparatively small area of Great Britain and the good roads which will soon exist in almost every district make it probable, unless steps are taken to counteract the tendency, that our horses will be superseded sooner and to a larger extent than in any other country.

"As regards military requirements, the enormous demand in every zone of our operations is an all-sufficient proof that the horse still remains an absolute necessity in modern warfare. It must also be remembered that in those parts of France and Belgium which are the principal scenes of our present activities, more roads exist than in perhaps any other part of the world. It has been possible, therefore, to utilise motor traction there to its utmost limits. In a future war these conditions may be different and our armies consequently might demand horses in even greater numbers.

"Again, Cavalry in this war has not so far played such an important part as it may be called upon to do in the future. The already fabulous amount of field ammunition utilised in actual warfare will probably continue to increase, and horse or mule traction must remain virtually the only means of supply to the front lines. Everything, in fact, points to the belief that, although it is obvious in the event of a future war that any shortage in the immediate supply of horses would seriously handicap us as compared with other nations, even if it did not prove disastrous, it is equally clear unless adequate steps are taken to retain horses in this country that such a result must inevitably occur.

From the point of view of the civilian, at all events for business purposes, the competition between horse and motor traction is chiefly a question of finance. When speed is the object, for long distances and on good roads, the horse cannot compete with mechanical traction. But, after all, the greater part of trade requirements is to be found in towns. With short distances and long waits, the position is at once changed and the comparative cost, both of running and working, becomes an increasingly important factor. For such purposes the horse may prove the cheaper, and the greater the difference in cost becomes the less inducement there is to adopt motor traction. The initial cost of a motor car is considerable, and the capital thus absorbed could doubtless be put to good use by business firms in other directions. A scheme providing horses both for trades and farming which involved no preliminary outlay to the user would obviously go very far to insure the retention of the horse for many ordinary purposes.

Army Requirements.

"The minimum number of horses which must be kept with the standing Army in time of peace depends entirely upon the speed with which the balance, fit for immediate use, can be obtained on mobilization. For example, if a large proportion of the balance could be obtained, say, in forty-eight hours, then the number to be kept could be reduced to a minimum, namely, the comparatively few required merely for training and drilling. If, however, three months had to elapse before any considerable additional number could be obtained, far more must of necessity be kept permanently with the Army, the

number increasing *pro rata* with the necessary time occupied. The requirements for annual manoeuvres and for the annual training camps are separate matters. During the short period of the year when these are taking place, the Army requirements all automatically increase to what is known as their "establishment." In the past it has been found necessary to resort to hiring for obtaining the balance; but, as has already been shown, hiring for these purposes has proved a failure, and obviously if the requisite numbers of horses are not in the country hiring is impossible.

"Again, even the full establishment of horses only represents a portion of the numbers required immediately upon mobilization. For replacements, transport, ambulance, and other Army services a number at least equal to the establishment is at once absorbed, while continuous demands to replace wastage at once commence, the extent depending of course upon the conduct and conditions of the war. Further, upon mobilization a proportion of the civilian element of the population becomes employed directly or indirectly on munitions or other Army requirements and the horses necessary for such trades cannot be requisitioned.

"But before discussing the actual service demands for horses, it is necessary to form some conception of the size and composition of the British Army after the war. This to a large extent must be a matter of pure conjecture. It will necessarily be affected by the conditions of peace, by finance, and by many other questions, all of which will have to be fully discussed and eventually settled by Parliament. Fortunately, the one great point of disension in pre-war days, namely, voluntary or compulsory service, has now been removed. There are few, if any, to be found to-day to argue whether it will be possible, at any rate in the first decade after the war, to return to a purely voluntary system. The necessity of being prepared and the obligation of every man of military age to bear his share of the national burden are now accepted principles. The main questions therefore arising are: How is preparedness to be obtained at the least cost, and how can compulsory service be made the least burdensome?

As regards the latter, opportunities no doubt will be afforded for men to shorten the period of their trainings by attaining proficiency locally in one or another branch of the service. For instance, by an increase in the number of ranges in the country, men could qualify in marksmanship; signalling and other courses might also be arranged. The extent, however, to which local drills or courses will be developed must necessarily affect any future arrangements about horses—and here it may be asked will horses have to be provided and kept throughout the whole country? The new conditions will be altogether different to those of the past; formerly there were no other means for mounted units to learn to ride except those which could be provided locally. In future, riding will be taught during preliminary trainings, and it is extremely doubtful whether such little practice in riding or driving as could be obtained on occasional summer evenings and Saturday afternoons would be worth the expense and trouble involved in keeping horses for the purpose locally. Even in the case of Artillery such spare time could probably be much more profitably devoted to technical work. In any case it could only apply in towns, as men living in country districts would be debarred from using them.

"It is believed by many that six months' preliminary training with monthly annual trainings during three following years will be the adopted standard. Accepting this as a basis, for the former, which would be continuous, a certain number of horses, as few as possible, will have to be kept permanently at the various depots. As regards the latter, however, the position is entirely different. These trainings only occupy one month; horses, therefore, will only be required for this particular period in the year, so some arrangement must be made to keep them during the remaining eleven months. As every man who has undergone a preliminary course will be called up annually for three further monthly trainings, their number will be largely augmented; in other words, three times as many men as attain the military age in any one year will eventually be annually undergoing their successive monthly training. Again, the six months' course will exist for the main purpose of teaching preliminary work, whereas the monthly trainings will be utilised for more advanced operations, consequently they will entail the provision of a far larger proportion of horses. In the peace establishment in the Territorial Force, including Yeomanry, Artillery, and Infantry, the proportion formerly specified for the training was one horse to every six men, and this number may still be taken as the average.

The census tables show that our annual male birth-rate is approximately 500,000, but for the purpose of estimating the number of men eligible for service in each year this figure must be reduced both by the rate of mortality previous to attaining the age of, say, eighteen years, and also by the inevitable rejections for physical unfitness and other reasons. Accepting the reduced figure of 300,000 as the number who will come up in each year for their preliminary course, the number of the annual monthly trainings after the first two years will reach a total of 900,000. For this figure the proportion of horses that will be required is 150,000. In addition to these, however, the following further requirements must be noted:

(1) The reserve of horses which would be wanted immediately in case of an outbreak of

war, i. e., a number equal at least to the ordinary peace establishment.

(2) Horses for the annual manoeuvres of the Regular Army and for the training of any national or reserve forces which it may be considered necessary to provide.

(3) The necessary supply to cover wastage during war.

"To what extent provision may be necessary for these two latter items is open to argument. It may fairly be contended that the development of the motor car will apply to many Army requirements, and that the number of horses wanted for certain purposes will therefore be decreased. Again, it may be considered safe to rely entirely upon the importation of horses from overseas to cover wastage in war; it will probably be admitted, however, that 300,000 horses is the fewest which must be always immediately available for monthly trainings in peace, and for mounting our Army in time of war."

LIVE STOCK.

Maintenance and Fattening Rations.

Throughout the last decade there has not been a season when it was so necessary as it is now to consider the stores and determine what to feed and how to feed it. In the first place all grains and mill-feeds are unusually high in price; there was a poor crop of coarse grains in Ontario as well as a small yield of roots and silage corn; hay yielded abundantly, but straw was short. There are individual exceptions to these conditions in Ontario, and in some few instances communities might be favored to a slight extent; yet, generally speaking, there are full hay mows, but low grain bins, silos and root cellars. A shortage of grain and succulent feeds at the same time presents difficulties which call for a careful consideration of the stores in hand and for well-laid plans regarding the winter feeding. In these times every farmer knows pretty well what amount of feed he has in his mow, stacks, bins and silos. With a little calculating he can also foretell what his stock will require to carry them through; these are the first factors to consider. Again, roughages and concentrates should be so combined as to give maximum results with a minimum of waste. Hay alone is not a good feed for store cattle nor for feeders that will be finished next June on grass, yet with some silage, roots, corn fodder or a small quantity of concentrates added, hay will do its part well in bringing the steers and heifers through the winter in a thrifty condition. Many will have ample roughage but not sufficient grain or silage to mix with it that the coarse fodder can be fed to advantage. It is this matter that requires, first, a careful study of the table in this department showing the digestibility of our common feeding stuffs, and second, some deductions made therefrom that will ensure economical feeding or, in other words, balanced combinations. If one does not adhere closely to the balanced ration he should endeavor, at least, to feed protein-rich feeding stuffs along with those carrying a large percentage of carbohydrates and fats. This is only the first step in scientific or economical feeding. We appreciate the fact that stockmen desire more particularly to know what and how much to feed, and, in individual instances, an answer can be given; yet there are so many different opportunities presented to feeders, according to their localities, that the subject can be discussed in a general way only. To those who would pass over this matter lightly let us suggest that when anyone intends to enter through a locked door it is convenient to have a key. Similarly it is just as well to understand feeding stuffs first and then combine them as the information at hand would indicate as best. Several standards have been set up, showing the quantities and approximate relationship between the protein and carbohydrates in the ration. Dairy-men observe them closely, but, for horses, cattle, sheep and swine, they serve more as a guide and should not be followed too religiously.

Wintering Store Cattle.

Throughout many sections of Ontario two-year-old cattle are wintered on a maintenance ration, or, in other words, they are given just enough feed so they neither gain nor lose in weight. Thousands of steers are boarded out in farmers' stables on just such allowances for \$10 to \$12 for the winter. In the spring they are lifted by their owners, who are usually extensive cattle dealers, and grassed for the summer, when they are sold as finished bullocks. Sometimes when the winter feed is pretty good the steers will make slight gains, and the price paid for such accommodation will vary according to the results. Thousands of cattle will be wintered on similar rations this year, and, without entering into a discussion of feeding this class of live stock for six months with no gains, let us consider what a maintenance ration may consist of.

There is considerable hay, and no doubt it will form a part of all rations this season, but there is usually straw, corn fodder, corn stover (corn stalks with ears removed), and clover chaff. If there is any silage or roots to spare it will be easy to make a fattening or gaining ration out of what would ordinarily be a maintenance allowance.

A steer of 1,000 lbs. live weight will require in the neighborhood of 18 lbs. dry matter per day. (To thoroughly understand the term "dry matter"

refer to the table in this department and to notes regarding same.) However, the amount of dry matter actually needed will depend somewhat on the constituents of the feeds. The nutritive ratio of a maintenance allowance may be as wide as 1 part of protein to 12 parts of carbohydrates and fats. The following ration has been proven capable of maintaining an ox, weighing 1,000 lbs., at rest in a stall with neither gain nor loss:

Feeding stuff	Dry matter	Crude protein	Carbohydrates	Fats
	Lbs.	Lbs.	Lbs.	Lbs.
Clover hay, 5 lbs.	4.36	0.38	1.96	0.09
Corn stover, 5 lbs.	2.95	0.07	1.56	0.03
Oat straw, 10 lbs.	8.85	0.10	4.26	0.09
Oil cake, 1/2 lb.	0.45	0.15	0.16	0.03
Total.....	16.61	0.70	7.94	0.24

This ration is rather low in dry matter, but the deficiency is partly made up in the constituents contained in the different feeds. Corn stover is not a common feed with us, but 3 lbs. of corn fodder (stalks, leaves and cobs, if any) would about equal the amount mentioned in feed constituents. This reduction of approximately 2 lbs. of dry could be made up with straw. Another maintenance ration, quite as serviceable, is composed of corn stover, 14 lbs.; oat straw, 10 lbs.; cottonseed meal, 1/2 lb. It should be understood that animals can be maintained on roughage alone, but the feeding of a small amount of concentrates will often save more than its value of hay, straw, corn stover or corn fodder.

Another class of cattle are commonly fed in such a way that slight gains are made all winter. They are then in splendid condition to go out on grass and finish early in the season. Perhaps the cheapest way to accomplish this end during the coming feeding season is to feed largely on cut straw and silage, mixed, for the first two months, with, perhaps, a small feed of hay daily. During February and March the addition of a little bran and cottonseed meal or oil cake, say up to 2 or 3 lbs., will show results, and later the ration can be strengthened with a pound or two of chop. If the silage still holds out the bran can be dropped when the chop is added. Some successful cattle feeders never go above 2 lbs. of concentrates for their steers to be finished on grass, but they usually start to feed it early in the season. The cottonseed meal, oil cake, or bran tend to balance up an otherwise wide ration. They are commonly fed by successful cattlemen in this country.

Considerable feed is required to fatten steers properly. If one has not the stores at hand and will not buy, it will be more economical and satisfactory to finish on grass, for a half-fitted, stall-fed bullock is sure to command only a moderate price. When feeder cattle go into the feed lot do not burn them out with grain the first thing. Fill them up with roughage, preferably some kind that has a laxative effect like silage or roots, mixed with cut straw. After a time start them with a pound of grain, or less daily, and gradually work up to 8 or 9 pounds by the first or middle of March. Ordinarily it is wise to conserve the hay for spring feeding, but circumstances this season may warrant feeding it from the first. If silage and roots are short use some bran for the laxative effect. Oil cake is also somewhat loosening and has a high protein content which tends to balance a ration of silage, roots and straw. Eight or nine pounds of grain daily are usually ample during the heaviest feeding. Watch and know the animals individually and feed them according to their requirements.

Breeding Cows and Young Stock.

It will never pay to skimp the breeding cows or growing stock. Good hay, some straw and silage with a little chop, bran or oil cake is a suitable ration for the dry cows; while those in milk, of beef type, should have their allowance increased in proportion to the demands upon their systems. Keep them thrifty and if bran is required to do so, it will pay to buy it. Some of the foregoing rations may be modified to suit this class of stock, which should be properly fed to insure future production and a strong herd.

For the young stuff there is nothing better than a ration composed of hay, roots and chop containing some bran. Silage is also good, but we favor roots, when available, for well-grown calves. As yearlings, straw and silage must be used largely for good and economical results. There will be considerable hay fed this year, and in some instances the rations will be very meagre. However, yearlings should not be allowed to lose weight this winter even under the most scanty circumstances, for upon them we must depend for feeders during the winter of 1917-18.

Only a few rations have been mentioned. Every stockman will be obliged to feed according to his stores and ready cash. Succulency is very important, and if silage or roots are not to be had, bran is the next best substitute. Variety is also worthy of much consideration. Even when roughages make up the bulk of the allowance, mix as many as possible or feed them together, rather than separately until one is exhausted. All animals, humans included, require some kind of a balance between the protein and carbohydrates and fats. Fill cattle to be fattened with some form of laxative roughage at first. Then introduce the grain slowly and gradually increase it.

Com

Feed

Conce

Dent corn...
Corn meal...
Corn-and-co...
Hominy feed...
Gluten feed...
Gluten meal...
Corn bran...
Wheat, all a...
Red dog fou...
Standard w...
(shorts)

Wheat bran...
Wheat scree...
Rye...
Oats...
Oat dust...
Barley...
Malt sprout...
Brewers' gra...
Emmer (spe...
Buckwheat...
Cottonseed...
Flaxseed...
Linseed mea...
Pea, field...
Soy bean...
Cow's milk...
Skim-milk...
Buttermilk...
Whey...
Dried blood...
Tankage (55...
Beet pulp, w...
Beet pulp, d...
Distillers' g...
from corn...
Distillers'...
from rye...
Distillers' b...
Molasses, br...
Molassine m...

Dried...
Corn fodder...
remainin...
Corn stover...
very dry...
Sorghum fod...
Bluegrass, C...
Bluegrass, K...
Millet, barny...
Millet, com...
garian...
Mixed grass...
Orchard grass...
Quack grass...
Red Top...
Timothy, all...
Oat hay...
Alfalfa, all...
Alfalfa, first...
Alfalfa, sec...
Alfalfa leave...
Clover, alsik...
Clover, mam...
Clover, red, a...
Clover, swee...
Clover, white...
Cowpea, all...
Pea, field...
Clover and r...
Peas and oat...
Barley straw...
Oat straw...
Oat chaff...
Wheat straw...
Wheat chaff...
Bean...

Roots...
Beet, sugar...
Carrot...
Mangel...
Potato...
Turnip...
Apple...
Apple pumac...
Cabbage...
Kale...
Pumpkin, fie...
Rape...
Sugar beet...
Turnip tops...

Sil...
Corn, immat...
Corn, wmat...
From frosted...
From field-cu...
Alfalfa...
Clover...
Corn and clo...
Oat and pea...

Composition of Our Common Feeds and How to Combine Them

Feeding Stuff.	Total dry matter in 100 lbs.	Digestible nutrients in 100 lbs.				Nutritive ratio	Fertilizing constituents in 1,000 lbs.		
		Crude protein	Carbo-hydrates	Fat	Total		Nitro-gen	Phos-pho. ic acid	Potash
Concentrates.									
Dent corn	89.5	7.5	67.8	4.6	85.7	10.4	16.2	6.9	4.0
Corn meal or chop	88.7	6.9	69.0	3.5	83.8	11.1	14.9	6.1	3.7
Corn-and-cob meal	89.6	6.1	63.7	3.7	78.1	11.8	13.8	5.8	6.3
Hominy feed, high grade	89.9	7.0	61.2	7.3	84.6	11.1	17.0	12.4	9.5
Gluten feed, high grade	91.3	21.6	51.9	3.2	80.7	2.7	40.6	6.2	2.3
Gluten meal, high grade	90.9	30.2	43.9	4.4	84.0	1.8	56.8	5.5	1.2
Corn bran	90.0	5.8	56.9	4.6	73.1	11.6	15.5	6.2	5.4
Wheat, all analyses	89.8	9.2	67.5	1.5	80.1	7.7	19.9	8.6	5.3
Red dog flour	88.9	14.8	56.5	3.5	79.2	4.4	26.9	20.0	7.6
Standard wheat middlings (shorts)	89.6	13.4	46.2	4.3	69.3	4.2	27.7	21.1	11.8
Wheat bran, all analyses	89.9	12.5	41.6	3.0	60.9	3.9	25.6	29.5	16.2
Wheat screenings	89.8	9.6	47.3	3.6	65.0	5.8	21.3	7.4	7.6
Rye	90.6	9.9	68.4	1.2	81.0	7.2	18.9	7.3	5.7
Oats	90.8	9.7	52.1	3.8	70.4	6.3	19.8	8.1	5.6
Oat dust	93.4	9.1	34.9	4.3	53.7	4.9	20.2	—	—
Barley	90.7	9.0	66.8	1.6	79.4	7.8	18.4	8.5	7.4
Malt sprouts	92.4	20.3	47.4	1.3	70.6	2.5	42.2	16.5	18.3
Brewers' grains, dried	92.5	21.5	30.5	6.1	65.7	2.1	42.4	9.9	0.9
Brewers' grains, wet	24.1	4.6	8.7	1.5	16.7	2.6	9.1	2.4	0.3
Emmer (spelt)	91.3	9.5	63.2	1.7	76.5	7.1	19.0	7.6	5.7
Buckwheat	87.9	8.1	49.7	2.5	63.4	6.8	17.3	10.0	7.0
Cottonseed meal, choice	92.5	37.0	21.8	8.6	78.2	1.1	70.6	26.7	18.1
Flaxseed	90.8	20.6	17.0	29.0	102.8	4.0	36.2	15.0	9.5
Linseed meal, new process	90.4	31.7	37.9	2.8	75.9	1.4	59.0	17.7	13.0
Pea, field	90.8	19.0	55.8	0.6	76.2	3.0	36.6	8.4	10.1
Soy bean	90.1	30.7	22.8	14.4	85.9	1.8	58.4	13.7	24.7
Cow's milk (whole)	13.6	3.3	4.9	4.3	17.9	4.4	5.6	1.9	1.7
Skim-milk (separator)	9.9	3.6	5.1	0.2	9.1	1.5	6.1	2.2	1.7
Buttermilk	9.4	3.4	4.9	0.1	8.4	1.5	5.8	1.7	1.6
Whey	6.6	0.8	4.7	0.3	6.2	6.8	1.6	1.2	2.6
Dried blood	90.3	69.1	—	0.9	71.1	0.3	131.5	4.9	1.2
Tankage (55-60% protein)	92.5	54.0	—	12.7	82.6	0.5	93.0	—	—
Beet pulp, wet	9.3	0.5	6.5	0.2	7.4	13.8	1.4	0.4	0.7
Beet pulp, dry	91.8	4.6	65.2	0.8	71.6	14.6	14.2	2.4	3.8
Distillers' grains, dried, from corn	93.4	22.4	40.4	11.6	88.9	3.0	49.1	6.8	1.7
Distillers' grains, dried, from rye	92.8	13.6	38.0	6.6	66.4	3.9	37.0	8.3	2.4
Distillers' grains, wet	92.8	3.3	13.3	1.5	20.0	5.1	7.2	1.6	0.4
Molasses, beet	74.7	1.1	59.4	—	60.5	54.0	5.6	0.5	56.3
Molasses meal	83.4	5.4	50.3	0.8	57.5	9.6	14.1	—	—
Dried Roughage									
Corn fodder, ears, if any, remaining	91.0	3.5	51.7	1.3	58.6	15.7	12.5	3.7	9.9
Corn stover, ears removed, very dry	90.6	2.2	47.8	1.0	52.2	22.7	9.4	4.5	12.9
Sorghum fodder, dry	90.3	2.8	44.8	2.0	52.1	17.6	11.8	—	—
Bluegrass, Canada	89.3	2.8	48.5	0.9	53.3	18.0	10.6	4.5	23.3
Bluegrass, Kentucky	86.8	4.7	43.5	1.5	51.6	10.0	13.3	5.4	21.0
Millet, barnyard	86.5	5.1	40.5	0.8	47.4	8.3	13.3	5.5	25.3
Millet, common or Hungarian	85.7	5.0	46.0	1.8	55.0	10.0	13.3	3.6	21.5
Mixed grasses	87.2	4.3	44.3	1.2	51.3	10.9	12.2	3.8	16.4
Orchard grass	88.4	4.7	41.1	1.6	49.4	9.5	12.6	4.0	19.4
Quack grass (couch)	94.1	4.1	49.7	1.1	56.4	12.4	11.7	—	—
Red Top	90.2	4.6	45.9	1.2	53.2	10.6	11.8	4.4	18.8
Timothy, all analyses	88.4	3.0	42.8	1.2	48.5	15.2	9.9	3.1	13.6
Oat hay	88.0	4.5	38.1	1.7	46.4	9.3	13.4	8.0	32.7
Alfalfa, all analyses	91.4	10.6	39.0	0.9	51.6	3.9	23.8	5.4	22.3
Alfalfa, first cutting	91.5	9.3	39.0	0.6	49.7	4.3	22.2	5.4	22.3
Alfalfa, second cutting	92.7	11.2	40.2	0.7	53.0	3.7	23.5	5.4	22.6
Alfalfa leaves	93.4	15.8	35.1	1.3	53.8	2.4	36.0	—	—
Clover, alsike	87.7	7.9	36.9	1.1	47.3	5.0	20.5	7.0	17.4
Clover, mammoth red	81.3	6.4	37.2	1.8	47.6	6.4	17.3	6.3	8.7
Clover, red, all analyses	87.1	7.6	39.3	1.8	50.9	5.7	20.5	3.9	16.3
Clover, sweet, white	91.4	10.9	38.2	0.7	50.7	3.7	23.2	6.6	12.6
Clover, white	91.9	11.8	43.3	1.5	58.5	4.0	25.9	5.2	20.0
Cowpea, all analyses	90.3	13.1	33.7	1.0	49.0	2.7	30.9	9.6	41.3
Pea, field	88.9	12.2	40.1	1.9	56.6	3.6	24.2	6.7	12.4
Clover and timothy	87.8	4.0	39.7	1.1	46.2	10.6	13.8	4.7	19.0
Peas and oats	83.4	8.3	37.1	1.5	48.8	4.9	18.2	6.6	16.4
Barley straw	85.8	0.9	40.2	0.6	42.5	46.2	5.6	1.8	12.0
Oat straw	88.5	1.0	42.6	0.9	45.6	44.6	5.8	2.1	15.0
Oat chaff	91.8	2.2	31.3	1.2	39.2	16.8	9.4	1.3	4.5
Wheat straw	91.6	0.7	35.1	0.5	36.9	51.7	5.0	1.3	7.4
Wheat chaff	85.6	1.1	25.7	0.6	28.2	24.6	6.7	4.0	8.4
Bean	89.5	3.6	42.4	0.7	47.6	12.2	11.7	4.2	13.6
Roots and Tubers.									
Beet, sugar	16.4	1.2	12.6	0.1	14.0	10.7	2.6	0.8	3.2
Carrot	11.7	0.9	8.6	0.2	9.9	10.0	1.9	1.1	2.7
Mangel	9.4	0.8	6.4	0.1	7.4	8.2	2.2	0.4	2.2
Potato	21.2	1.1	15.8	0.1	17.1	14.5	3.5	1.2	5.3
Turnip	9.5	1.0	6.0	0.2	7.4	6.4	2.2	1.3	2.9
Apple	18.2	0.4	15.6	0.2	16.4	40.0	0.8	0.3	1.6
Apple pumace	23.3	1.2	15.6	0.8	18.6	14.5	2.6	0.6	1.5
Cabbage	8.9	1.9	5.6	0.2	7.9	3.2	3.5	0.7	2.9
Kale	11.3	1.9	4.7	0.3	7.3	2.8	3.8	—	—
Pumpkin, field	8.3	1.1	4.5	0.5	6.7	5.1	2.0	0.9	3.2
Rape	16.7	2.6	10.0	0.3	13.3	4.1	4.6	1.1	3.9
Sugar beet tops	11.4	1.7	5.4	0.1	7.3	3.3	4.2	1.0	6.4
Turnip tops	15.0	1.8	7.3	0.1	9.3	4.2	4.5	1.5	5.2
Silage.									
Corn, well matured	26.3	1.1	15.0	0.7	17.7	15.1	3.4	1.6	4.4
Corn, immature	21.0	1.0	11.4	0.4	13.3	12.3	3.0	1.2	3.5
From frosted corn	25.3	1.2	13.7	0.6	16.3	12.6	3.5	1.5	4.3
From field-cured stover	19.6	0.5	9.9	0.4	11.3	21.6	2.2	—	—
Alfalfa	24.6	1.2	7.8	0.6	10.4	7.7	5.6	—	—
Clover	27.8	1.3	9.5	0.5	11.9	8.2	5.9	—	—
Corn and clover	28.6	2.1	15.9	0.7	19.6	8.3	5.3	—	—
Oat and pea	27.5	2.8	12.6	1.0	17.6	5.3	6.1	1.7	7.0

How to Interpret the Table.

Such a table as appears on this page requires some explanation. At first sight it may appear complicated and scientific, but to the most obtuse mind it will convey some information, and to others it will reveal facts according to the amount of consideration they have given to feeding stuffs and to the efforts they have expended in trying to apply what they have learned. The figures will reveal much to the chemist, but the practical feeder, better than anyone else, is in a position to derive benefit therefrom, for he knows feeds, he knows animals, and he knows whether his charges are responding to certain mixtures, when the exclusively scientific man would be blind to anything but the composition of the materials. Thus the work of the best chemists and live-stock investigators in Europe and America can be placed before the public so the man who needs information can make use of it in a practical way. Standard books on feeding contain such tables in a more extended form than is reproduced here. These are excerpts from a full table appearing in Henry's "Feeds and Feeding," and we have chosen only those feeds as come to our attention most frequently in Canada. Feeding has become a science. Those who have grasped the fact can make good use of this table; while those who continue to throw feed to their live stock without any consideration of its composition or effect on the animal system will continue on the highway trod by those who "just get along."

One glance at the table will show a simplicity that the casual reader would never expect. Take for instance the fertilizing value of dent corn, the first item. We learn from the right-hand side that in 1,000 lbs. of corn there are 16.2 lbs. of nitrogen, 6.9 lbs. of phosphoric acid, and 4 lbs. of potash. One ton of dent corn would, of course, contain just twice these amounts. Then if one should purchase a ton of this material to feed he can arrive at the approximate fertilizing value of it to his land after it passes through his live stock. Animals will incorporate some of the constituents into their systems or return it as milk, and this depends much on the kind of animal and the work it is doing. Such a factor is not exceedingly important and for the moment we may disregard it, considering that all the fertilizing constituents are voided as solid or liquid manure. Before the war we were paying about 20 cents per pound for nitrogen, and approximately 5 cents per pound each for phosphoric acid and potash; when obtained in the form of commercial fertilizer. These prices have been altered considerably during the last two years, but for normal times we may consider them substantially correct. Consequently, in one ton of dent corn there would be 32.4 lbs. of nitrogen, which, at 20 cents per pound is equivalent to \$6.48. There would also be 13.8 lbs. of phosphoric acid and 8 lbs. of potash, making 21.8 lbs. at 5 cents, or \$1.09 worth of fertilizing ingredients. This with the nitrogen would make \$7.57 worth of fertilizing constituents purchased with each ton of corn, and the greater part of which would be applied to the soil. Referring to oil cake or cottonseed meal, we find they have a much higher content of nitrogen and are consequently worth much more for their residual effect. In fact, cottonseed meal was formerly applied to the soil direct as a fertilizer without being fed at all. With this brief explanation we can leave the three columns to the right of the table and consider the different feeds from the feeding viewpoint.

What Feeds Contain.

Starting at the left-hand column of figures, we find the heading, "Total dry matter in 100 lbs." Some might think that timothy hay and corn are dry matter, and they are, to a certain extent, but the former has in the neighborhood of 11 lbs. of moisture in each 100 lbs. of hay, while corn has in the vicinity of 10 lbs. of moisture to each 100 lbs. Feeds for live stock are calculated on the dry-matter basis, hence the significance of this column.

Regarding protein, carbohydrates and fats, little need be said here, except that a certain amount of each material is required to maintain the animal system in such a way that it will function normally. If more protein than is needed is taken into the system it is wasted, and, more than that, the energy used up in digesting it is likewise thrown away. If corn were the only feed being consumed, a considerable quantity would be required to supply sufficient protein, because it is low in that constituent. In an effort to satisfy the body requirements for protein, more carbohydrates, in which corn is high, than necessary would be digested and much of the carbohydrates voided in the manure without performing any useful function. If some oil cake or cottonseed meal be added to the corn, much less will be needed, for one will supply the protein and the other carbohydrates. This is called a balanced ration when the relation between the two is such as to fill all the requirements of the body without a waste of either protein or carbohydrates.

Carbohydrates and fats serve much the same purpose, but fat is 2 1/2 times more efficient than a similar quantity of carbohydrates. Thus when it is desirable to compare the protein of a certain feed with the carbohydrates and fats, we must first express fat in the terms of carbohydrates. Taking corn again as an example, we find that in 100 lbs. there are 4.6 lbs.

of fat. Multiply the fat by $2\frac{1}{4}$, or, since the figures are in decimals, by 2.25, we get 10.35. Add this to the amount of carbohydrates and we have a total of 78.15. The same table says that 100 lbs. of corn contain 7.5 lbs. of protein, then we have 7.5 parts of protein to 78.15 parts of carbohydrates. In other words, we have one part of protein to 10.4 parts of carbohydrates. This is called the "nutritive ratio" of the feed, and is indicated in the sixth column of figures. Passing down to gluten meal, which is high in protein, we find one part of protein to 1.8 parts of carbohydrates and fats, calculated in the same manner as our former example. The latter has a narrow nutritive ratio, the former a wide one. Dairy-men so combine their feeds as to have a mixture with a nutritive ratio in the neighborhood of 1 part protein to 6 parts of carbohydrates and fats, expressed thus, "1:6." Let us now see how different feeds can be combined and the nutritive ratio determined.

Calculating the Ration.

Let us take for example a ration for a dairy cow, consisting of clover hay 10 lbs.; silage, 40 lbs.; mangels, 30 lbs.; oats, 3 lbs.; bran, 4 lbs.; oil cake or linseed meal, 1 lb. We must now determine the amount of the different constituents contained in these quantities. Referring to clover hay in the table, we find that 100 lbs. of red clover will contain 87.1 lbs. of dry matter. That being the case, 10 lbs. would contain 8.71 lbs. $10 \times 87.1 \div 100$, which equals 8.71 lbs. Similarly with the protein, 10 lbs. of hay would have $7.6 \times 10 \div 100$, or .76 lbs. Of carbohydrates there would be $39.3 \times 10 \div 100$, or 3.93 lbs. Coming to the fat, we have $1.8 \times 10 \div 100$, which equals .18 lbs. This we multiply by 2.25, to express it in terms of carbohydrates, which equals .40. Since the carbohydrates and fats are now in the same terms of efficiency, we can add them thus: $3.93 + .40 = 4.33$ lbs. From our calculations, so far, we find that 10 lbs. of red clover hay contains 8.71 lbs. dry matter, .76 lbs. protein and 4.33 lbs. of carbohydrates and fats.

This system of calculation applies to the silage, mangels, oats, bran and oil cake. When we have computed the others in the same manner we have a table much like the following.

Feeding stuff	Dry matter	Protein	Carbohydrates + (fat x 2.25)
Clover hay, 10 lbs.....	8.71	.76	4.33
Silage, 40 lbs.....	10.52	.44	6.60
Mangels, 30 lbs.....	2.82	.24	1.98
Oats, 3 lbs.....	2.72	.29	1.74
Bran, 4 lbs.....	3.59	.50	1.93
Oil cake, 1 lb.....	.90	.31	.41
Total	29.26	2.54	16.99

From the totals just compiled we learn that in this ration there are 2.54 parts of protein to 16.99 parts of carbohydrates and fats, or, by dividing 2.54 into both sides of the equation, 1 part of protein to 6.6 parts of carbohydrates and fats. The nutritive ratio is then "1 to 6.6." This is rather wide for a heavy milking cow, or, in other words, the proportion is too heavy on the side of the carbohydrates. The dry matter is also fairly heavy for anything but a large cow giving a heavy flow of milk, so by reducing the silage slightly and perhaps the oats by one pound, the dry matter is reduced and the proportion of protein slightly increased. One could add another pound of oil cake, if necessary, by reducing some of the other feeds, and thus narrow the nutritive ratio or make more protein compared with the carbohydrates. Furthermore, we have used corn silage from well-matured corn. When not so well matured the composition would be different.

Considerable further valuable information in this regard will be found in the Dairy Department. We have simply used these figures and quantities as an example by which readers may interpret the table.

Let us impress upon readers that nutritive ratios and feeding standards are not to be looked upon as final or the last word in combining rations. They should be used as a guide only. The table, however, conveys the information that feeders require, and anyone will profit by understanding it and retaining it for future use.

Destroy the Ticks.

One of the great neglects in the sheepfold is to allow breeding stock to go into winter quarters badly infested with ticks. Such a condition will reduce thrift and result in a poor fleece. There are good profits being made from the average farm flock, but better profits accrue when all vermin are exterminated. On some of the occasional warm days, of which we are usually favored with a few at this season of the year, house the flock and pour some reliable dip, after being prepared, on their backs and heads. If stood in a trough or shallow vat some drippings can be saved and used again. The dip will find its way down their sides and into the wool, and eradicate many ticks that would be expensive parasites throughout the winter. While this method is not so thorough as dipping it is the next best, and should be practiced when the weather is too cold to immerse the sheep.

THE FARM.

The Rural Church Status.

EDITOR "THE FARMER'S ADVOCATE":

I have read with a good deal of satisfaction your Editorial discussion of the question, "Can Union Save the Tottering Rural Church?" You have thrown out no complimentary bouquets, made no excuses, but frankly stated the situation as I believe it exists. Calling "a spade a spade" nowadays takes some courage, especially, when it comes to prodding among ecclesiastical traditions. We are said to be living in a fast age, at least, in our race after the almighty dollar. Evidently, interest in the welfare of the rural church is not taken so seriously. Perhaps it is because modern business methods do not blend well with the Sermon on the Mount, the promulgation of which, the church, rural or urban, should stand for.

Of course somebody is to blame. Primarily the cross-roads church is the farmer's tabernacle. He probably built it himself, for no one knows better than he, its influence as a booster of land values. Now that there is danger of it becoming archaic, what is the matter with him resurrecting his former interest and injecting new life into the dry bones?

Referring then, to the causes of this condition—what are they? The parson usually ascribes them to the worldly-mindedness of his flock; the latter retaliate by dubbing their pastor as a dead one. When sheep and shepherd fall out, wolves are apt to infest the fold, and deterioration begins.

It must be freely admitted that in many rural communities there are a great many churches too weak to do effective work. This also means a waste in duplication of buildings and of current expenses. Yet any premature attempt at union will do more harm than good. A string of cheese factories and creameries can be consolidated, if such a move is shown to be profitable. It is simply a matter of figures. Apply the same principle to church amalgamation, and you have one of the most fruitful causes of trouble in country churches. The attempt to make two churches into one has frequently resulted in three churches—two of the stand-patters plus the union church. Thus the situation brought about was worse than that which they had attempted to improve. To effect a natural union, churches must be allowed to grow together, not be thrown together.

It has been said "that no house is large enough



Champion Yorkshire Boar, Ottawa.
Owned by John Duck, Port Credit.

for two families." Some very good people who thoroughly respect each other believe that and are happier living apart. While two churches may not be a theological necessity, they are a good thing socially by providing a means whereby malcontents from the one may go to the other and cool off. A safety valve on an engine wastes good steam that theoretically ought to be at work, but who wants to live with an engine that has no safety valve? Theoretically, I am an ardent believer in church union, but practically, having observed several attempts to accomplish it, I believe it to be one of the most trouble-making issues that can be raised in a country community. I would say make haste slowly here.

Many of our little country churches are losing their grip, simply because they have no program worth while. If we are going to save them it is necessary to help them find a man's job. Big things breed enthusiasm. They haven't time to go to sleep on a contract like that or to be everlastingly getting into hot water. An enthusiastic church acquires a broad vision which shames the two factions that are squabbling as to which girl shall play the organ. For instance, foreign missions apart from any good done the heathen, have saved many a church from suicide. A number of examples could be cited where a group of country churches have co-operated in supporting a missionary of their own and who is now doing good work in his appointed field. If a census could be taken of such churches and compared with another census of those which have only their "masterly inactivity" to distinguish them, we would have a vivid conception of what honest, enthusiastic effort can do as an antidote to dry-rot. Take, also, the present activity of our rural churches in Red Cross work. Not only does the handling of big things aid in cementing the individuals of a single church, but makes it easier to enlist the co-operation of neighboring churches in a sort of get-together campaign. Fortunately, charity work is not much needed in the country, but a community house for social purposes, a farmers' institute, a series of patriotic addresses and the like will set all the people

thinking of the same thing, and something worth while at that.

Now right here, it seems to me is a chance for trying out a little scheme of reciprocity without any political party butting into the game. It should go without saying, that the country parson is anxious that the church under his charge should be a live one. He ministers to a congregation of farmers. His business, as he ordinarily sees it, is to look after their spiritual welfare. Having done what he can in that direction the average parson seems to be laboring under the delusion that his responsibility ceases and that he has done his duty. But has he? Doubtless all will admit that Christ was the model pastor. We are told that "he went about doing good." He talked to the farmers of that day about the sowing of good seed in good soil and the harvest that such care and attention to details would ensure. Does the minister of the "tottering rural church" think it beneath his dignity to do likewise? Some one ought to get the country preacher out of his shell and persuade him to take a part in the campaign for rural education. He is so situated, that he could make himself a real agricultural asset. His parishioners no longer expect him to be a tearful Jeremiah. The demand is for him to get out in front in everyday matters and be of real constructive assistance to his flock. The trouble is, he has been put upon a perch and led to believe that it is his duty to stay there and look solemn. But a perch is rather an unstable situation after all, and the wonder is that so many preachers can make a go of it. The sooner they are taken down to the level of other good citizens the better. If you see the boys rushing for the barn whenever the parson calls you may set that man down as being one of the perch species. He needs readjustment; some means of putting himself into closer touch with his people, and particularly with the young people.

Here is a hint to the "progressives" in any rural community. I would say to such: "you are directly interested in increasing the efficiency of your backward neighbor—or you ought to be. Your pastor is the very man to be your agent. The gospel of the farm missionary is not essentially different from the gospel of the preaching missionary, and the two mesh together beautifully.

The Department of Agriculture sends one of its missionaries into each county. He is doing a big work—too big, in fact, as in most communities he can be little more than an outsider, and this may awaken prejudice in the minds of some who ought to be reached. Your pastor is one of you. He has entrance as a friend to all your homes. If he is any man at all he has the confidence of the people. Being on the ground, he can follow up his suggestions and see that they are put into practice. Any pastor who will follow out some such plan will have no complaint about being down on his ministerial luck. He will have gained in influence because he has shown the people that his interest in them is not confined to creed or doctrine. Such a procedure is pretty likely to be a pew-filler.

The country church has its roots in the past. All along the road from Antioch to the circuit at Jones' Corners it has a glorious company of saints and martyrs. They have done a great work blazing out new trails and pushing their ramifications in every direction that promised possibilities for the cause in which they were enlisted. The church membership, that to-day languidly points to the reputation of its ancestors and continues to sit snug and contented with itself may well be the butt of derision and criticism. Their manner invites deserved comments from outsiders. If the country church is to recover the prestige established by its progenitors and its future continue a course of natural development it must lay hold of human affairs in its own parish and be willing to co-operate with other churches in all that pertains to good fellowship. If out-and-out union seems to be the best solution and all are agreed on that point, then let it be union. If, however, there are those, and there probably will be—who cannot combine in their present state of development they should gladly co-operate. Jew and Gentile, ritualist and non-ritualist can find many things in common, and right at hand, to work on.

Elgin Co., Ont.

AGRICOLA.

Sweet Clover on a Waterloo County Farm.

EDITOR "THE FARMER'S ADVOCATE":

Some farmers seem afraid to grow sweet clover, so I thought I would give my experiences with it. We seeded down 18 acres of sweet clover with rye as the nurse crop. The following year we had a good stand. We cut part of it for hay, and the other we let go for seed. We were too late in cutting it for hay, and the second crop, which was for seed, did not amount to very much. The other part which was left for seed grew to heights of 7 and 8 feet. The seed was so uneven in ripening, on account of the wet season last year, that we thought it would not be worth while to cut it. This field needed manure, just like many other farmers' back fields, so we thought we would let these miniature trees rot down, and by so doing manure the field and that the seed would reseed it. Most farmers would not believe that those sweet clover stalks would rot down. In June of the following year you couldn't see a sweet clover stalk standing up, and they were fairly well decayed too. I think if Peter McArthur had come around with his gun last fall he might have shot a rabbit, for there were many there, but I am getting away from my story. The following spring the

clover came so you see we would have to grow as when we mowed and mellow stalks were

Last spring legume. cut many at the bottom of plaining of clover, and This "wee root, and moisture a pasture for sweet clover

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clover came up "as thick as hair on a dog's back," so you see if we had cut it for seed the previous fall we would have had a fair yield. It came up too thick to grow as it should have, so we used it as pasture. When we plowed the field this fall it plowed as nice and mellow as we could wish. No roots of the old stalks were to be seen. They had all decayed.

Last spring we seeded down 25 acres with this legume. It grew so fast that when the grain was cut many of the sheaves were green with sweet clover at the butts. Several farmers around here are complaining of their poor catches of timothy and red clover, and our sweet clover is just the opposite. This "weed," as many call it, sends down a long root, and by so doing it penetrated through to the moisture and grew. We would have been without pasture for our cows and horses if we hadn't sowed sweet clover.

A farmer north of us seeds down with sweet clover and lets it grow till May of the following year, and then plows it down for corn. It is then about one foot in height and it makes a good fertilizer. Farmers need not grumble any more that they have no manure for their corn land. Sweet clover has come to their rescue.

We are going to cut this 25 acres of ours early for hay and the second crop for seed. That is where a great many make a mistake in letting it grow too long a time, if they want the second crop for seed. Some have cut as high as 12 bushels to the acre. What crop pays better than sweet clover, if you get a good stand of the best of hay and say 6 or 8 bushels of seed to the acre. I believe that sweet clover is the coming hay crop.

This winter we are going to cut up the sweet

clover hay, wet it and put a little chop on it, and feed it to the brood sows.

In seeding down with sweet clover be sure your seed-bed is compact. The land doesn't need to be fertile, but the crop doesn't thrive so well on land that is sour. If it is sour give it an application of lime. It seems to do better on any land that is limed. Winter-killing, as with other clovers, does not bother it, as it sends down a long root. In feeding value it ranks as high as alfalfa. You will have no trouble in getting the cows and horses to eat it.

Care should be taken in taking off the hay crop. It should be raked up into small windrows, a couple of hours after it is cut, and then put into small coils and let stand until it is dry. If it is let stand too long after it is cut the leaves will dry up and drop off, and the best part of your hay is then left in the field. Waterloo Co., Ont. SUBSCRIBER.

Automobiles, Farm Machinery and Farm Motors.

More Advice for Winter.

There are very few sections of Canada, up to the time of writing, that have not received a touch or two of frost, and so practically everyone realizes that winter is just around the corner. In a moderate sort of a way we have been advising our readers of those little precautions which are necessary in the care of a motor car when the temperature falls below freezing. Every schoolboy knows that iron, when it has been heated, can be pounded and hammered without any danger of creating a break or cleavage. In fact the system of turning metal to commercial purposes has been for all time, a heat-treating method. On the contrary, it is also a well-founded fact that metal which has been allowed to become very cold, at the same time does not fail to get brittle in direct ratio to the number of degrees of frost prevalent, and so as a matter of sound advice in the winter season, let us say that your car which is largely composed of steel and iron prepared by various chemical processes, should be kept as warm as possible. By this we do not mean that a fire is necessary in any building which has been well constructed, but we do insist that an automobile, in which you have invested any considerable amount of money, should certainly not be housed in an old barn or shed or similar building, which does not provide fair protection from the weather. If you persist in allowing your motor to remain in a cold atmosphere, there is bound to be trouble, and above all things, the springs will become so brittle that should you decide to take it out there is every possibility that some of the leaves, and perhaps all of them, will crack upon the slightest provocation.

Regarding your carburetor, we must now call for a different system of operation. Do not fail, before starting your motor, to flood the carburetor by pressing down the tickler repeatedly. When we say flood, we mean that you should so fill the gas chamber that fuel can be either seen, or if you are starting your car in the dark, felt with the fingers. This action is going to save you a lot of trouble and will be economical in so far as the starter and your cranking arm are concerned.

As soon as the severe weather sets in, you should always make sure that your water pump is not freezing up. This applies especially to automobiles stored in cold places. It is not sufficient to say to yourself that you are draining the radiator, because you must know that running off cold water from a mechanism of this kind is not a complete operation, as a certain amount always remains and only a trifling supply is necessary to tie up the water pump. We have always recommended that before the radiator is drained, the engine should be started as this heats the water and furthermore, when much of the water has been drained off, the heating of the motor dries up any little balance that may have been left. If you neglect any of these details and use your starter without first following the necessary precautions, you may break your water pump. When the motor refuses to move, do not attempt to throw it over by hand as this will certainly accomplish a result you do not desire. You can readily realize that in machines that have the thermo-syphon system, there is no worry in the winter time about a pump, although do not take this to mean that we recommend the thermo-syphon as of greater value than the pump idea. In so far as the filling of a radiator is concerned, you can lay it down as a perfectly good rule, that warm water should be used at all times.

Heavy oils and thick greases have a tendency to clog and stick during cold spells, and so while it is necessary that these essentials of lubrication should be used at all times, we cannot too strongly recommend

that your machine be kept immaculately clean at all times. Heavy substances which are likely to contain foreign matter, do not conduce to easy manipulation in any mechanical contrivance. There is no reason in the world why such commonsense advice as this should be ignored. Furthermore, the greater interest you take in your car, the less trouble it is bound to give you, and the more knowledge you will gain from its tremendous possibilities. When you have an hour or two to spend, may we suggest—the use of a gas spray, or even a cloth soaked in gasoline, and thorough cleaning on the effective parts of your automobile that are easily accessible. You cannot do any harm by being a faddist for cleanliness, but you can create a large number of exasperating situations by countenancing the presence of dirt. AUTO.

Some Facts About Electric Lighting Plants.

Why should you have an electric lighting plant? Because—it is the safest. Most of the fires on the farm start from an upset kerosene lamp or lantern. Electric lights in the barn, the loft and house will remove this source of danger.

It is most convenient. A turn of the switch floods every part of your building with light. No fumbling for matches in the cold. No more groping for harness in the dark.

It is healthy. No fumes, no smell, no wicks to trim, and no chimneys to clean.

A complete electric lighting plant consists of: a storage battery; a dynamo for charging; a switch board; power to run the dynamo, usually a gasoline engine.

This apparatus has been developed to such a degree that every farmer or farm hand can operate it.

How to Choose a Plant.

Storage battery. It is always advisable to get a good-sized storage battery of ample capacity; there are two kinds, one made of glass and the other of rubber.

Storage batteries in glass jars are usually shipped knocked down and assembled on the ground. They are to be recommended for plants of 35 lights and upwards.

Storage batteries in rubber jars.—The batteries are assembled and sealed in the factory and shipped ready for use. They are to be recommended for plants requiring from 10 to 35 lights.

Dynamo.—A belt-driven dynamo gives the best satisfaction. A base with belt tightener should be obtained, as new belts stretch considerably. A speed of 1,800 revolutions is the normal speed. The bearings should be made of phosphor bronze and ring oiled.

Switchboard.—It is advisable to have one large enough, and it should include the following apparatus: an automatic reverse current cut-out protecting fuses. A switch for charging and discharging, an ammeter showing the flow of current when charging.

With rubber-jar batteries it is advisable to combine this ammeter with a watt-hour meter, which registers the amount of electricity stored in the battery.

With glass-jar batteries a hydrometer is used instead of the watt-hour meter. It floats in one of the cells of the battery and always shows the amount of electricity stored.

Look for a substantial reverse current cut-out with heavy contacts. This is very important, as an ordinary reverse current cut-out used for automobiles will not give satisfaction for any length of time.

Engine.—The engine must run at a uniform speed,

and practically any gasoline, kerosene or steam engine with substantial, well-balanced fly wheels will do.

Approximate horse-power required:

10 light plants.....	1 1/2 HP.	_____
14 ".....	1 3/4 " "	_____
20 ".....	2 1/2 " "	2 H.P.
30 ".....	2 3/4 " "	2 " "
35 ".....	2 3/4 " "	2 " "
50 ".....	3 1/2 " "	2 " "
75 ".....	5 " "	4 " "
100 ".....	5 " "	4 " "
150 ".....	6 " "	4 " "
200 ".....	7 " "	6 " "

How Does the Plant Work?

The engine.—Nearly every farmer who would be interested in electric light knows how to run one.

The electrical part.—The power transmitted by the belt to the dynamo is transformed into electricity. The two carbon brushes on the dynamo accumulate the electricity and it is led through wires into the switchboard where it is distributed as follows: When switch is on charging position the electricity flows into the storage battery. If lights are used at the time the battery is charged a portion of the electricity is led off at the switchboard and used for lighting. When the engine is not running the switch is put on "discharge." Then the dynamo is disconnected and the electricity for the lamps is supplied by the storage battery. There should be an automatic cut-out on switchboard which prevents the electricity from flowing backwards from the battery into the dynamo.

How to Operate a Plant.

It will take from five to eight hours to charge a battery fully. One charge will supply lights for four or five days during the winter, six to ten days during the spring and fall, and 10 to 21 days during the summer.

It is not advisable to exhaust the battery completely but start charging again. A storage battery needs little attention, excepting the electrolyte or liquid, which has to be kept above the top of the plates. This is important and should be attended to at least once every three weeks. Fill up with distilled water or clean, rain water strained through a cloth. Keep excessive dust from the plant. The best place to install this equipment is in a corner of the basement—6 x 8 feet is ample space. It is advisable not to let the temperature get below zero. If there is not room for the whole outfit, keep the battery there. A 24-light plant should do the average farm, and the cost of an up-to-date, efficient plant of this size (14 lights) will run from \$270 to \$300, installed and complete. (Be sure you have skilled workmen put it in and not merely a lineman who can stretch wire.) To this we must add the cost of the engine—and there are many to choose from. Don't get an engine just large enough to run the dynamo, but have a line shaft with the dynamo and several other machines attached (the feed grinder, churn, etc.), and you can charge your batteries while doing other work.

If you look ahead and plan you will never have to run your engine for the sole purpose of getting light. There are many reliable outfits on the market, but it is not necessary to pay \$100 to have this most desirable equipment. We have not attempted to make you think that any one can install such a plant, because they can't, just for the same reason that everybody can't farm successfully.

Canada's Young Farmers and Future Leaders.

Important Notice to Young Farmers.

Since the department for Canada's Young Farmers was started in this paper we have had many expressions of appreciation and it is our desire that the young men on the land work together through these columns for the good of agriculture. We can help you but you can help one another by giving your own individual experiences for the benefit of other boys and young men facing the same problems which you have faced

and successfully solved. Accordingly we are going to assist you by suggesting some topics for discussion. We know you have had experiences and we know that it is much easier to write when you have a subject, and one about which you know through practical success or failure.

Topics For Discussion.

Here is a list of topics and we would invite you to discuss them in the order named. You are at liberty to discuss all of them, each in a separate article, or you

can discuss only one as you choose. Confine your articles to not more than 800 words each. Stick to facts learned by experience. In the competition which we recently carried on in this department, some interesting facts were brought out. Remember we pay liberally for all articles, accepted. You will not be working for nothing if you write for this column. You will get cash—not books or worthless premiums. Look over the subjects as outlined:

1. Mistakes and Difficulties of the Season. This has been a difficult season. Seeding was wet;

summer was dry. Mistakes were frequent; difficulties many. Discuss some of them as they affected you. Tell us how you overcome obstacles and what you learned which would help you over another such a year. Get your copy here by November 25.

2. The Literary Society.

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

3. The Farmer's Club.

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

4. Field Crop Competitions.

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

We announce these four topics. We have more in mind and one will be added to the list each week. We hope scores of our readers get in these discussions. The more who enter the greater the good we shall accomplish. Watch this column and help make it more valuable. It is the young farmer's special column and no one would like to see the older men put up better material than the young farmers. Write and get paid for writing. Write and do good.

School Fair Effects.

EDITOR "THE FARMER'S ADVOCATE":

The question has been raised of the unfavorable result of disappointment upon those pupils unsuccessful in school fair competitions. The point is important and deserves consideration because though often quickly forgotten these things loom large and are keenly felt for the time by the junior. Ringside observers at the big exhibitions know, however, that mature and seasoned competitors to whom the desired ribbons do not fall, sometimes reveal a susceptibility like that of the youthful amateur. Had they begun earlier they might possibly have been schooled to greater show-ring forbearance. To endure reverse with patience is not the least valuable of school lessons, and some pupils in nearly every class promotion examination must witness others advance to another form and see them there for a whole term, while they retrace their course through the old book and familiar but unmastered exercises. Unpleasant it is but to their final good educationally it may prove. The race is not always to the early swift. Then, the school fair disappointment is not so serious as one might suppose, because of the variety of stirring events and also for the reason that the numerous classes and extended sections enable a great many youngsters to share in the winnings. From my observation I would think it advisable perhaps that the groups of schools participating should not be over large and inconvenient. The educational resourcefulness of those who direct these fairs and the teachers will ensure variety of features, and yet continuity in essay writing, raising products from home-grown seed or home-reared poultry for example. As in field sports like baseball, so the individual school will likely do best that plans and prepares early and observes what is known as "team work." In conjunction with teachers and the district director or representative responsible, pupils will desire such provision and regard for decorum, rules and their property shown that isolated cases of disturbing exhibits through any "undesirable" spirit will be conspicuously absent. The fear has been expressed that the school fair might encroach upon the interest of the township fall exhibition. The reverse seems likely to be the case. It provides a wholesome stimulant to the latter and trains a large number of young people in the production and display of meritorious articles of growth or handiwork, who later on will infuse new blood among the managers and competitors of the agricultural shows. At one school fair I visited, a very marked feature of the attendance was the large number of young men and young farmers present. They and others were agreeably surprised at the skill and knowledge disclosed in products and collections of technical work with weeds, etc., that would have done no discredit to experts. Educationally the school fair idea rests upon the sound principle of providing for and giving direction to the physical as well as intellectual activities of young people, a most desirable diversion from a too bookish curriculum of studies. It is but just to say that in the course of a good many years' observation of rural school movements no effort appears to have so awakened and quickened the practical interest of pupils in the ways of nature and the things of the farm and farm-home as the school fair. No doubt professional educationists themselves will cheerfully extend to leaders in the service of the Department of Agriculture the share of credit and the co-operation which is their due.

ON THE WING.

Sidelights on Fall Fairs.

EDITOR "THE FARMER'S ADVOCATE":

Now that the Fall Fairs are over and directors are being appointed for another year it may not be out of place to make some suggestions.

In a part of Western Ontario horse-racing has become one of the chief features of Fall Fairs. Indeed I think that the tendency is in this direction in many parts of Ontario. I speak however with reference to one fair that I have attended for a number of years. It is a centre for a very large district and draws a large crowd. Here horse-racing is made the main feature of the day. The track is made fairly large in order to be suitable for speeding. They have each year two races with three heats in each. Of the horses taking part few, if any of them, are bred in the district for the district is given over to the raising of heavy horses almost entirely. This means that the horse racing is not in any real sense a display of farm products for the district. The people can have very little interest in it except that we all have more or less liking for a contest in endurance.

Now for my part I think that a Fall Fair to be really beneficial should be a display of the products of the community. The idea of a Fall Fair is not merely to amuse the people. One great benefit of it is that it lets one man know what the other is doing and horse racing under these conditions does not do this. Hence it does not involve competition in the raising of home products. Another great benefit of the Fair is that it brings country and town people together letting the town people see what the country people are doing. Horse racing as above does not do this. It ought also to educate.

It does not do these things because where there is horse racing there is little else in view. A fair that runs, as this one does, from about 1.30 p. m. to 5.30 p. m. and runs off six heats three times around the track in that time does not leave room for much else, especially when it takes about five minutes each time to get rightly started. The track is engaged almost all the time, either racing horses or warming them up for the race. The result is that the large display of



Ardelia DeKol Tensem, 13700.

Canadian champion two-year-old in the eight-months-after-calving division with 19.02 lbs. butter. In the R. O. P. test she gave as a two-year-old 16,704.6 lbs. milk and 835.37 lbs. butter, but did not freshen in time to qualify. Official record at 6 years, 29.28 lbs. butter in seven days.

heavy and light horses is judged out in the centre of the large ring scarcely ever making an appearance on the outside ring. The crowd are not likely to look past a racing horse to see a fine Clydesdale class judged, but I feel that they would get more real benefit if they did. The trouble is that the obstruction should not be there.

Away off in a corner of the yard are two or three large pens where droves of cattle are herded together and judged without ever being led into a ring and sometimes without even being separated from the herd. I have seldom if ever seen twenty men watching the judging at one time. Sheep and hogs are judged in much the same indifferent fashion.

Now I am not writing to condemn horse racing but under these conditions I do condemn it. The six horses that won money in those two races carried off a large percentage of the money given for prizes and they were an ill lot to look at. They held the attention of the crowd while they might have got a good education in stock judging and an inspiration to go home and do better things. The people went home without getting any real benefit from their afternoon off.

If we must have racing with regular race carts and race harness put it by itself on a separate day. At least give the Fall Fair an appearance of being a Farmer's Fair or better still a Community Fair, including the products of the village. In this day of ours when we seem to need so much amusement we are apt to forget that we need education as well.

I was driven to write this because I see how this district is being educated by this sort of Fall Fair. We had a very good School Fair this year. There were some excellent exhibits but the directors of it were not content without having a horse race, which almost ended disastrously for one of the boys. To my amaze-

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ment the local paper in publishing an account of the School Fair mentioned the one fact that it was made interesting by a good horse race. It then gave the names of the winners, both the drivers and the horses. None of the other exhibits were mentioned.

That is educating the farmers' sons wrongly. It is also disastrous to the Fall Fair. Many of our best people have told me they were disgusted with it. I would like very much to see it remedied for I fear the tendency is in this direction in many places. The case I mention is in one of our best farming districts in a neighboring county to your own Middlesex. Elgin Co., Ont.

A. R. MAC.

THE DAIRY.

Another Letter on the Ottawa Milk Question.

EDITOR "THE FARMER'S ADVOCATE":

When you are right defend the right; but when you are wrong the proper thing to do is to admit it, and make no bones about it.

B. Rothwell, President of the Ottawa Dairy, Ltd., is right and I was wrong. The figures he furnishes re milk taken from the company's wagons during September by the Ottawa Board of Health, prove that while the Dairy demands a butter test of 35 from shippers, it gives its customers milk testing considerably better than 35—sometimes more than 4 per cent.—which is accounted for, of course, in the fact that a great deal of the milk shipped in by producers tests quite a bit better than even 4 per cent.

The source, usually reliable, from which I obtained the figures given in my former article was plainly wrongly informed, but I quoted in good faith and now admit the error and make the correction wholeheartedly. I have no desire to injure the Ottawa Dairy, and my reference to it was brief, but it contained enough *aqua fortis* to stir up righteous resentment. These things will sometimes happen in spite of care to avoid them.

You cannot always get your information first hand, or strictly reliable. It is the policy of every reputable journal and all decent writers to freely make "the amende honorable" when a reputation is at stake, if the party assailed produces evidence of error. There was so much "hot stuff" banded about during Ottawa's furore over the price of milk, and so many allegations, denials and corrections, that a writer on the subject did well to be right in his quotations fifty-one per cent. of the time. So, as a witty Irishman remarked on a similar occasion, "If there's anything I've done that I'm sorry for, I'm willing to be forgiven."

Mr. Rothwell says my statement that the Ottawa Dairy "paid dividends amounting to 46 per cent." is not true. The words I used were "dividends and bonuses." At the mass meeting held in the Ottawa

City Hall, August 29th, to prevent the price of milk from increasing, Alderman Muir, who led the revolt and called the meeting, is thus reported (Ottawa Journal Aug. 30):

"Ald. Muir referred to an article in an Ottawa newspaper to the effect that the Ottawa Dairy Company was paying a dividend of 22 per cent. to its shareholders.

"George Hopper, a milk producer, denied this. "Ald. Muir declared warmly that if such a dividend was paid the company members had no right to it under existing conditions. He stated that it had been said that owners of preferred stock received two shares of common stock, making their dividend 51 per cent., taking that into consideration."

The Ottawa Citizen of August 26 quotes what it calls "some highly interesting statements from a shareholder of the Ottawa Dairy Company, one of the leading citizens of the city, whose name, for obvious reasons, is withheld for the present. This gentleman, having a thorough knowledge of the milk business, is in a position to know what he is talking about."

"The Dairy Company's profits, he declared, are large in comparison with those of the farmer, and in this connection some high lights are thrown on the financial operations of that corporation since it came into existence. One of the allegations he makes is that a few years ago when the company took out a Dominion charter its dividends were 16 per cent. on the common stock. This bonanza was reduced to more reasonable-looking proportions by the stock-watering process of calling in the common stock and issuing two shares of new stock for every one of the old. It is interesting to note that this method was a leaf out of the book of the Ottawa Electric Railway Company. When that corporation's returns became

so huge as to create the danger of arousing the people, it called in the stock and issued three shares for one.

"The Dairy Company's dividends, however, have continued to swell to such an extent that already this year it is alleged to have paid 14 per cent. on the common. The whole or part of this may, of course, come from other than the milk division of the business. That could be determined by an investigation."

Mr. Rothwell in his letter to the Advocate says: "Your correspondent, in ignorance or intentionally, ignores the fact that the Ottawa Dairy are engaged in several other lines of business in addition to the milk trade, and that their profits are made in these side lines."

The real point of this argument from the farmer's standpoint is that if enormous profits are made by the company, even though they be made on "side lines" (such as butter, ice-cream, condensed milk, etc.), these profitable side-lines all grow out of the farmer's milk; and that the company makes a very big profit from the product, while the farmer makes a very small one. To put the proposition another way, if the farmers supplied no milk there would be no profitable "side-lines." To state it any other way is to make a distinction without making a difference. It is what the common, every-day, milk-shipping farmer gets out of the thing that we are concerned about in these articles.

The Ottawa Citizen's "shareholder" informant above quoted gives some interesting history concerning the Ottawa Dairy.

"When the company was first formed all the men who owned milk routes were approached to sell out their routes to the company," he said. "They were paid for their routes in proportion to the amount of milk they sold in the city. It was \$20 a gallon for their average daily distribution in the city. This was paid for in 8 per cent. preferred stock and a bonus, dollar for dollar, of common stock. What attracted the milk producers most was the amount they were to receive for their milk from the company."

"The majority of the milkmen sold out to the company in this way and the company started operations. The first two years were bad, the company losing a great deal of money. The trouble was that the customers did not change as readily as had been anticipated from the individual dealers to the company, and many instead bought from other independent distributors.

"Then the company called a meeting to decide what was to be done. Most of the shareholders were farmers, and the officers said that the only thing to save the company was for the farmers to sell their milk routes; if the company failed they would be left out of the city business altogether, and little remained for them to do but accept a lower price per gallon. This they did. This enabled the company to cut the prices and thereby get most of the business in the city. The other dealers were for the most part crowded out. From that time on, with few independent dealers left, the company began to grow prosperous.

"At that time common stock went for a song. I remember one occasion when a man flipped a quarter to see whether he would pay five dollars or ten dollars for six shares. He won and got them for five dollars.

"From that on the value of common stock went up rapidly as the dividends increased. As far as I know, none of the common stock was sold by the company for cash. It was all given as bonus stock. There was \$150,000 worth of common stock at the start.

"Finally the profits were going up at such a rate that as high as 15 per cent. was declared on the common stock in one year. Money was put into new buildings and better equipment, but in spite of this the common shareholders continued to reap big profits.

"Then a few years ago the company was changed, getting a Dominion charter instead of the provincial one. All the preferred and common stock was called in and the stock in the new company was issued. The preferred stock in the new company was issued in the same proportion as had been in force in the old company, but the holders of common stock received two shares in the new company, for every one they held in the old company. This doubled the amount of common stock, and accordingly the dividend per share would not be as high. However, since that the dividends have again begun to climb. It is understood that they are already 14 per cent. this year.

"The Ottawa Dairy's farm was not a paying venture. It was paying, as I remember at the last meeting I was at, only 2 per cent. on the money invested. However, it was considered good business from an advertising standpoint. The actual profits in the milk business, as shown by the company's books, have not been so very great. The big profits have been made, according to the company's returns, on the other branches of its operations, ice-cream, butter, etc.

"I think it would be a splendid thing to have an investigation such as The Citizen suggests. I have been intimately connected with the milk business and know this, that the farmers are making a small profit and the Ottawa Dairy Company is making a big one. Therefore, the idea to investigate only those making the small profit will not help the situation. Both should be investigated together.

"The Ottawa Dairy figures show that the company makes a very modest profit from its milk business. It is something like 7 per cent. on the money invested. They show that the big profits are made on the ice-

cream, butter business, etc. An investigation would show whether this is really a fact or whether it is a matter of bookkeeping. It would show whether the overhead charges are fairly placed so that the different departments are carrying their fair share, or whether it is a case of charging too heavily on the milk business, which would result in the other departments showing a big profit at the expense of the milk end. An expert accountant could easily determine this."

Mr. Rothwell endeavors to prove the profitability of producing milk by making the following statement:

"The writer, a practical farmer, has been intimately connected with the conduct of the company in question since its formation, and from his knowledge, born of experience in all phases of the milk trade, and in the hope that it will be educative as well as interesting to your correspondent, will say that the modern dairy farm, under skilful administration, may be made to show a net profit comparing favorably with that of the distributing company, and offers a less inviting target for verbal brickbats from well meaning but ill-informed critics of modern farm and trade economics."

This statement is more "interesting" than "educative." It is not fair nor reasonable for Mr. Rothwell to say out of his own experience that "the modern dairy farm, under skilful management, may be made to show a net profit comparing favorably with that of the distributing company." He may himself have shown such a net profit before joining the Ottawa Dairy, though I very much doubt it. With his farm located close to the city of Ottawa, and with his own distributing wagons getting the full retail price for his milk, he was incomparably better situated than the average farmer away out in the country "to show a net profit comparing favorably with that of the distributing company."

To contend that the ordinary milk-producing farmer, even with "skilful management," is able to or ever does make such profits as "shareholder" tells of, is not only wide of the mark but silly—absolutely silly, and Mr. Rothwell knows it might well. It is an excellent illustration of what he calls "rhetoric in lieu of facts."

Such statements are neither "educative" nor "interesting," and if anything is calculated to "turn the thoughts of the country youth to the already congested centres of population and intensify the ever-increasing disparity between producers and consumers," it is reading stories of company financing like that furnished by "shareholder" in the Ottawa Citizen.

Unfortunately there is no Babcock test to keep the water out of Big Business as it is kept out of milk. But that will come presently when the farmer realizes the real cause of his weak economic position in the business relations of this country, and uses his ballot in the interest of his own class and in opposition to the unfair profiteering of Big Business and High Finance. British Columbia and the prairies have furnished a warning, and the clouds are already gathering around Ottawa too. The signs are that the under dog in Canada will not be the under dog much longer.

This matter needs more agitation. In a later article I will show what the farmers have done to throw off their shackles, and introduce decent, business-like, commonsense legislation across the border to the south of us. It reads just like a fairy tale. Northumberland Co., Ont. W. L. MARTIN.

Feeding the Dairy Cow for Most Profitable Returns.

Dairymen who bring their cows to the highest stage of production during winter months must aim at imitating summer conditions. This is more easily said than done. During late spring and early summer the dairy herd reaches the highest production, and the quality of the product is superior to that of other seasons. Luxuriant pasture gives abundance of feed, which is considered to be nearly a balanced ration. Grass is both succulent and palatable and in securing it cows receive exercise in a moderate temperature. Dairymen who are in a position to furnish these conditions secure the maximum profit from their herds during the time they must be confined to the stable and fed on stored feed. Any kind of feed will not produce milk in paying quantities. The demands on the animal system must be met before feed can be converted into milk and butter-fat. Milk is high in protein, therefore feeds containing this nutrient in large quantities are necessary. Carbohydrates and fat are also required and the relationship existing between these feeds should be around one of protein to five or six of carbohydrates. Wider rations are fed, but cows on heavy production require that the ration be somewhat narrower. The amount of feed must be sufficient to maintain the system, over that amount is left for production. However, the cow is so constituted that for a time she will produce even when kept on a maintenance ration by drawing on stored up material in her body. This cannot go on indefinitely. The cow gradually loses in flesh, then the milk yield drops.

The dairy cow is a highly organized manufacturing plant which turns out food ready for consumption. The digestive system is her engine and on it depends to a large extent the profits from the plant. The feed consumed furnishes fire to generate power to keep her going and working. The cow bears a close analogy

to a steam engine. Fuel must be supplied to generate steam to start the wheels turning. Wood, coal, gasoline, etc., of different qualities, comprise the different kinds of material which are in use. If it is of poor quality the fireman has difficulty in keeping up steam. The water may heat but not enough steam will generate to run the plant to capacity. Consequently the greatest profit is not made. In factories steam is generated under pressure so that the machinery can do its work. The best fuel is used to keep the fires burning. It is claimed that it only requires a little extra fuel to generate steam under pressure than it does to produce a small amount, but more work is accomplished per pound of fuel. The same may be applied to the dairy cow. A small amount of poor-grade feed may maintain the animal but will produce but little milk. Increase the ration and if the cow is of the right quality the production will be increased. Two or three pounds extra of concentrates may increase the milk yield ten or fifteen pounds. The engine must be big enough for the work it is required to do, and the dairy cow must also have the capacity and quality of digestion in order to be profitable. Too many cows have not the capacity nor machinery to make them profitable manufacturers, and on the other hand some that have both are deprived of the right kind of fuel and raw material by their owner. The cow which gives the largest returns in milk and butter fat for the feed consumed is the most profitable. However, an abundance of feed will not make a good cow out of a poor one. The mechanism or blood of the animal plays a large part.

The cow is equipped to handle a large amount of roughage. Under normal conditions this is the cheap part of the ration. Concentrates are more expensive, but it usually pays to add a certain amount of them to the roughage the cow eats. The amount may be regulated by the milk yield. The coarse feeds or roughages should be grown on the farm and if any feed must be purchased let it be concentrates. Clover or alfalfa hay and corn silage make ideal coarse feeds for the dairy cow. These feeds will produce a fair flow of milk without grains. Alfalfa cannot be grown on all soils but red clover and corn do well over a wide area. Silage adds succulence to the ration and aids in making dry feeds, as straw, more palatable. Roots are a feed which is being displaced somewhat by silage, but they still have a place in the ration. There is more value in this succulent feed than analyses show.

While most of the feed is grown on the farm, it is advisable to follow a standard when compiling a ration. It may pay to sell some grains grown, and purchase feeds higher in protein in order to balance the ration so that the best use can be made of all nutrients fed. With an unbalanced feed there is more or less loss of some of the nutrients fed. Each must bear a certain relationship to the other for most profitable production. The protein content is the most expensive to fill. The table on another page giving digestible nutrients of various feeds, gives some idea of their value for producing milk or meat.

About 7.925 pounds of digestible nutrients are required daily by 1,000-lb. cow for maintenance only, and of this .7 pounds should be digestible protein. About 30 pounds of silage and 10 pounds of straw would supply enough carbohydrates, but would be .3 pounds short of protein. If 8 pounds of clover hay are used instead of the straw, the maintenance requirements would be about met. A cow must be fed more than this quantity in order to produce milk. In fact, at no stage should a cow be kept on so small a ration. If she is not milking, she is usually carrying a calf, in the majority of cases doing both, therefore the demand on her system is great. The nutritive value of various feeds is shown in the table and where two or more are nearly equal, the dairyman would be influenced mostly by the market value. Sometimes the highest priced feeds are the cheapest in the end, as a small quantity seems to bring the ration up to the required amount. In this class are cottonseed meal, linseed meal, brewers' grains, peas, malt sprouts, gluten meal, etc. These are high in protein which is the most expensive substance required by dairy cows, but a feed they cannot get along without. They require it in larger quantities than other classes of stock. Mineral matter, as lime and phosphorus, is required in milk production but this substance is provided for in legume hay. Where the roughage is composed principally of timothy hay, wild grass, and corn stover, much greater quantities of concentrates are required than if clover or alfalfa hay are available. For economical feeding, dairymen should endeavor to grow plenty of clover hay. They can then produce milk on the minimum amount of expensive concentrates.

All cows are not of the same temperament. Some put the extra feed on their backs instead of in the pail. On this account a study should be made of the requirements of the individual animal. In the best bred herds cows vary in their productive ability, therefore to obtain the greatest profit, records should be kept of both milk and feed, and tests made occasionally to ascertain if it would pay to increase or decrease the grain. The cow should have all the good quality roughage she wants but the grain may be regulated by her production. The following feeding standard, based on rations which have given excellent results in practice, is taken from Henry's "Feeds and Feeding." As previously stated, a 1,000-lb. cow requires .7 lbs. digestible protein and a total of 7.925 pounds digestible nutrients for her maintenance; to this should be added .286 pounds digestible nutrients, of which .047 pounds are protein, for each pound of

three per cent. milk. For each pound of 3.5 per cent. milk .316 and .049 must be added respectively, and for 4 per cent. milk, .346 pounds and .054 pounds. This would make the total nutrients required by a cow giving 50 pounds of 3.5 per cent. milk, 23.72 pounds. A rule followed by some dairymen is to feed about one pound of concentrates per day for each pound of butter-fat given during the week. Thus a cow making 14 pounds of butter a week would be fed 14 pounds of concentrates daily in addition to the roughage she requires. When whole milk is marketed, a rule is to feed one pound of concentrates per day for each four pounds of milk produced. According to this a cow giving 50 pounds of milk per day would require 12½ pounds of concentrates, made up of grains and mill feeds, to balance the ration. These rules are only approximate. Keeping records of feed and milk and doing a little experimenting is the preferable method. Each dairyman must study the individual cows in his herd. The feed which gives best results with one cow may not prove so satisfactory with another. Balanced rations containing the proper proportions of the different nutrients can be made up from a great variety of feeds. Therefore, the dairyman should first consider what he is growing on the farm and if necessary purchase those concentrates which furnish most protein. When grain is scarce brewers' grains, linseed meal, cottonseed meal, etc., or an increased amount of clover and alfalfa hay may be used. With grains plentiful, but shortage of hay, silage and straw could form the bulk of the roughage and the proportion of grain increased. In certain districts dairymen are getting very good results this fall feeding silage and alfalfa hay. Of course their cows might do better if fed some concentrates, but, in order to be profitable, the milk yield would have to increase sufficiently to pay for the extra feed, which would have to be purchased on the open market. Silage 30 lbs., roots 40 lbs., straw 5 lbs., clover hay 8 lbs., brewers' grain 3 lbs., bran 4 lbs., makes a fairly good ration but a trifle short on the dry matter. Roots are not always available and the home-grown grains may be plentiful. Therefore a ration with a nutritive ratio of 1:5.2 is made with silage 40 lbs., clover hay 5 lbs., oat chop 2 lbs., barley 1 lb., bran 1 lb., and oil cake 2 lbs. For a cow giving 40 lbs. of milk per day the following gives fairly good satisfaction: silage 40 lbs., hay 10 lbs., oat straw 4 lbs., cottonseed meal, or oil cake meal 2 lbs., bran 4 lbs., oats 3 lbs. and barley 2 lbs. A ration with a nutritive ratio of about 1:5.8 is compiled with silage 30 lbs., alfalfa hay 12 lbs., mangels 20 lbs., oat chop 5 lbs., barley meal 3 lbs. For heavy production about a pound of oil cake per day might profitably be added.

Feeding a balanced ration is not in itself sufficient for profitable production. The cow must be made comfortable, which will require that she be housed in a well ventilated stable, during the winter, where the temperature will range around fifty degrees F. The stable must be kept clean and the feeds kept as clean as possible and prepared in such a way that they will be palatable. The cow in milk requires a large quantity of water daily. Salt in the ration is also essential. Some feed twice a day, others three times a day, with about equal results. Feeding and milking should be done at a stated time each day, as the cow soon forms the habit of wanting her feed at a certain time whether it is two or three times a day and if the regular hours are not adhered to the dairyman suffers by a decrease in the production. Combined with good feed and attention must go kindly treatment. The cow that is treated roughly will not give the same quantity of milk as she would were she handled in a gentle manner.

POULTRY.

The Coming Chick Crop.

EDITOR "THE FARMER'S ADVOCATE":

The time to work for a better chick crop is right now. We cannot expect to put it off until it is time to put the eggs under the hen or in the incubator and then realize our dreams. Now is the time. What can we do at this early date to secure not only a good hatch but a better flock of chicks?

First, pick out the finest hens for breeding purposes. These will be the hens that are not too old, those which are thrifty and well formed, and good layers. Birds that are neither too young nor too old should be chosen for this important work. What applies to the hens may be said of the male birds, so far as age, thriftiness and perfect form are concerned. The most handsome bird of the flock ought to be mated with females of a like degree of beauty and efficiency. For it is not a fact that like produces like. Like produces either something better or something worse. So it pays well to begin with the choicest stock for breeding purposes.

And then feed for the very top notch of efficiency. from now until it is time to select the eggs for hatching. The hens may be fed cracked corn, wheat and oats, as a grain feed with a mash of wheat middlings, wheat bran, cornmeal and a little beef scrap. This fed dry. Watch that your birds do not get too fleshy. That is the way to infertile eggs.

One of the best things of all is to mate a small number of hens with a single male. Too often we find twenty five or thirty hens in a pen with a single male. Too many by at least one half. For the best results a dozen hens are all that should ever be mated with one male.

These points carefully followed should give both

extra good hatches and superior birds. Keep this up and success must come.

N. Y.

E. L. VINCENT.

Egg-laying Competition.

The Philadelphia, North American International Egg-laying Competition which is operated on the grounds of Delaware College, Newark, Del., completed the fifty-second week of the fifth year. One hundred pens, of five birds each, were entered, and birds in a large number of pens were persistent layers during the entire year. A pen of White Wyandottes, entered by Tom Barron, Catforth, England, produced the highest number of eggs. Their total for the year was 1,305 eggs, or 261 per bird. The second highest was a pen of White Leghorns with a total of 1,151 eggs, entered by E. A. Ballard, Chestnut Hill, Pa. A close third was Barron's White Leghorns, which produced 1,147 eggs. Many pens have a record of over 1,000 eggs for the year which puts them in a class far above the average. One pen of Barred Rocks laid 1,000 eggs, pen of White Rocks 1,033, and pen Columbian Rocks 1,015. The best pen of Reds reached 966 eggs.

HORTICULTURE.

Don't Follow the Crowd.

During the last few years there has been a widespread feeling in North America that the apple-growing business is being overdone. This sentiment prevails here and there, where apples are produced, from the Atlantic to the Pacific, and from the northern latitudes away down into the Southern States. All growers do not entertain such ideas about the enterprise, but those prominent in educative and administrative circles have done considerable figuring to reveal the markets that may consume the enormous production when the visible plantings come into bearing. Following the boom of several years ago many trees were set, not only in Nova Scotia, Ontario, or British Columbia, but in the Western States as well as East and South throughout the Republic. Had they been properly cared for and brought to fruition the result would have been manifest by the present time, but as it is many plantations have already gone under and thousands are going as quickly as neglect will propel them along. This is particularly true in case of absentee ownership, where the would-be fruit grower has still clung to his profession, whatever it might be, and has attempted to develop his holding until such time as the luscious fruit, clinging to the branches in his orchards and vineyards, would insure him a substantial income and would warrant him leaving his profession for the seeming romantic life in the country. One cannot derive the same profit from labor employed on the land as in manufacturing pursuits. Some of the most brilliant industrial managers have learned this. Men who can employ thousands and use their labor to enhance business and savings fail to make a farm pay. Thus it has been with the young fruit plantations. The income from the first has not been up to expectations; unthought-of difficulties have arisen; interest has waned, and the end is in sight. Year after year sees a decrease in the area that will probably factor in the fruit crop within the next five to seven years. Conditions will gradually right themselves, and he who adopts modern methods and "sticks" will, we believe, be on the inside when the next period of prosperity comes.

Ontario growers have had considerable to contend with during the last five years, yet there are those who have made money in spite of the ill winds. In suitable locations and under favorable conditions it appears that the present is as good a time to plant trees as there has been for a long period. If one follows the crowd in the fruit business, the spoils must be divided amongst so many that each one will receive a small portion. A modest expansion now may mean an opportunity to share some of the good things that periodically come about.

Experience is demonstrating year after year that profitable fruit growing will eventually get down to a basis where the small farm orchards, other than enough to supply the home, will become extinct, and the great quantity of fruit to supply home and foreign markets will be produced on large plantations that will be managed as extensive commercial fruit-growing enterprises. The late Alex. McNeil, when Fruit Commissioner for Canada, saw this coming several years before his death, and as years go by his prediction is gradually coming true.

FARM BULLETIN.

A Wet Day.

BY PETER MCARTHUR.

It is so long since I have been kept to the house by a rainy day that I hardly know what to do with myself. Of course I am glad that it is raining for rain is sorely needed throughout the whole district. Rainwater cisterns have gone dry and I know from experience that bringing home a barrelful and a churnful of water every washday from the nearest artesian well that yields soft water is not the kind of chore that a fellow cares to look forward to as a regular thing. As I write I can hear the water gurgling into the cistern from the flowing caves and I know that I shall not have to haul home a stone-boat load of water for the next few weeks anyway.

That is a cheerful thought and I am making the most of it but I can't spread it over a whole, dreary, wet day. Occasionally I reflect that this is a fine, warm rain and that if it doesn't turn cold after it we may yet get a good feed of mushrooms. They have simply tantalized us this season. Never did the most patient search by the whole family result in getting more than a taste. But even thinking about mushrooms cannot be made to take up so very much time. Of course there is a load of books to be read—two new books on the tariff, one for and one against—Lionel Curtis' Round Table "Problem of the Commonwealth,"—and a lot of lighter books, but I am not in the humor for reading when everything looks so gloomy. On a bright, sunny day I could sit by a window and read from morning till night but to-day I feel that I need exercise and that I'd like to be pottering around doing something or walking to the village. I guess the whole trouble is that I know I am a prisoner in the house for the day and something in my system rebels. There is a great deal of truth in a story I heard when a boy. It is about a man who lived in one of the old walled cities. As he grew to be an old man he used to boast that he had never been outside the walls of the city, and every year he grew more proud of the fact and more boastful about it. At last the king of the country heard about this man and humorously exercising his royal power he issued orders that under no condition was this man to be allowed to go outside of the city. As soon as the poor man heard of the decree he immediately began to pine and fret to go out, until at last he became so miserable that he petitioned the king to revoke the decree and let him go out of the city. All of which shows that this human nature of ours is a peculiar thing if we would only allow ourselves to confess it. Although I know there is no real reason why I should go to the village to-day I feel in my bones that before the day is over I shall go slopping to the post-office to see if there are some more letters there that I don't expect to get.

Although the mail carrier brought the papers as usual they only helped to unsettle me. Yesterday they brought the news that Hughes was elected President in the United States and to-day they say that Wilson has probably been elected, but they are not sure about it. The news they bring is about as uncertain and inconclusive as if it had passed through the hands of a censor. Possibly if I went to the village I could find out at the telegraph office which one was finally declared elected. To make matters worse, I had written an article about the election of Hughes before the papers came and now I have to throw it away and write this article instead. Do you wonder that the rainy day has proven a nuisance to me, even though I have been wishing for rain for weeks—ever since the cistern went dry. The election of Hughes gave me a splendid subject for an article, for the election was really a wartime election, and if it had resulted in a change of government the change would have been full of lessons for us. Although the United States are not at war we would have had a chance to see how their interests would be affected, and could judge whether it would be safe for us to have a war-time election, no matter whether it caused a change of government or not. You know it is beginning to look as if we might have an election during the war after all, though I doubt if many people would consider such a move to be wise. If either party could force an election and place all the blame for it on the other fellows they would bring it on with a whoop—all of which tends to convince one that we should not have the election.

Although I have been opposed to a war-time election ever since it was first spoken of as a possibility, I am beginning to change my mind and the reason for the change has nothing whatever to do with the conduct of the war or to any preference I might have in the way of having one party or the other win. If it could be conducted peacefully and without disturbing the country in its attempt to prosecute the war to a successful finish I should like to have an election held just because I should like to have the soldiers' vote counted. For some time past ill-advised persons have been raising the question of loyalty, as if one political party were more loyal than the other. Piffle! I have never known a political party that was loyal to anything except to the interests that supplied it with campaign funds. True loyalty is a personal matter and can be found only in individuals. There are many instances in history where the man who opposed both king and government turned out to be rendering them the best service and to be most thoroughly loyal. Some of the finest expressions of loyalty I have heard since the outbreak of the war have been by men who have been getting rich from the needs created by the war. They reminded me of a remark made by Vice President (or perhaps ex-Vice President) Marshall of the United States, in a recent interview. He said, "We all mourn better if we are mentioned in the will." Men who are getting unexpected profits, are like Artemus Ward, who didn't care if the war lasted "as long as his wife had any relatives left to send to the front." Loyalty is a dangerous and irritating question to discuss but I do not think anyone will doubt the loyalty of the men who have enlisted. I am of the opinion that if a war election is held it will be found that the boys at the front will be about equally divided between the two political parties. Although it seems impossible to get exact figures about the soldier vote in the recent election in British Columbia, it must have been pretty fairly divided because it made no real change in the results. The defeated Prime Minister was elected by the soldier vote and I understand that one defeated Liberal was elected in the same way. This would make an even break and no one in British Columbia need say that both parties are not well represented at the front. I feel sure that a Dominion-wide election would give a similar result and for that reason

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alone I should like to see one held. It would settle forever the talk about the relative loyalty of the parties. But that is my only reason for wanting to see a war-time election.

P. S. It looks as if the weather were going to clear and I have thought of a lot of business to attend to. I am going to the village even if I get as wet as the roosters I see through the window.

Record Prices for Shorthorns and Aberdeen-Angus at Recent American Sales.

During the first week of November there were a number of auction sales of high-class Shorthorn and Aberdeen-Angus cattle held in the United States. There was keen demand for high-class stuff, and phenomenal prices were realized. Both American-bred and imported Shorthorns were in the offering. It was a great week for the Shorthorn breeders. A total of over \$159,000 being realized from the four sales of the Chicago-Wisconsin series.

On November 2, 43 Shorthorn calves were sold at Anoka Farms, Waukesha, Wis., for an average of \$1,015, which breaks all records of the beef breeds so far as the calf sales are concerned in America. Nineteen bulls averaged \$1,260, and the twenty-four females \$817. The sale was started by offering the calf, Gold Stamp, which brought \$5,200. The next highest price was for Loyal Stamp, a roan bull which brought \$2,500. Augustus Sultan 2nd was knocked down at \$2,050; Bandmaster Junior, \$1,950; Lavender Stamp, \$1,850; Regal Sultan, \$1,675, and Regal Sultan 2nd, at \$1,000. Some high prices were paid for heifer calves. Anoka Clipper 3rd headed the females at \$1,800. Anoka Clipper 4th brought \$1,650; Augusta Anoka 3rd, \$1,600; Lovely Anoka 3rd, \$1,500; Anoka Blossom 2nd, \$1,250; Victoria Anoka and Anoka Broadhogs 3rd, each sold for \$1,000.

The Carpenter & Ross Shorthorn sale of imported stock at Chicago on November 1 was a memorable event. Breeders from many States showed their desire for securing the productions of the breeders of Great Britain by paying an average of \$906 for seventy-four head. At no time during the sale did the bids come slow. There was a great demand for imported bulls to head some of America's herds. The sixty-two females brought \$53,835, or an average of \$868. Only twelve bulls were offered, but the average price was \$1,107. Bapton Corporal brought \$2,600; Cluny Royal Windsor, \$1,625; Proud Boy, \$1,375; Aldsworth Reformer, \$1,350, and Hean Mariner, \$1,500. The highest-priced female was Rosewood 90th; \$1,900 being realized for her. Proud Carnation and Rosewood 91st each brought \$1,550; Highfield's Parsley was knocked down at \$1,325; Blushing Bride and Royal Rosewood each sold for \$1,200. Woodend Beauty 9th brought \$1,300; Augusta 100th, \$1,225; Hean Missie 8th, \$1,125, and Murton Favor 2nd, \$1,200.

The sale of forty-five Shorthorns from the herds of J. W. McDermott, Kahoka, Mo., and Weaver & Garden, Wapello, Ia., was another one of the series which brought gratifying results and proved that there was a great demand for Shorthorns of good breeding. Cumberland Marshall 2nd was the highest-priced bull; he brought \$1,825. Chief Champion sold for \$1,500, and Cumberland Victor for \$1,000. The nine bulls made an average of \$850, and thirty-six females averaged \$627. Two thousand dollars was paid for Lady Craigstone, with a good bull calf at her side by Villager. This was the highest-priced animal in the sale. Golden Girl 2nd brought \$1,400; Sultan's Heiress, \$1,325; King's Gift, \$1,300; Village Clara 6th, \$1,075, and Veronica May, \$1,050.

Herr Bros. & Reynolds' Shorthorn sale was the last of the week's series. Forty-four head, mostly of their own breeding, were offered and realized very good prices. The females averaged \$395, and the bulls \$341. Future Sultan and Missie's Ruby, a white and a roan bull respectively, each brought \$505. Cumberland Rock and Royal Ruby were each knocked down at \$500. Eight hundred dollars was the highest figure paid for a female. This was secured for Bonnie Girl, a roan heifer.

Roan Wimple sold for \$725; American Beauty, \$555; Lady Holly, \$500, and Lady Wimple, \$425.

On November 1, Escher & Ryan held a combined sale of Angus cattle at Harlan, Ia. The prices realized in a great measure reflect the rising popularity of the breed. The sale was proof that Angus cattle of the right blood lines and quality command high prices. Seven bulls averaged \$614, and forty-four females \$590. Pilot of Dennison, the highest-priced bull, was knocked down for \$1,400. The sensation of the sale was Kensington Lady E., which sold for \$1,575. Shady Glen Heather-bloom 2nd sold for \$1,125; Enamma 2nd brought \$1,075; Black Cap McHenry, \$1,040, and Capitola C., \$1,025. Several other females sold around the \$900 mark.

On October 31 there was a strong demand for the 46 head of Angus cattle offered by auction by C. D. & E. F. Caldwell, Burlington Jct., Mo. Eight bulls averaged \$521, and thirty-eight females \$410; a total of \$19,750 for the entire offering. Blackstercap, a yearling bull, brought \$1,500, and Blackbird Star \$1,000. Imported Antonia 5th of the Dell was the highest-priced female, selling for \$1,000. Seven hundred and fifty dollars was paid for Eppy 4th of Five Gates, and \$700 for Eramera of Homedale 3rd.

Western Ontario Shorthorn Breeders' Successful Sale.

Providence has been very kind to the Western Ontario Consignment Sale Company since its inception. They have held four semi-annual sales and on every occasion the weather has been exceedingly mild and favorable. Each sale has been better than the last and the fourth, which took place at the Fraser House stables, London, on Wednesday afternoon Nov. 8, excelled the previous ones in the number of cattle and prices realized. Shorthorns exclusively made up the offering. The weather could not have been better for the occasion, the ring was in good condition, the large attendance were made comfortable. Capt. T. E. Robson, the auctioneer, was in splendid form and, before the sun went down on the short November day, he had passed 71 shorthorns through the ring for the sum of \$13,040. J. W. Laidlaw, Wilton Grove, assisted in the selling, and rendered splendid service in the ring. There were 34 cows and heifers offered, and they changed hands for \$7,235 or an average of \$212.79. A Claret-bred heifer, calved on November 2, 1915, and contributed by T. E. Robson went to Robt. Miller, Stouffville, for \$435. This was the highest priced animal of the sale. Strawberry Blossom 8th, a thick roan heifer, about 25 months old and in calf to Blarney Stone, went from the herd of Harry Smith, to Robt. Miller for \$420. Three females sold for \$400 or over; three for \$300 and up to \$400, and 12 brought \$200 and up to \$300. The demand for young bulls did not appear to be quite so keen as at the spring sale in March, when 32 realized an average of \$183.90 and only two sold for less than \$100 each. On November 8, however, they were picked up at good prices and 33 selling for \$100 or over brought \$5,450 or an average of \$165.15. A dark roan, only a trifle over 10 months old and contributed by F. McDonald & Son, was knocked down to Lessiter Bros., Michigan, for \$305. Master Mason, one of Harry Smith's breeding, about 13 1/2 months old went to Iowa, for \$300, while Chinnick Bros., Chatham, took Marksman at \$250. Five bulls sold for \$200 or more and out of the total number only four bulls, lacking a little in condition, realized less than \$100 each. The aggregate amount paid for these was \$355, making the sum total for the sale mount up to \$13,040, giving an average all through of \$183.66. Those in attendance had every reason to be satisfied with the offering, and considering the number of animals presented for sale at this season of the year the prices bespeak a growing popularity for these semi-annual events staged by the Western Ontario Consignment Sale Company. This organization owes much of its success to the honest and efficient management of the sales by Harry Smith.

Shorthorn breeders contributing to the offering were: T. W. Douglas, Strathroy; R. S. Robson & Son, Denfield; F. W. Scott & Sons, Highgate; Harry Smith, Hay; Wm. Waldie, Stratford; J. Radcliffe, Exeter; F. McDonald & Son, Woodstock; E. Brien &

Son, Ridgetown; H. K. Fairbairn, Thedford; Muncey Institute, Muncey; J. A. Lattimer, Woodstock; R. & S. Nicholson, Parkhill; G. & W. H. Nicholson; Parkhill; D. A. Graham, Wyoming; J. J. Merner, M. P. T. Henderson, Glencoe; G. A. Attridge, Muirkirk; A. B. Douglas, Strathroy; H. Oestreicher & Sons, Crediton; Douglas Brown, Ayr; W. Hamilton, Bright; W. Knight, Jr., Mull; R. H. Scott, Ilderton; Thos. Cameron, Exeter; T. E. Robson, London.

Following is a list of animals selling for \$100 or over, with the names of the purchasers.

Cows and Heifers.

Welcome Violet, James Pearson, Toronto.....	\$190
Welcome Lady (and new-born calf), F. R. Martindale, Caledonia.....	220
Miss Clipper, John Radcliffe, Exeter.....	300
Village Countess 3rd., Robt. Miller, Stouffville.....	400
Wimple Pride, Jno. Miller Jr., Ashburn.....	245
Rosebud Climax, D. G. McAlpine, Komoka.....	265
Cloris Lady, Donald Campbell, Mitchell.....	200
Village Butterfly, Robt. Miller.....	350
Strawberry Blossom 8th., Robt. Miller.....	420
Mysie's Buttercup, A. J. Farrow, Oakville.....	200
Athelstane Rosemary, Robt. Miller.....	230
Hillside Mayflower 4th., A. C. Lanham, Sheldon.....	300
Ury Queen, John Miller, Jr.....	155
Ramsden Rose, G. H. Parkhurst, Orient, Mich.....	235
Sea Nymph, Jas. Pearson.....	240
Blue Ribbon Snowflake, Robt. Miller.....	170
Duchess of Muncey, Robt. Miller.....	150
Muncey Duchess, James Guy, Parkhill.....	100
Broadhook's Lady, G. A. Attridge, Muirkirk.....	140
Broadhook's Lass 3rd., V. A. Scott, Highgate.....	135
Orange Lily, Morell Bros., Belton.....	255
Isabella May 2nd, James Pearson.....	170
Kate Carnegie 5th, James Pearson.....	200
Oakland's Blossom, Robt. Miller.....	190
Oakland Belle, Donald Campbell.....	155
Scottish Beauty, Geo. W. Casterson, London.....	230
Flora Burke, B. G. Burke, Oustry.....	135
Cloverdale Belle, W. T. Hopper, Paisley.....	200
Cherry Blossom 5th., B. G. Burke.....	135
Bessie, Edward Fahner, Crediton.....	135
Doris Buckingham, H. Oestreicher & Sons, Crediton.....	100
Rosebud, J. H. Burnard, Petrolia.....	105
Claret Fragrance, Robt. Miller.....	435
Fancy Buckingham, Thos. Forsyth, Kippen.....	145
Total 34; average.....	\$212.79

Bulls.

Roderick Dhu, Jas. Benedict, Cedar Springs.....	\$175
General Brock, P. J. Quealy, Cokeville, Wyoming.....	150
Royal Scotch, R. S. Robson & Son, Denfield.....	135
Rosebud Chief, P. J. Quealy.....	165
Master Mason, A. B. Kennedy, Shibley, Iowa.....	300
Marksman, Chinnick Bros., Chatham.....	250
Vain Blarney, W. Knight, Jr., Mull.....	155
Rosewood Star, A. McIntosh, Parkhill.....	190
Royal Standard, W. W. Knapp, Howell, Mich.....	155
Prince Alert, J. H. Patrick & Son, Ilderton.....	120
Clipper Chief, J. H. Patrick & Son.....	120
Victor Prince, J. H. Patrick & Son.....	110
Craiglea Clipper, Lessiter Bros., Clarkston, Mich.....	305
Bessie's Augusta, D. J. McAlpine.....	150
Bessie's Brave, J. H. Patrick & Son.....	155
Buchan Lad, D. J. Mitchell, Glencoe.....	120
Bold Ythan, D. Moorehouse, Cairo.....	155
Musketeer, E. Fox, Kingsville.....	150
Tidy Boy, R. S. Robson & Son.....	140
Crown Jewel, John Elder, Hensall.....	305
Turpin Prince, R. S. Robson & Son.....	170
Prince Edward, Douglas Martin, St. Mary's.....	140
Velvet Lad, R. S. Robson & Son.....	115
Canadian Statesman, Alex. Lamont, Mt. Brydges.....	220
Wawa, Robt. Hand, Alvinston.....	155
Prince Augusta, William Brooks, Paris.....	150
Mosa Baron, R. S. Robson & Son.....	135
Mosa Royal, J. H. Patrick & Son.....	130
Maplebank Senator, Jas. Pearson.....	130
Amos, James DeKay, Elmira.....	205
Red McKenny, Crawford Bros., Strathroy.....	130
Prince Albert, R. S. Robson & Son.....	145
Royal Scot, R. S. Robson & Son.....	120
Total 33; average.....	\$165.15

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts of live stock at Union Stock Yards, West Toronto, Monday, Nov. 13, were 210 cars, 3,573 cattle, 189 calves, 891 hogs, 2,960 sheep, and 260 horses. Market active and strong. Good butcher cattle, cows, and bulls canners and cutters, stockers and feeders 25 cents higher; common class ten cents higher. Milkers and springers steady. Calves firm. Sheep and lambs strong and 15 cents higher. Hogs, none sold at noon, packers quoted 25 cents lower. The total receipts of live stock at the City and Union Stock Yards for the past week were:

	City	Union	Total
Cars.....	118	800	918
Cattle.....	1,580	10,386	11,966
Calves.....	30	858	888
Hogs.....	2,235	14,927	17,162
Sheep.....	2,071	9,005	11,076
Horses.....	46	1,670	1,716

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

	City	Union	Total
Cars.....	46	656	702
Cattle.....	792	2,572	3,364
Calves.....	20	733	753
Hogs.....	411	6,536	6,947
Sheep.....	1,147	9,411	10,558
Horses.....	28	1,710	1,738

The combined receipts of live stock at the two markets for the past week show

an increase of 216 cars, 8,602 cattle, 135 calves, 10,215 hogs, 518 sheep, but a decrease of 22 horses when compared with the corresponding week of 1915.

The cattle market on Monday opened slow and draggy, and all classes were from 10c. to 25c. lower than the close of the previous week. In some cases the reduction was still greater. Two carloads of butcher steers, average weight 1,380 lbs., sold at \$8.30, which was the top of the market. Distillery cattle buyers were not operating (in fact, they are through for this year) which partly accounted for the decline in stockers and feeders. Cows were steady at the decline above mentioned and so were bulls. For the balance of the week trade in cattle was slow, with prices steady with Monday. The demand for good to

choice butchers was steady, and what few animals arrived were readily disposed of. Canners and cutters were active, and sold readily at from \$3.75 to \$4.75. Bulls and cows of quality were firm while the common ones were slow and draggy. Good to choice stockers were active, and the common class slow. Good to choice milkers and springers were fairly active but slightly lower in price, medium and common grade cows were decidedly slow. To sum up, cattle trade on the Toronto market for the past week was anything but satisfactory. It was slow and prices much slower than the week previous. At the time of writing the yards are filled with cattle and hogs, packers being unable to dispose of them as quickly as they have purchased. The lamb trade was steady to strong

all week, choice lambs selling at from \$10.85 to \$11.25, while a few choice decks of Blackfaces sold at \$11.35. Sheep were active and strong, and sold at from \$8 to \$9, while one extra choice lot sold at \$9.25. Choice veal calves were steady, and sold at from 9c. to 11 $\frac{1}{2}$ c. per lb., and common to medium calves at from 5c. to 8c. per lb. Hogs were steady at prices sent out by packers, which was \$10.15 f.o.b.; \$10.65 fed and watered, and \$10.90 weighed off cars.

Quotations on Live Stock.—Steers, choice heavy at \$8 to \$8.25; good heavy at \$7.60 to \$7.90. Butcher steers and heifers, choice at \$7.25 to \$7.50; good at \$6.75 to \$7; medium at \$6.40 to \$6.60; common at \$5 to \$5.75. Canners and cutters, \$3.50 to \$4.75; common at \$4.50 to \$5.25. Feeders, best at \$6.40 to \$6.65; medium at \$6 to \$6.25; common at \$5 to \$5.50; stockers at \$4.25 to \$6.25. Bulls, choice at \$6.75 to \$7.25; good at \$6.25 to \$6.50; medium at \$5.50 to \$6. Milk and springers, \$45 to \$110. Lambs, choice at \$10.85 to \$11.35; culls at \$8 to \$9. Sheep, light handy at \$8 to \$9; heavy at \$6.50 to \$8. Veal calves, choice at 9c. to 11 $\frac{1}{2}$ c. per lb.; heavy fat and grassers at \$5 to \$8. Hogs, \$10.15 f.o.b., \$10.65 fed and watered, and \$10.90 weighed off cars.

Breadstuffs.

Wheat.—Ontario, according to freights outside—No. 2 winter, new, per car lot, \$1.80 to \$1.82; No. 3 winter, per car lot, \$1.78 to \$1.80; No. 1 commercial, \$1.75 to \$1.77; No. 2 commercial, old, \$1.65 to \$1.68; No. 3 commercial, old, \$1.56 to \$1.60. Manitoba wheat (track, bay ports)—No. 1 northern, new \$2.05; No. 2 northern, new, \$2.01 $\frac{1}{2}$; No. 3 northern, new, \$1.96 $\frac{1}{2}$; No. 4 wheat, new, \$1.84 $\frac{1}{2}$; old crop trading 3c. above new crop.

Oats.—Ontario, according to freights outside, No. 2 white, 62c. to 64c., nominal; No. 3 white, 61c. to 63c., nominal. Manitoba oats (track, bay ports)—No. 2 C. W., 68 $\frac{3}{4}$ c., according to freights outside; No. 3 C. W., 67 $\frac{1}{2}$ c.; extra No. 1 feed, 67 $\frac{1}{2}$ c.; No. 1 feed 67 $\frac{1}{2}$ c.

Peas.—According to freights outside; No. 2, \$2.35 to \$2.40.

Kye.—According to freights outside, No. 2, new, \$1.35 to \$1.37.

Buckwheat.—According to freights outside, per bushel, (\$1.20 bid).

Barley.—Ontario malting, \$1.14 to \$1.16, nominal; feed barley, \$1.06 to \$1.09, nominal.

American Corn.—No. 3 yellow, \$1.08, track, Toronto, immediate shipment.

Flour.—Ontario, winter, new, according to sample, \$8.25, in bags, track, Toronto. Manitoba flour prices at Toronto were: first patents, \$10.20; second patents, \$9.70, in jute; strong bakers', \$9.50, in jute; in cotton, 10c. more.

Hay and Millfeed.

Hay.—New, car lots, track, Toronto, No. 1 per ton, \$12 to \$13; No. 2 per ton, \$10 to \$11.

Straw.—Baled, car lots, \$8 to \$9.

Bran.—\$31 per ton, Montreal freights; shorts, per ton, \$33; middlings, \$35 per ton, Montreal freights; good feed flour, per bag, \$2.80, Montreal freights.

Country Produce.

Butter.—Butter advanced in price on the wholesales during the past week. Creamery, fresh-made pound squares selling at 44c. to 46c. per lb.; creamery solids, 42c. to 44c. per lb.; dairy, 39c. to 40c. per lb.; separator dairy, 40c. to 41c. per lb.

Eggs.—Eggs also advanced, new-laid in cartons bringing 50c. per doz.; fresh eggs, selects in case lots, bringing 40c. per doz.; and fresh in case lots selling at 37c. to 38c. per doz.

Poultry.—Live weight prices—chickens, 13c. per lb.; ducks, 11c. per lb.; turkeys, 25c. per lb.; fowl, 4 lbs. and over, 14c. per lb.; fowl, under 4 lbs., 10c. per lb.; geese, 10c. per lb.; squabs, dressed, \$3.50 to \$4 per doz.

Beans.—Hand-picked, \$5 per bushel; prime white, \$4.40 to \$4.80, according to quality.

Cheese.—June, 24c. to 25c. per lb.; new, 23 $\frac{1}{2}$ c. per lb.; twins, 23 $\frac{1}{2}$ c. per lb.

Honey.—Sixty-lb. tins selling at 12c. per lb.; glass jars, \$1 to \$2 per dozen; combs, \$2.50 to \$3 per doz.

Hides and Skins.

City hides, flat 20c.; country hides, cured, 21c.; country hides, part cured, 19c.; country hides, green, 17c.; calf skins, 35c. per lb.; kip skins, 30c. per lb.; sheep skins, city, \$2.50 to \$3.50; sheep skins, country, \$1.50 to \$3; lamb skins and pelts, \$1 to \$1.50; horse

hair, per lb., 38c.; horse hides, No. 1, \$6 to \$7; No. 2, \$5 to \$6; wool, washed, 42c. to 46c. per lb.; wool, rejections, 35c. to 38c. per lb.; unwashed, 32c. to 33c. per lb.; tallow, No. 1, 8c. to 9c.; solids, 7c. to 8c.

Wholesale Fruits and Vegetables.

Apples arrived freely on the wholesales during the past week, but the bulk were low grade, only a small percentage grading No. 1 and 2. Spys brought as high as \$7 per bbl.; Kings, Greenings, Baldwins, etc., going as high as \$6, and graded from those prices down to \$3 per bbl., according to quality.

Pears were still being shipped in small quantities; Keiffers selling at 25c. to 30c. per 11-qt. basket; Duchess selling at 50c. per 11 qts.; Beurre de Bocs at 60c. to 65c. per 11 qts., and some cold-storage Bartletts at 75c. to 85c. per 11 qts.

The few quinces offered brought 35c. per 6-qt. basket, and 50c. to 65c. per 11-qt. basket.

Hot-house tomatoes were limited in quantity and failed to satisfy the demand; selling well at 25c. per lb.; No. 2's bringing 20c. per lb.

Florida oranges and grapefruit began to arrive freely, they are of good quality, and sold at \$3.50 to \$5 per case for the grape fruit, and \$4.25 to \$1.50 per case for the oranges.

California late Valencia oranges remained quite firm in price at \$5 to \$6 per case.

California lemons sold at \$6.50 to \$7 per case.

Potatoes kept quite firm in price, with prospects of a further advance in the near future; New Brunswick Delawares now sell at \$2.25 per bag; Westerns at \$2 per bag, and British Columbias at \$2.10 per bag.

Cabbage came in in large quantities and declined in price, selling at 2c. per lb., and \$2 per bbl.

Turnips also declined, selling at 75c. to 85c. per bag.

Parsnips and carrots also were slightly easier in price; parsnips selling at \$1.25 to \$1.35 per bag, and carrots at \$1.15 to \$1.25 per bag.

Onions remained high priced; Spanish selling at \$4.75 per case; British Columbia at \$3.50 per 100 lbs.; home-grown, \$2.75 per 75-lb. sack.

Montreal.

Offerings of choice cattle on the local market continue light from week to week. Demand has received a check by the high prices which have prevailed for a long time past, and which promise to prevail for a long time to come. For good steers, last week, the price paid showed little change, being from 7c. to 7 $\frac{1}{2}$ c., with occasionally 8c. per lb. for the choicer qualities. From this, the price ranged down to 5 $\frac{1}{2}$ c. and 6c. per lb. Butchers' cows sold at 4 $\frac{1}{2}$ c. to 6 $\frac{1}{2}$ c. per lb., according to quality, while bulls brought 4c. to 5c. more than these prices. The feature of the market continues to be the demand for canning cattle. Offerings of these have been quite large, and prices were firm under an active demand from packers. Sales of canning bulls were made at around 4 $\frac{1}{2}$ c., with fractionally less for the poorer qualities, and fractionally more for the better. Canning cows ranged generally from 3 $\frac{1}{2}$ c. to 4c. per lb. Sheep and lambs continued in good demand, with sheep selling from 6 $\frac{1}{2}$ c. to 7 $\frac{1}{2}$ c. per lb., and lambs from 10 $\frac{1}{2}$ c. to 11c. for Ontario stock, and 10 $\frac{1}{2}$ c. to 10 $\frac{3}{4}$ c. for Quebec. Calves were bought readily, and prices ranged from 4c. to 6c. per lb. for ordinary to 10c. for choice. The tone of the market for live hogs continued on the easy side and prices were rather lower, being 11c. to 11 $\frac{1}{2}$ c. for good, and 11 $\frac{1}{4}$ c. to 11 $\frac{1}{2}$ c. for selected lots, weighed off cars.

Horses.—There is nothing new to report on this market. Prices continued steady as follows: Heavy draft horses, weighing 1,500 to 1,700 lbs., \$200 to \$250 each; light draft horses, weighing 1,400 to 1,500 lbs., \$150 to \$200 each; small horses, \$100 to \$125 each; culls, \$50 to \$75 each; choice saddle and carriage horses are \$200 to \$250 each.

Dressed Hogs.—There has been a decline in the market for dressed hogs, this being in sympathy with the market for live. Sales of abattoir, fresh-killed hogs took place at 16c. per lb., this being the lowest for some time past.

Potatoes.—In spite of the embargo in the United States against imports, the price of potatoes has shown another advance, and Green Mountains were

quoted carloads, ex-track, at \$2.25 per bag of 80 lbs., and best Quebec stock at \$2 to \$2.10. For smaller lots 15c. to 20c. was added to these prices.

Honey and Maple Syrup.—The market was unchanged at 15c. per lb. for white clover comb; 12 $\frac{1}{2}$ c. to 13c. for white extracted, and brown comb, and 10 $\frac{1}{2}$ c. to 11c. for brown extracted. Buckwheat honey was 9c. to 10c. Maple syrup is in quiet demand at 90c. for 8-lb. tins; \$1.05 for 10 lbs., and \$1.25 to \$1.50 for 13-lb. tins.

Eggs.—The price for new-laid eggs continued to rise with the increasing scarcity, and 53c. to 55c. was quoted for the choicest. Fresh eggs were 48c. to 50c.; No. 1 selects, 40c.; No. 1 candled, 36c., and No. 2, 32c. per dozen.

Butter.—Choice creamery was scarce for this time of year and the market advanced. Finest was quoted at 42 $\frac{1}{2}$ c. to 42 $\frac{3}{4}$ c., and fine creamery at 42c. below. Undergrades ranged from 41c. to 41 $\frac{1}{4}$ c., while dairy butter sold at 36c. to 39c.

Cheese.—Record prices were paid at the auction here, No. 1 white brought 23 1-16c., and No. 2 brought 22 13-16c. At the Peterboro board 23c. was paid, and this was also the quotation in Montreal for finest Western colored, white being at a discount of 1/4c. Eastern colored was 22 $\frac{1}{4}$ c. to 22 $\frac{3}{4}$ c., and white at a discount of 1/4c.

Grain.—November wheat sold at \$2 per bushel in Winnipeg, but there are no longer quotations on wheat in Montreal. The market for oats was very strong. No. 1 Canadian Western oats were quoted at 70 $\frac{1}{2}$ c. per bushel, ex-store; No. 2 at 70c.; No. 2 feed at 68c., and Manitoba feed barley at \$1.08.

Flour.—The price of Manitoba flour has been raised 20c. per barrel, quotations being \$10.30 for first patents; \$9.80 for seconds, and \$9.60 for strong bakers', per barrel, in bags, with 30c. more for wood. Ontario winter wheat flour was \$9.20 to \$9.50 per barrel, in wood, for 90 per cent. patents, and \$4.40 to \$4.85 per bag.

Millfeed.—The price of millfeed has again been marked up, and bran sold at \$30 per ton in mixed car lots, in bags, while shorts were quoted at \$33; middlings at \$35; mixed mouille at \$38, and pure grain mouille at \$40.

Baled Hay.—Notwithstanding advances in everything else, hay continued steady at \$13 per ton for No. 2; \$11.50 for No. 3, and \$10.50 for clover mixed, ex-track.

Hides.—Another new high record has been made on lamb skins at \$2.20 each; beef hides advanced another cent to 25c. per lb. for No. 1; 24c. for No. 2, and 23c. for No. 3. Calf skins were 33c. for No. 1, and 31c. for No. 2. Horse hides were higher at \$4 to \$5.50 each. Rough tallow was 2 $\frac{1}{2}$ c. per lb., and rendered 7 $\frac{1}{2}$ c. to 8c. per lb.

Buffalo.

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

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

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

Bulls.—Best heavy, \$6.75 to \$7; good butchering, \$6.25 to \$6.50. Stockers and Feeders.—Best feeders \$7 to \$7.15; common to fair, \$5.25 to \$5.60; best stockers, \$6.50 to \$7; common to good, \$5 to \$5.50.

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

Hogs.—Receipts last week were the largest of the season, there being approximately 50,900 head, as compared with 47,222 head for the week before, and 51,300 head for the same week a year ago. Trade, considering the supply, was good. On Monday, with over 23,000 head on sale, the market ruled steady to a nickel higher. Some on the medium and heavy order, which kinds were scarce, brought up to \$10.10 and \$10.15, and the

general range on light hogs or the York weights was from \$9.75 to \$9.85, bulk \$9.75; Tuesday good hogs were steady and the lighter grades were five to ten lower; Wednesday prices dropped 15 to 25 cents; Thursday there was a slight reaction, and Friday the market ruled five to ten cents in favor of the selling side, top for the day being \$10.20, with not many above \$10, and the general range on hogs weighing from 160 to 180 pounds was from \$9.75 to \$9.85. The week opened with pigs selling at \$8.75; Tuesday some sold down to \$8.60; Wednesday none brought above \$8.50; Thursday they ranged from \$8.25 to \$8.50, and Friday they brought from \$8.50 to \$8.75. Roughs, \$7.85 to \$9, and stags, \$8.50 down.

Sheep and Lambs.—Trade showed considerable improvement last week. Monday, when there was a twenty cent advance noted on lambs, tops sold up to \$10.85, and culls ranged from \$9.50 down; Tuesday's top was \$10.75; the next two days best ones sold from \$10.75 to \$10.85, and Friday, under a light supply, good to choice lambs were placed from \$11.15 to \$11.35, with culls selling up to \$10. Top for yearlings was \$9, wether sheep sold up to \$8.40, and ewes went from \$7.50 down. Last week's receipts totaled 16,800 head, being against 28,491 head for the week previous, and 25,700 head for the same week a year ago.

Calves.—Market was on the active order last week. Monday, Tuesday and Wednesday tops sold from \$12.60 to \$13; Thursday none sold above \$12.75, and Friday best lots landed from \$13 to \$13.50. Cull grades ranged from \$10.50 down, and grassers mostly \$5 to \$5.50, with some common ones selling down to \$4.50. Friday's run included two decks of Canadians, and the top veals out of these sold at \$12.50 and \$12.75, with some on the heavy fat order going at \$7 and \$7.50. Receipts last week were 2,675 head, as compared with 2,660 head for the week before, and 2,050 head for the same week a year ago.

Chicago.

Nov. 11.—Cattle—Beeves, \$7.10 to \$12.05; western steers, \$6.70 to \$10.10; stockers and feeders, \$4.80 to \$8; cows and heifers, \$3.75 to \$9.70; calves, \$8.50 to \$12.

Hogs.—Ten cents up; light, \$8.85 to \$9.95; mixed, \$9.40 to \$10.20; heavy, \$9.55 to \$10.20; rough, \$9.55 to \$9.70; pigs, \$6.75 to \$8.65.

Sheep.—Native, \$7.75 to \$9; lambs, native, \$9 to \$11.80.

Cheese Markets.

Belleville, 23 $\frac{1}{2}$ c.; Mont Joli, 22 $\frac{1}{2}$ c.; St. Hyacinthe, 23 $\frac{3}{4}$ c.; Montreal, finest westerns, 23 $\frac{1}{2}$ c.; finest easterns, 23c.; New York, specials, 23c. to 23 $\frac{1}{2}$ c.; average fancy, 22 $\frac{1}{2}$ c. to 23 $\frac{1}{4}$ c.

Dairymen cannot neglect to study the breeding of Holsteins to be offered at the Elgin Breeders' sale at St. Thomas, on Tuesday, November 28. There are 50 females and 5 bulls in the offering, and they are representatives of some of the best Holstein strains in Canada. Procure a catalogue from Fred Carr, Box 115, St. Thomas, or Neil Burton, R. R. 2, Port Stanley. The advertisement in this issue tells you where the sale will be held. The catalogue will tell you about the animals to be offered.

Sale Dates.

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

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

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

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

Coming Events.

Nov. 21.—Ontario Vegetable Growers' Convention, Parliament Buildings, Toronto.

Nov. 22 and 23.—Ontario Horticultural Association Convention, Parliament Buildings, Toronto.

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

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

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

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



In Red moon in the A small pour From the the And little p Tamarac o Of pine long Soft sun mi e The jewell more The Red C the s The In Afar He seeks th In magic bar; Through th clear "Such pea heave (REV.) JAM Bookman

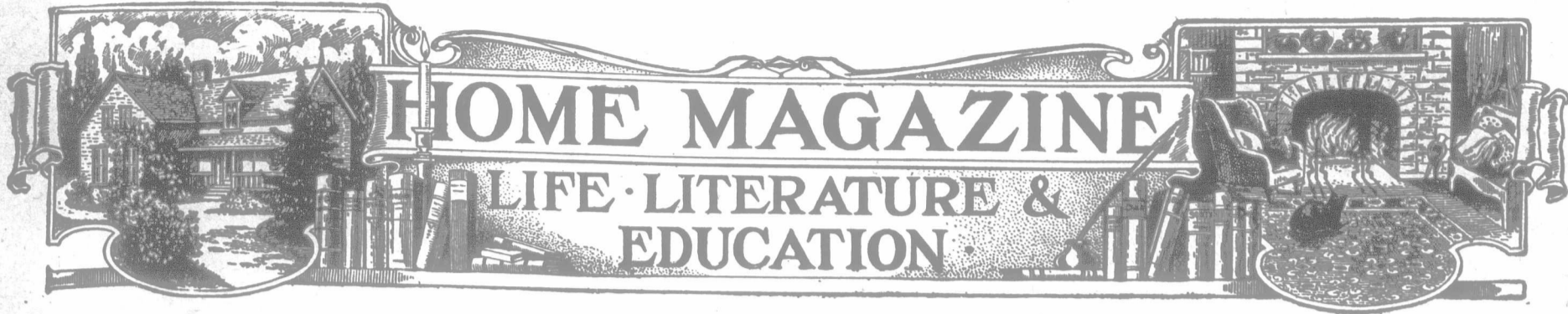
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There is for discussion the farm journa of keeping t once the att it is very ev the boy who i girl is going a necessary socia attractive som whereby the is usually co conditions a for sending t On the farm, th the econor



Indian Summer.

Red moons that wax and wane, and
in the air
A smell as of a fragrant smoke out-
poured
From thuribles that swing before
the Lord;
And little puffs of drowsy wind that bear
Tamarac odors, and the perfumes rare
Of pine and cedar! Rich as wine
long-stored
Soft sunlight fills the day. Than
mi er's hoard
The jewelled leaves flash out in tints
more fair.

The Red Gods call the woodsman; by
the streams
The Indian's wigwam lonely waits.
Afar
He seeks the happy hunting of his dreams
In magic vales beyond the horizon's
bar;
Through the calm ether falls a whisper
clear:
"Such peace is not of earth—God's
heaven is near."
(REV.) JAMES B. DOLLARD, in Canadian
Bookman.

Bee Keeping for Women.

BY ETHEL ROBSON.

[Miss Robson is one of the few women in Ontario who have had extensive experience with bees. She speaks from the standpoint of the woman who knows because she has done the work herself.—Ed.]

Have you seen the meadows glowing
With the clover all abloom?
Have you smelled its fragrance blowing
Through the balmy month of June?
Have you heard the bees a humming
All the long and sultry days?
Have you seen their wings a flashing
In a busy, busy maze?

If you have, you've learned some secrets
From the golden summer days,
That take you near to Nature's heart
And teach you of her ways;
For the heart of all the summer
Is the humming of the bees
In the fragrant clover blossoms
And the whispering basswood trees.

Poetry, yes, but true nevertheless!
However, bee-keeping for women is not an entirely poetical proposition, as the writer very well knows, having had ten years' experience at the work and therefore being in a position to speak with authority. Now the purpose of this article is not to enter into a detailed account of how to keep bees—this can more profitably be read elsewhere; nor yet to show that bee-keeping is an occupation suitable for women,—this is indisputable, nor to show that it can be made commercially profitable,—this is obvious; but rather to discuss some of the ethical points which ten years' experience has revealed. Ethics may seem rather a formidable term; however, any work to have a true value must have an ethical basis, so it may work out in a sufficiently commonplace way after all.

There is no subject more fruitful for discussion for the Institute speaker or the farm journal than that of the problem of keeping the boy on the farm; but once the attention is drawn to the boy it is very evident that it is not only the boy who is leaving the farm. The girl is going also, and to maintain the necessary social life to keep the country attractive some means must be found whereby the girl will be held. It is usually considered that economic conditions are one of the chief reasons for sending the girl from the farm. On the farm, the family, not the individual, is the economic unit, and ordinarily

there is little opportunity for the girl to be independent. Away from the farm her services have a definite cash value, hence the ambitious girl goes where her services are appreciated. The conclusion is, if she can find opportunities for independent economic development on the farm the girl will remain there. Among the solutions offered none makes a more picturesque appeal than bee-keeping.

There are two classes of women to whom bee-keeping should make an appeal: the farmer's daughter desiring to make a little money for her own use, and the woman who is looking for a means of livelihood. The former, by far the largest and most important class, we will consider first: To anyone driving along on Ontario roads the latter part of June and early in July the most striking thing is the almost over-powering fragrance of the clover, while the eye is dazzled by the continuous procession of blossoms. Don't you recollect when you were a youngster tearing the blossoms apart and sucking out the tiny drop of nectar at the bottom of the flower-cups? It was only a tiny, tiny drop, but "little drops of water" you remember what they do, and there are just millions and millions of drops of nectar in the clover, and kind mother Nature has provided a means whereby we may have it gathered and stored for our own use. The little honey bee actually wears herself out in her efforts to gather the nectar and bear it to the hive. No doubt hundreds, nay thousands of tons of honey are lost every year because there are not enough bees in the country to gather it. Not only is the nectar lost, but the bees are necessary for the full production of clover seed, and a very valuable asset to our country. When we consider that the work with bees is all done in the summertime and during the nice weather, we would ask what more attractive field could be found for our women to develop.

Now, in the early days of our county almost every farm had its straw skeps of bees and the honey formed an important part of household supplies. To-day, with vastly improved methods of production and a consequent improvement in the product, it is only rarely that we find bees a part of the farm equipment. Honey is usually bought but sparingly, yet the average family could easily consume two or three hundred pounds in the year and be the better for it. Surely here is a home market that any girl might take satisfaction in supplying.

Yet the actual fact is, that in spite of all that has been written in the papers, up to the present comparatively few women are actively interested in bee-keeping. Occasionally inquiries are made by enthusiasts, but very rarely do these materialize in actual work. To the uninitiated a certain amount of mystery, not to say necromancy overshadows the management of bees, and the dread of the stings hangs like a dark cloud over the industry. It must be confessed that bees do sting, also that it hurts; however you can get used to it. Some people have an idea that bees get to know the person who works with them, but this is doubtful; at any rate my bees have never learned any particular regard for me, though I have learned when and how to work with them. We hear of people whom the bees will not sting, but experience has failed to make me personally acquainted with any. The gifted ones seem to belong largely to a generation that is passing away. So, while not doubting the truth of this at all, it would hardly be advisable to lay much stress on immunity. With a veil to protect the face and reasonable care in dressing, the bee-stings need be no very

great menace, though an occasional expletive of a doubtful nature might be pardonable in extreme cases.

Now, the difficulty of the stings disposed of, there still remain the swarms. "Do you have the swarms yourself?" is a question that is often asked. Why, of course, else half the fun of bee-keeping would be lost, but by proper management and giving plenty of room, swarming can usually be kept to a minimum. If there are no high trees, swarming is not a very formidable affair anyway, but if there is an old orchard near it sometimes takes a good deal of manoeuvring to locate the ladder within working distance of the swarm, and a good-natured man is exceedingly useful at this point in the operations. Your ladder safely located, there is a certain exhilaration in going up into the tree tops and bringing down your booty.

Have you heard the mad vibration
Of a myriad wings in air,
Which tells you very clearly
That a swarm is surely there?
In a high, old orchard tree
Seen it cluster, rich and brown?
Have you climbed a wobbly ladder
And brought it safely down?

But an undue amount of swarming means a depleted honey crop, so you learn the part of wisdom and endeavor to keep the swarming down as much as possible. It is the ambition of many beekeepers to produce a non-swarming strain of bees, but so far they have not succeeded.

Now a word for the delights of bee-keeping, and here the pen might indeed run away,—the joy of peeping into the hive in the spring and seeing the bees boil up over the frames, to see them coming in laden with pollen from the willow and maple, to watch the combs whiten as the glistening nectar is brought in, to taste the first fresh honey with the fragrance of the blossoms still in it, and finally to pack them away securely for the winter! However it isn't all delight by any means. There are times in the spring when the bees do not boil up over the frames because they are lying lifeless in the hive; there are seasons when the blossoms almost fail to secrete nectar; and when feeding time comes in the fall you have perhaps to spend a larger part of the season's profits in sugar, or if it is very bad maybe last year's profits, or if it is worse still next year's profits, to tide them over the winter. But no matter what the discouragements may be, and the beekeeper usually meets with plenty, nothing can rob you of the days spent in the open air, the joy of the sun and the wind, the memory of the bees in the blossoms and the close communion that comes from walking hand in hand with nature.

So far the all-important questions "How much money could a girl hope to make from bees? And how much would it cost her to start?" have been left unanswered. To the latter question, unless the girl falls heir to the bees in some way the initial expense is considerable. A fully equipped hive with honey super costs \$5.00 from the factory and then you have to get your bees besides, though there are cases in which these are accommodated enough to come to you. If not they can be bought by the pound from various dealers, though one would not recommend this as a means of starting. Bees in the hive can ordinarily be bought at from \$5 to \$10 per hive; no set price can be given as the market is limited and sometimes bees can be picked up for a song. However, if you are buying from a dealer the price will be close

to \$10 for a hive of bees in the spring, which is the best time to buy as then you run no danger of winter loss and have a reasonable chance to secure some honey the first year, which is a great encouragement. If you are going into bees to any extent you will also need an extractor. A small hand machine suitable for from 10 to 25 colonies can be had for about \$12.00. The expense of an extractor can be avoided by producing only comb honey, but unless you are situated where you have a good market this is not profitable. Moreover we often have times when bees will work freely on the large extracting combs while they positively refuse to do anything on sections; the flow must be good and the colony strong before they will work on these. There are innumerable other expenses into which you will no doubt be tempted; however once you have the fever you will make the expenditure willingly enough.

Now for the profits: These will depend on the girl, the location, and the weatherman. The girl who succeeds must be willing to put her heart into her work and attend to her bees when they require attention. Ordinarily they work along so unobtrusively that there is much danger of neglecting them, and at the critical time neglect means the difference between success and failure. You must learn to know your bees and their needs. We had a girl living near here who used to average \$100 per year from 10 to 15 colonies, but then she had no expense for equipment, her father having been a beekeeper before her. Nineteen fourteen and fifteen were off years for the beekeepers in this district and practically nothing was made, but it is unusual to have two such poor years in succession, and we hope not to have them repeated for some time. The season just ended was a record one; indeed had it been a failure, as at one time it promised, we should have completely lost heart in the bees. In a good alsike clover district the profits will be much greater than where little clover is grown; where there is buckwheat, while the quality of the honey may not be so good, there is ordinarily little expense in feeding for winter, as the buckwheat usually gives a good fall flow. Basswood is a precarious yielder and now so few of the trees remain that it is only locally that it can be counted on to any extent. The main honey harvest is usually of short duration and if unfavorable weather is encountered—as too much wet, continued drought, too cold or windy—the blossoms will not secrete the nectar; but under ideal weather conditions it is unbelievable what quantities of nectar a single colony will bring in. This last year it was nothing unusual for a single colony to store from 12 to 15 lbs. of nectar in a day. Of course this would be evaporated considerably before it became ripened honey. To say definitely what can be made from bees is impossible and for the first few years after starting a goodly part of the profits will have to go into equipment.

As to bees offering a solution to the economic problems of the farm girl, this is uncertain. If she is a lover of the out-of-doors and not afraid of a little hard work it may do so; however, it is usually a desire for change of environment as well as for money of her own that tempts the girl away, and the bees will not provide the former unless she is able to enter zestfully into the work, and so discover a newer and brighter horizon as she follows the flight of her bees in their search for the hidden sweetness of the flowers.

Now let us turn to consider the opportunities which bee-keeping offers for a livelihood. Here new problems confront us, for this is necessarily bee-keeping on a large scale, which of course very materially increases the labor. While under very favorable conditions your bees might net you \$10 per colony, under ordinary conditions you might consider yourself fortunate if you had \$5 per colony clear, and often the profits will fall much below this; so it will be readily seen that the woman who depends on bees for a living would need to keep a considerable number of colonies if she would make money. Not only this but it takes time to get your apiary built up and to learn the business, and there are always some losses during the winter. Running say 100 colonies of bees means handling a good deal of honey and honey is heavy; it is no light task to lift supers of 50 and 60 and 70 lbs., though by using the half-depth supers the lifting may be lightened. But do what you will there still remains a goodly amount of heavy work. Turning the extractor hour after hour is no light task. A gasoline engine will obviate this, but gasoline engines have a way of kicking most vigorously and are not always tractable for a woman to handle, as we have found out a good many times. Taking all the heavy work into consideration, it would really seem that a woman should be fairly strong to undertake bee-keeping though there is one little woman at Onandaga who is accomplishing wonders. Indeed in spite of the labor involved in bee-keeping there is nothing about it which a woman cannot do if she only has the will to do it.

For the woman who is able to live at home, bee-keeping does offer an attractive means of livelihood, especially attractive for sisters, for here the labor may be shared and the pleasure doubled; and at home in the country it is usually possible to secure a man's help when it is necessary without being dependent on the kindness of a neighbor or on hired help, which is not usually very satisfactory for a woman. But living at home has its drawbacks from the standpoint of successful bee-keeping. A home has a way of making insistent demands on a woman and though she may make the better woman for this she will scarcely make the better bee-keeper. The woman who deliberately chooses to go out into the country and keep bees should be endowed with a most intense love of the outdoors, else the reward would scarcely be commensurate with the sacrifice. The country is no place for women to live alone; it is not so bad in the summer but in the winter it is impossible. Of course it is not necessary to stay with the bees in the winter, but shifting about isn't usually very satisfactory for a woman; doesn't agree with her homing insects, and then there are always a good many preparations to be made between seasons. My advice to the woman who has ability enough to keep bees successfully is to find some other vocation where the common wealth of conveniences is greater and take her vacations in the country, with some reliable beekeepers if she would learn something about bees; or if she must have bees of her own find some congenial man to go into partnership with. But in this case she will probably have so many new and absorbing interests that she will have but little time to give to the bees, though indeed a good many of our most successful beekeepers owe a large share of their success to the help they receive from their "better halves."

In conclusion, the opportunities for bee-keeping are at present unlimited. Nevertheless the bee-keeper instinct is too strong in one to permit one to advise any indiscriminate rushing into the business, not because we fear over-production,—we know that the honey market is yet in its infancy, and increased knowledge of bees means increased consumption. What we do fear is disease. Bees are subject to one or two very fatal and infectious diseases, and as the infection is carried in the honey it can readily be seen how easily disease may be carried from one yard to another. A little infected honey exposed carelessly and your neighbor's bees find it and carry the disease home. Or your diseased bees die, leaving some

honey in the hive. The hive is not removed and bees from other yards find the honey, and thus the disease is scattered far and near. You can go into the chicken business and all your flock die from disease and your neighbors are not harmed. With bees it is different and unless you are prepared to care for your bees intelligently you have no right to go into the business and jeopardize your neighbor's bees on which he may be depending for a living.

As a means of recreation there is nothing more fascinating than the study of the bee. Its life history is more interesting than any novel, and nothing could be more restful for tired nerves than a summer spent among them, nor is there any more delightful book to read than Maeterlinck's "Life of the Bee." As an industry for women to especially develop, the time does not seem to be ripe, though in this as in almost every other agricultural pursuit her interest and help will count incalculably.

What the Women Said and Did in London.

I am going to try to tell you what the women said and did in London, but you must not expect me to mention the name of each woman who said anything. For one reason I could not catch more than half of the names of either persons or places, and more than once I wished that the place were in possession of a little megaphone through which each speaker could call her name and district, and, indeed, sometimes her message itself.—However, the megaphone was minus, so we'll have to do the best we can.

To begin with, lest outsiders be bewildered, OF COURSE, I am speaking of the Women's Institute Convention, held at London, Nov. 8th and 9th.

And before going further it may be opportune to say it was a success, a great success. In fact it was remarked by more than one or two that this was the most enthusiastic assembly of the Institute yet held in London.

Mrs. Stock, of Tavistock, presided at the first meeting, which was opened by prayer by the Rev. D. C. MacGregor, of St. Andrew's Church.

Mrs. Stock, in her preliminary address, dwelt upon the fact that the delegates had come to help one another by the exchange of experiences. The women of the Institute had made a noble response to the call of the war, she said, but she looked far past the time for that need. When the war is over the women will not fold their hands. It will remain for them to mould those that follow into good Canadian citizens; we will need them all. The duty of efficiency in all things will stand waiting, and, especially, efficiency in caring for the children, and managing the homes.

Mrs. Boomer, in bringing greetings from the National Council and other women's organizations of the city, embraced the opportunity to thank those who had assisted her in collecting money for the Belgians, describing herself as a "red pillar box at the corner for taking money—and passing it on." The war calls for all our resources. The British Empire itself is depending greatly on the women, many of whom have to take the place of bread-winners. Mr. Lloyd George, in speaking of the nobility of sacrifice, had told of a beautiful valley in North Wales which was yet so enervating that the boys were in the habit of climbing the mountains to get the stimulating breezes. We, too, have been living in a sheltered valley—perhaps too selfishly, but we have been scourged by the war to the higher pinnacles of sacrifice. Mrs. Boomer in closing quoted a prophetic vision told by George Fox: "I saw an ocean of darkness and death, but an infinite ocean of love and light rolled over it, and in that light I saw the love of God." We are in a crucible, but it has many lessons to teach us which will be of use when the time of reconstruction comes.

Mrs. Wilson, of Wardsville, replied to the address of welcome, referring also to the great work of the women, but pointing out that they must keep the spirit of the great empire-builder, Cecil Rhodes, who on his death-bed said, "So much to do, so little done!" We must redouble our efforts for the boys in the trenches, even when it pinches us to do so. A great philanthropist, near the close of his life was asked what he would add to it, could he live his life over. He said, "I would wish to be kinder." We might make this our key-note.

The Superintendent's Report.

Mr. Putnam's report told of the magnificent patriotic work the women of the Institute have been doing during the year, and of the expressions of gratefulness sent, over and over again from soldiers in the trenches. The attention of the whole province, too, has been directed to the Institute because of the work, and many appeals for help have come, and not in vain, from various parts of the great machinery forging help for the men at the front.

But this is an age of GIVE. We must continue, both with money and toil. Each must do her utmost in the great strife for liberty for which the Allies are fighting. A few localities have not yet done their part, but it is hoped they will fall into line.

When our men come back, many of them will not want to go back to indoor life again, and many will go into the rural districts for the first time. When they do, a new responsibility will fall on the women, to so encourage the social and intellectual life there that these men will be contented.

For other reasons the rural districts must be developed in every way, and quickly. What is to become of our country if it continues to be drained of its best blood to swell the cities? Such a drain must bring about decrease of production, especially in such branches as live stock, which need man labor. Disaster must be courted if we go along on present lines. All these rural problems must be solved by women's and men's organizations in co-operation with one another.

Another problem, very acute at present, is that of the child. Boys just entering their teens are having to assume the responsibilities of men. It is "up to" the women to see that the boys and girls receive the training which will best fit them for every-day responsibilities on the farms and in the homes.

At the Ottawa Convention it had been told that boys were being given work in some of the branches. He was not sure that men would not be found soon in the Women's Institute (laughter).

To-day, city and country women are standing shoulder to shoulder in work for the nation, and because of this the city woman is finding out that the country woman has something for her, and the country woman is finding out that the city woman has something for her.

Mr. Putnam touched upon the advisability of baking and sewing classes and contests for girls, the garden contests, canning clubs and home nursing instruction. He also spoke of the Demonstration Lecture Courses, which any branch can secure; and of the work that is being done in medical inspection of schools. When the war is over the Demonstration Lecture Courses will be enlarged to include courses in the lighter forms of agriculture, poultry-raising, bee-keeping, vegetable growing, etc.

A question of especial interest to-day, is how to get foodstuffs more directly from the producer to the consumer. Apples, for instance, bought 20 miles from Toronto at \$2.00 per bbl. were sold in the city by the basket at a cost of \$6 to \$7.50 per bbl. There should be better management than this.

In closing Mr. Putnam congratulated the members on their improvement in business methods, and advised them that, by organization and representations to the Government, they can stand a chance of receiving many things needed for community development.

From time to time during the Convention, reports from various districts were fitted in, and at this point Mrs. Coutts, of Thamesville, read reports from Elgin, Kent and Essex. As all of the reports, whatever the district, dwelt chiefly upon Red Cross work, only unusual plans for money-making, etc., will here be noted especially. From these south-western counties box socials, concerts, etc., were reported. In one place, whose name I did not catch, a Dramatic Club had given an entertainment, and, as scenery was needed the women went to work and painted it themselves. A girl belonging to one branch had picked and sold apples to get money for the Red Cross, and in Thamesville the Girl Guides had given a concert. . . . Outside enterprises were the holding of school fairs and sending money to Chatham Shelter for children. . . . In closing Mrs. Coutts said that the Women's Institute should

help with good every work in the community. If it did not it was not living up to its full opportunities.

Before closing, the Mayor of London brought the city's greetings, also an invitation to the delegates to attend a meeting and tea to be given in the Normal School by the Women's Canadian Club, the city to furnish free cars for transportation.

Address by Dr. Backus.

At the Canadian Club, Dr. Annie Backus, of Aylmer, always a favorite speaker in the Women's Institute, gave an address on "The Open Door for Women." The first "door" noted was women's organizations. Not so very long ago to speak of a women's organization to a man was likely to call up in him visions of eye-scratching and hair pulling. To-day women's organizations are everywhere, yet she had not heard of a single hair pulled or eye lost.—In the National Council of Canada to-day there are 150,000 women; in the Women's Institute in Ontario, 30,000 women, and in all Canada upwards of 100,000; the Daughters of the Empire number 30,000; and the Missionary Societies, the largest of all, 200,000.—See, then, how old traditions break down! When the first steamship crossed the Atlantic its hold was filled with pamphlets which proved that such a voyage could not be taken.—To-day it is known that the Missionary Society handles the most money, at the least cost, of any organization in the Dominion; thus have women demonstrated their ability for organization.

Looking at the audience she found it impossible to tell which were rural and which urban. One of the great things accomplished had been the bringing of city and country together. There are fewer differences between people than we imagine, fewer between women and men, city and country. What the women manufacture in the country the city women want at lowest cost; they want to cut out the middleman; and one thing it would be well for the organizations to take up would be how to bring the produce directly from producer to consumer. She had been considering, the other day, what to give a friend for a Christmas present, and had decided on a pound of butter and a dozen of eggs (laughter).

Many doors have been opened by the call to women to work for the war, in munitions factories and elsewhere. If it were not so tragic it would be absolutely ludicrous the way men are now screaming to women to work (laughter). They are telling us now that we can't do the things they always said we couldn't do.

In Ottawa recently Mr. Burrell said that the franchise is coming to women, and the Mayor said they would be sitting in Parliament. She rather thought she would make a jolly good Premier herself (laughter).

In Ottawa a house for Red Cross purposes has been presented to the Women's Canadian Club by a rich man. Its rooms have been set apart to various uses, some even turned into operating-rooms where they "correct the socks without proper toes." But one especial work is being done here. The lists of wounded come first to Ottawa. At once these women send each man a letter of sympathy and appreciation, asking him if there is anything they can do for him. If possible it is done, and right away. One soldier, for instance, wrote that he had left a farm in New Ontario and was afraid it would be forfeited because there was no one to look after it. The women secured his title and wrote him that everything was right as right could be.

The patriotic work that the women everywhere have done, cannot be estimated in dollars and cents, and it is likely that it will have to go on for two years more. We shall still have to send out our men and follow them with comforts. It means not only our freedom but that of the world.

Turning to the suffrage question, Dr. Backus said, "we have been told that we must not speak of the suffrage, so please shut your ears."—and of course all their ears pricked up a little more than usual. We expect the vote after this, said the speaker, so we must get ready for it.

As we are now we are not citizens nor are we classed as citizens. In New Brunswick a young woman qualified for the legal profession but could not be sworn in because she was only a female. It was told that an old woman in court pro-

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tested her punishment for some misdemeanor on the ground that she was not a citizen. But the judge said, "That does not go."

We want full citizenship, so that we can claim protection as was afforded to the prisoner in Abyssinia for whom, because he was a British subject, England sent out an army under Gen. Napier, with the demand that he be liberated.

The franchise is coming to us, and we must prepare. By men it has sometimes been prostituted; we want to see it in our hands dignified.

In Canada there are, between the ages of 15 and 80, 3,000,000 women. Of these 360,000 are wage-earners, business women going through the door that opened so slowly.

First we knocked at the door of education, but it was bang shut. At last it opened, and the marvel was great that women could learn anything as could men. Now women are passing their examinations, not without honors, are being welcomed and recognized in the professions. Thus are men and women becoming companions.

She had visited in Toronto the munition factories where women are working. In the Russell motor factory, where 300 are employed, 150 are now women, and since they entered the output has increased one-third. There she was introduced to two women, one an Assyrian and the other Canadian, who are the highest wage-earners in the factory.

After the war, when there is no more making of munitions, what is to be done with these women? The speaker suggested the establishment of factories for clocks and other articles once made in Germany. After the war there will be serious problems, chiefly social, to be met, and a solution must be found for them.

Dr. Backus thought if women worked out more on the farms it would be better for them. In Russia, among the peasants, the strength of men and women is about equal. We can become stronger and sturdier if we will.

In closing she said the one great thing to-day is that, in this war, we win. Try to think what it would mean if we lost. At the time of the Civil War, Lincoln was asked, "Do you think God is on our side?" He said, "I do not know, but I think it is very important that we be on God's side."

Evening Session.

At the evening session, in the Masonic Temple Hall, Mr. Roadhouse, Deputy Minister of Agriculture, presided, and Lady Beck and Miss Cullis sang solos.

An interesting feature, that touched every heart, was the presence on the platform of a number of returned soldiers, two officers, two privates, and a chaplain.

Mrs. Manson, of Exeter, read reports from Bruce, Huron and Perth, telling of many devices to secure money for Red Cross work—autograph quilts, sale of home-made baking, and other devices; also of the sending of eatables, etc., to prisoners of war in Germany.

To be continued.

Smiles.

A boarding school lad wrote to an uncle for financial aid, and then, feeling a bit shaky about the impression his letter would make, added the following postscript:

"P. S. Dear Uncle: I am so ashamed to have asked you for this money that I have run after the postman a long way to get this letter back, but am unable to catch him. My only wish now is that you will never get this letter."

"Your Loving Nephew."
The uncle replied by return mail: "My Dear Nephew: I am hastening to make you happy by telling you that your wish was granted. I never received your letter."

"Your Loving Uncle."

The following letter is a rare example: "My Darling Peggy,—I met you last night, and you never came! I'll meet you again to-night, whether you come or whether you stop away. If I'm there first, sure I'll write my name on the gate to tell you of it; and, if it's you that's first, why rub it out, darling, and no one will be the wiser. I'll never fail to be at the trystin'-place, Peggy; for, faith, I can't keep away from the spot where you are, whether you're there or whether you're not. Your own, Mike."

The Dollar Chain

A fund maintained by readers of "The Farmer's Advocate and Home Magazine" for (1) Red Cross Supplies; (2) Soldiers' Comforts; (3) Belgian Relief; (4) Serbian Relief; (5) Prisoners of War.

Contributions from Nov. 3rd to Nov. 10th:
H. Bull, Warton, Ont., \$5; "Toronto," \$2; "Mother of Three," Sask., \$3; "Reader of Advocate," Turnersville, Ont., \$5.

Previously acknowledged.....\$3,009.00
Total to Nov. 10th.....\$3,024.00

IF YOU CAN'T GO TO THE FRONT GIVE.

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

Fashions Dept.

How to Order Patterns.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Price fifteen cents PER PATTERN. If two numbers appear for the one suit, one for coat, the other for skirt, thirty cents must be sent. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

Positively no patterns will be sold under 15 cents each, regardless of date published, owing to advance in cost of same.

When ordering, please use this form—Send the following pattern to:

Name.....
Post Office.....
County.....
Province.....
Number of Pattern.....
Age (if child or misses' pattern).....
Measurement—Waist..... Bust.....
Date of issue in which pattern appeared.....



8937—Night Gown, 34 to 44 bust.



9217 (With Basting Line and Added Seam Allowance) Combination Under Garment, 34 to 44 bust.



9168 (With Basting Line and Added Seam Allowance) Loose Coat for Misses and Small Women, 16 and 18 years.

The kindergarten had been studying the wind all week—its power, effects, etc.—until the subject had been pretty well exhausted. To stimulate interest, the kindergarten said, in her most enthusiastic manner: "Children, as I came to school to-day in the trolley-car, the door opened and something came softly in and kissed me on the cheek. What do you think it was?" And the children joyfully answered, "The conductor!"

Hope's Quiet Hour.

His Own.

Jesus knowing that His hour was come that He should depart out of this world unto the Father, having loved His own which were in the world, He loved them to the uttermost.—St. John 13:1 (R. V. margin).

Thou art as much His care, as if beside
For man nor angel lived in heaven or
earth:
Thus sunbeams pour alike their glorious
tide
To light up worlds, or wake an insect's
mirth;
They shine and shine with unexhausted
store:
Thou art thy Saviour's darling—seek no
more.
—Keble.

For two weeks or more those two wonderful words, "His own," have been ringing like a chime of English cathedral bells in my soul. The central thought is repeated over and over again, and the music is too perfect to become tiresome. Our King loves His own to the uttermost and will love them unto the end—the end of eternity. That is a limitless limit. Who are "His own"? Have we a right to rejoice in the wonderful friendship offered by the Master to His chosen apostles, when He said: "Henceforth I call you not servants; but I have called you friends?"


He prayed not for those apostles alone, but also for those believers who should follow them (17:20, 21) that they also might be admitted into fellowship with Himself. "His own" (17:6, 9) are the people who believe in Him and keep the word of the Father. Though our faith and obedience may be very weak—as weak as the loyalty of the "Rock-Apostle"—yet we may throw ourselves confidently on our Lord's power to read the inmost heart, and say humbly: "Lord, Thou knowest all things; Thou knowest that I love Thee."

Do you remember how St. Peter made this appeal—so different from his former positive assertion of his own loyal courage—and how he was told to prove his love by feeding and shepherding the Master-Shepherd's lambs and sheep? Feed "My" lambs, "My" sheep—His own.

When St. John wrote down the wonderful discourse, which he had pondered over for a great many years, (13:17) he was probably the only one left of the "Eleven" who had not been called to suffer a martyr's death. Just think of it! Their Master had declared that all power, in heaven and earth, was given to Him, and He loved "His own" with infinite tenderness. How was it, then, that He sent them out to endure awful tortures for His sake? A mother would shield her children from pain, if possible. Yesterday I saw one who is injuring her boy by giving him exactly what he wants. I expostulated with her, and she owned sadly that she ought not to do it, "but," she said, "how can I bear to hear him cry?"

If divine love were like that—too soft-hearted to stand our crying—of course, pain would never be allowed to chasten and transfigure a child of God. We, who are sure that God is Love, can reverse the saying of St. Peter and say: "I know that Thou lovest me." We even dare to look at the awful misery caused by this war and, sadly but trustfully, we lift our eyes to the Ruler of all the kingdoms and repeat our hopeful assurance: "In spite of the injustice, agony and sin, I am sure that Thou lovest Thine own to the uttermost." I can't prove it but I know it.

It is easy to see that a certain amount of pain, difficulty and sorrow are good for us. We do not doubt a man's love for his child because he restrains, disciplines and punishes him; and we do not find it hard to understand the wholesome discipline which keeps us robust and sound in body and soul. But hopeless misery is different. Instead of bracing it crushes the spirit. If God loves His children why does He permit the horrors which have almost destroyed the Armenian nation? Why does he leave the gallant Belgians in the merciless grasp of their enemies? That "Why" has not been made clear to us—as yet.



Fairy Soap produces a rich, free lather in any kind of water; its cleansing qualities are most agreeable and refreshing.

Fairy Soap is white—pure—made with expert skill from carefully selected materials.

The oval, floating cake fits the hand and wears down slowly to the thinnest wafer.

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BREAD

BIG, wholesome, nutritious loaves, of delicious nut-like flavour, downy lightness and excellent keeping qualities.

FIVE ROSES FLOUR
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God still demands that we shall trust Him without understanding all His dealings with us. He still answers our amazed expostulations by saying—"What I do thou knowest not now; but thou shalt know hereafter." If we only believe when we can see that our prayers are answered, we are not trusting Him but our own judgment.

He who wept beside the grave of His friend Lazarus, who mourned with patriotic fervor over the coming sorrow of Jerusalem, is not unfeeling over the present agony of men and women. If He can endure the pain of those whom He "loves to the uttermost," it must be because He knows that only in this way can they be perfected—as He Himself was (Heb. 2:10).

It may be that the divine pity of our God goes out even more to the selfish, worldly and hard-hearted than to the suffering. The rich man in the parable was more pitiable than Lazarus—as he discovered, when death showed him that character was infinitely more valuable than money. The "rich fool," whose one thought when crops were good was not to use but to hoard his wealth, discovered his desperate poverty when called to leave his earthly "goods" and answer (as a steward) for the use he had made of them.

Yesterday I saw, in an American fashion magazine—rightly called "Vanity Fair"—advertisements of fur coats for ladies, which ranged from eight thousand to seventeen thousand dollars each! (I am writing out the figures, for fear you might think there was a printer's error and that thousands had been put down in mistake for hundreds.) Are there women, in these days of terrible need, who will squander such sums for their personal adornment? How God must pity them! Perhaps He is pitying us, too, for our selfish hard-heartedness.

Our Lord loved St. Peter to the uttermost, therefore He rebuked him sternly when the disciple—in love for his Master—tried to turn Him aside from the road to Calvary. Probably St. Peter thought he was showing true affection when he said (in reference to the Crucifixion) "Be it far from Thee, Lord: this shall not be unto Thee." He must have been amazed, as well as cut to the heart, when his loved Master turned suddenly and faced him; hurling at the disciple (so heartily praised shortly before) the tremendous denunciation: "Get thee behind me, Satan: thou art an offence unto Me: for thou savourest not the things that be of God, but those that be of man."

What a mistake the bystanders would make if they thought those words were a proof that the Master did not love St. Peter! We sing about "gentle Jesus, meek and mild," forgetting that the anger of the gentle is more terrible than the anger of the fierce. It is from the wrath of the "Lamb" that the kings, chief captains and mighty men shall seek to hide, when "the great day of His wrath is come; and who shall be able to stand."—Rev. 6:15, 17.

And yet, even God's wrath is a proof of love. He will not spoil His children—as David, in weak tenderness, spoiled his sons—and so allow them to go unhindered along the path leading to destruction.

"Far better we should cross His lightning's path, Than be according to our idols heard, And God should take us at our own vain word."

Great gifts of faith, patience and courage are to be won only in stern battle-fields. Some day we shall thank God for the hard bits of our lives. Why can't we thank Him now, while we are wrestling with them? When He calls souls into the wilderness it is in order to bestow upon them the rich gift of His friendship. Ezekiel explains the mystery of the weary march through the wilderness, saying that the Lover of man brings "His own" into the wilderness that He may plead with them "face to face." Surely we can see that it is a high privilege to be called to a private interview with the King of kings. He wants our friendship—let us try to rise above the trifling pleasures of earth and find the joy of His friendship. How strange it is that we can see how our Leader endured the Cross, despising the

shame, and yet we—who claim to be following Him—"Should wince and fret at this world's little loss."

DORA FARNCOMB.

The Little Wooden Gun.

It's hanging on the wall
(How red the setting sun!),
In the deserted hall—
His little wooden gun.

When hollyhocks were kings,
And poppies gallant knights,
On Fancy's golden wings
We scaled heroic heights.

Ah! those were purple days;
In plenty dragons grew,
And things that would amaze
A Henty we could do.

I was an autocrat
When I was not a slave,
And in my tallest hat
He made a fearsome "brave."

As Frobisher and Drake
We sailed the Spanish Main;
Now quiet (for mother's sake),
Now chanting loud again.

And presto! he was I
And I was he, for change,
And day was night and night
The ghost!—the moated Grange!

Ah! in those happy years,
Glad times of make-believe,
I knew not these chill fears,
Who trembled to deceive.

I'm in the silent hall,
I and his little gun—
God grant he does not fall
Where fields are lost and won.

ERNEST H. A. HOWE.

"The Little Wooden Gun"—given above—was written by a reader of the Farmer's Advocate. I am sure it will go straight to the heart of each father of a soldier.—HOPE.

The Beaver Circle

The Fox and the Crow.

BY CAROL VOX.

Sometime ago a Crow, who found A piece of cheese upon the ground, Perched high upon a neighboring beech, And held the prize well out of reach. A sly old Fox, who watched her flight, Remarked, "That whets my appetite." He winked his eye and scratched his head, And then to Mistress Crow he said:

"My dear, you are a handsome bird, Your voice is very sweet, I've heard, Your lovely song, so rich and clear, Is just the thing I long to hear. I'm sure it must be passing fair, And one with which none can compare, So let me hear you sing, I pray, For I am feeling blue to-day."

The Crow, when Reynard thus did speak, Began to "caw," which opened her beak, The cheese at once dropped down below. The Fox to seize it was not slow. He laughed at Mistress Crow's distress, And thus the bird he did address: "Give ear to flattery, if you must, But always listen with distrust."

Little Bits of Fun.

As He Knew It—Teacher—"Tommy, can you spell 'fur'?" Thomas—"Yes, sir. F-U-R." Teacher—"That's right. Now can you tell me what fur is?" Thomas—"Yes, sir. Fur is an awful long way."—Cornell Widow.

"Come on, Bobby, let's play house," suggested four-year-old Betty to her twin. "All right," he agreed, "you get the broom and be the mother, and I'll get the newspaper and be the father."—Nell Van Kirk Morgan.

Her mother had been trying to teach little three-year-old Dorothy to spell her own name, but met with poor success. At last she scolded her, and said that no one would think her very smart if she couldn't spell her own name. "Well," she exclaimed, "why didn't you just call

me a cat, and spell? Big n

TH

Dear Puck girls write I would like has taken nineteen hun to be withou a dog whose years old I every day I Miss Shephe I have an u in France for the Royal Ca his horse "N come home. I will close. ETHEL R. R. No.

Dear Puc written to yo in print so I In the summ cocoons and have hatched in the spring tells us to get ing for them Entrance but just started t father said h load on and four loads y Farmer's Adv and I like r and asking riddles. My book at scho our school g we didn't. I of school sinc I will close Ford car like Ans.—Beca the seats and

R. R. No.

Dear Beav ing the Beav and now I w father has ta for three yea much. We sh it now. I liv on the shore most of the o pets. I have I liked best w and "Seven school every Miss Poole. prizes at our I got four pri lots of fun b must close ho

R. R. 5,

The I

[Rules for co Departments: (1) paper only. (2) with communicat the real name w enclosing a lett place it in stamp (4) Allow one answers to quest

A Won Pat P

To the E everything th subject, Patri been said, b question, th coming up. What does p to me patriot much the sar There are m loyalty to ou the most loy eyes to our saying "It's us of our fa as ever it did thing which o real good ho friend who is we make mi enough to wa

me a cat, and then it would be easy to spell? Big names make little girls tired."

The Letter Box.

Dear Puck and Beavers.—As other little girls write letters to your circle, I thought I would like to write one too. Daddy has taken the Farmer's Advocate since nineteen hundred and he would not like to be without it. For a playmate I have a dog whose name is Rover. He is ten years old. I like going to school, and go every day I can. My teacher's name is Miss Shepherdson and we like her fine. I have an uncle a soldier. He has been in France for more than a year. He is with the Royal Canadian Dragoons. He calls his horse "Nellie." I hope he can soon come home. As my letter is getting long, I will close.

ETHEL MARSHALL, (age 8 years.)
R. R. No. 1, Meaford, Ont.

Dear Puck and Beavers.—I have written to you before and saw my letter in print so I thought I would write again. In the summer and this fall I collected cocoons and caterpillars. None of them have hatched, but I think they will hatch in the spring. At our school the teacher tells us to get all we can, so we are all looking for them. My sister and I tried the Entrance but we both failed. We have just started to draw in our turnips. My father said he would give us five cents a load on and off. We have just got in four loads yet. My father takes the Farmer's Advocate and Home Magazine, and I like reading the Beavers' letters and asking my brother and sister the riddles. My brother is in the second book at school. Some of the children at our school got the whooping cough but we didn't. I have just missed two days of school since the holidays.

I will close with a riddle. Why is a Ford car like a schoolroom?

Ans.—Because there are little nuts in the seats and a crank at the front.

HARRIET THURTELL,
Senior IV class, age 12
R. R. No. 5, Guelph.

Dear Beavers.—I have enjoyed reading the Beavers' letters for a long time and now I wish to join your circle. My father has taken the Farmer's Advocate for three years and we all like it very much. We should not like to be without it now. I live on a farm near Brighton, on the shore of Lake Ontario; and like most of the other Beavers, I have several pets. I have read a few books. Those I liked best were "Pollyanna," "Laddie," and "Seven Little Sisters." I go to school every day. My teacher's name is Miss Poole. Our school took thirty prizes at our school fair in September. I got four prizes. In the summer I have lots of fun bathing in the lake. Now I must close hoping to see my letter in print.

MARJORIE HUFF.
R. R. 5, Brighton, Ont.

The Ingle Nook.

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

A Woman's Ideas on Patriotism and Production.

To the Editor.—It seems almost everything that can be said on the subject, Patriotism and Production, has been said, but, like the temperance question, there are always new ideas coming up.

What does patriotism mean? It seems to me patriotism to a country is very much the same as loyalty to a friend. There are many ways of proving our loyalty to our friends and it is not always the most loyal friend who closes her eyes to our shortcomings. The old saying "It's our best friends who tell us of our faults," holds as good to-day as ever it did. I do not know of anything which does us more good than real good honest criticism, from the friend who is not afraid to tell us when we make mistakes, and yet loves us enough to want to keep us from making

Britain Has Solved The Rubber Riddle

Rubbers and Overshoes Are Cheap as Ever To-day, While Other Necessities, Particularly Shoes, Have Nearly Doubled In Price

Rubber has been one of the most insistent and intensely interesting problems of the twentieth century—and its solution is proving of vital importance to the Empire in this great war.

Until 1910 the world depended for its crude rubber on the forests of South and Central America and Africa. The supply increased slowly, if at all, while consumption, since the advent of the motor car, has grown enormously. From an average of \$1.00 a pound in 1908, the price jumped to \$3.00 in 1910. Manufactures of rubber kept pace—no doubt you remember what rubbers cost for a year or two—and the situation looked alarming.

The search for synthetic rubber was redoubled in vigor. German chemists had been working on it, and the world seemed to expect them to come through with some ingenious process for manufacturing rubber from its known ingredients, on a commercial scale and at a low cost. But the world still waits—and so does the Kaiser, judging from his indignation over Britain's refusal to let him import rubber by registered mail.

Relief from a rubber famine came instead from the far-sighted development policy of Britain's Empire builders, who for years, in spite of general ridicule, had been encouraging the growth of plantation rubber on a large scale in Ceylon, Sumatra, Java and the Malay States. Money was advanced to planters to carry them through the seven-year period before the trees started to produce, and hundreds of thousands of acres were planted.

By 1910, when the pinch came, British plantations produced 8,200 tons—11% of the world's output. The next year saw 14,000 tons of plantation rubber—nearly 20%. In 1912 it had grown to 29%—in 1913 to 44%—in 1914 to 59%—last year to 68%—or 107,867 tons. This year's production is estimated at 150,000 tons, or 75% of the world's supply.

With three-quarters of the rubber production thus controlled by Great Britain, and the seas in the grip of her mighty fleet, the Allies are assured of an abundant supply for war purposes, while the Teutons' troubles from lack of it are growing daily more serious.

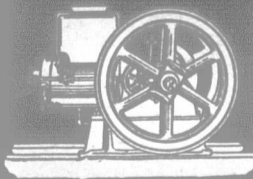
Having a practical monopoly of the supply, and the power to impose such prices as she chose, Great Britain has made it, except to her enemies, a benevolent monopoly, and has set the price of crude rubber lower than it was before the war.

To Canadians this is doubly important, because the climate makes rubber footwear a necessity. Now, when shoe prices are soaring, while rubbers and overshoes are as cheap as ever, it is clearly economy to protect expensive leather footwear with rubber, and to wear rubber farm boots instead of those made of leather. Besides the big money saving, there is the valuable protection to health. Wet feet and colds go hand in hand, with a ghastly train of ills—easily avoided by wearing rubbers.

Then there is the patriotic side. Vast quantities of leather are absolutely necessary for the army, and the scarcity is growing. Every pair of shoes we save helps to ease the situation, and so serves the Empire to which we owe this welcome cheapness of rubbers.

Save your Shoes and Serve the Empire!

Stover's Good Engines

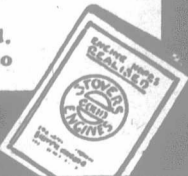


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the mistakes that a less loyal acquaintance might enjoy seeing us make.

There is often a certain sting about being told of our faults, but like some bad medicine, if administered in the right way, will do us good all the same.

I was in a hall the other day listening to a recruiting officer. By the way he talked you would think there was one, and only one noble thing for a man to do, and that was to shoulder a gun and march away to the front. But if all of the men did that, how would they and those who are left behind be fed? There are men who are needed at home, and by staying at home are more patriotic to their country, and of more use in the world's struggle than if they went.

Patriotic talk will not help our country in the terrible crisis unless accompanied by something more substantial. Talk is good; it is the only way our thoughts


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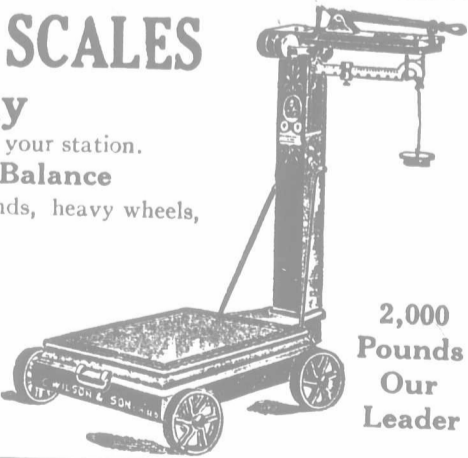
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HERBERT J. MILLER, R.R. 1, Keene, Ontario

When writing please mention this paper

and ideas can be conveyed to one another, but it must be carried on in moderation if we accomplish much. We all know the man who leans over the gate talking when the sun is shining and he should be making hay.

I know women, plenty of them, who will flay the Germans in their conversation, but just ask them to do some knitting or sewing or any one of the things our Red Cross societies are doing for our boys in the trenches, and you will get a decided "No. There are women enough to those things who haven't as much to do as I have." Now is this patriotism of the right kind? This will apply to men as well as women. Some men talk very partiotically, but just pull their purse strings ever so little and see where you are at.

Not long ago I spent a day in the city. It is not often I spend a day very far from the farm, and as one writer said, I hardly ever get 20 miles from a milk pail, but I had this day in the city and did not see a milk pail till the following morning.

In many places I saw posters on which was written "Your Loyal Talk will not defeat the Germans," and I thought what a damper that was on some people who had so much confidence in their loyal talk. We hope and pray for victory, but we must be honest with ourselves, and not shut our eyes to the fact that we have a powerful enemy and it will take more than talk to win that victory for us.

It seems to me, speaking from a farm woman's standpoint, that all and every unnecessary duty that can possibly be omitted at all, should be left undone, and the time it would take be spent in doing something for our boys to help them win our victory for us. It is our duty, while we are here comfortable at home, not disturbed by the roar of cannon or bursting of German shells, to see that our boys do not want for anything we can do for them. During the summer, in an institute meeting, the subject was brought up about what we should do for the soldiers with some money we had collected for Red Cross work, and one of the ladies said, "you surely do not expect us to do anything now during the hot weather." And it seemed to be the feeling of the meeting that we should just keep the money and do the work in the winter when we would do it more comfortably. I, as president, let it go at that, for majority rules, but I wondered if the soldiers over there in Europe were not working just as hard for us during the hot weather as at any other time.

The thought comes to me so often when I see so many women putting in their time at crocheting and tating and numberless other beautiful, but can be done without pieces of fancy work, that, if we were all alike, the boys in the trenches would go without many more comforts than they do now.

However, I do not condemn it all, for I know there are hundreds of women who are making their Red Cross money by doing fancy work, but I am not speaking of them. Patriotism means loyalty to our country, standing by and backing up our country, when she is in trouble which she did not bring on herself.

The production of our farms depends so much on help and weather conditions, and in many places it is almost impossible to get help of any kind. So many of the boys have gone to the front and those who are left are working in factories getting wages which it is impossible for the farmer to pay. And yet I wonder if food is not almost as necessary as munitions in the winning of the war, for after all is said and done, the farm is the backbone of the country.

For munitions our Government lets large contracts to firms at enormous prices, at least I think they must by the wages some of the men are earning, while it almost seems as though another industry as important to the success of our nation is being left to care of itself, namely farming.

I wonder, like many others, what will be the outcome of the scarcity of farm help, and yet it is bringing about some of the old time neighborliness, because I can see in our own community a growing tendency towards helping one another. We cannot run our farms any more successfully without help than the munition plants can run their factories short-handed. Women are helping in the factories. They can help to a certain extent on the farm

but there are few women built to take a man's place on the farm, although some writers claim they should. But I have noticed that the men who are looking for snaps hardly ever come to the farm to look for work.

There are so many things on a farm which one man can scarcely do, even on the modern improved farm where all kinds of labor-saving machines are used. How much harder is it for one man to get along on a farm which has not all these conveniences. And can we afford, as a nation, to have so much of our land lying idle? We can see already how much the one-man farm is shortening our production.

The well-to-do farmer says, "Well, if I cannot get help I shall just put in what I can attend to myself and let the rest go. I can make a living for myself that way if I do not make anything extra."

In many cases the fairest and best production of the farm has been sacrificed to the nation's call, and the father has little heart to go on in the same old way.

The threshing season is on now and the threshers tell us it will be short, as there is not nearly the grain to be threshed as there was last year. One man, not so many miles from here, told us the other day that he always depends on putting in two and three hundred acres of oats; this year on account of the wet spring he only got in 10 acres.

I am often surprised to see how little some of the men and women in the towns realize how much they are depending on the farm. They will come on the market and put up such a kick at the price of butter and eggs (necessities of life,) but you hear no kick about what they pay for ice-cream sodas, cigars, etc., things which they can get along very well without.

I would just like to bring some of these ladies out to the farm and put them through the work which it takes to produce 20 lbs. of butter. I would like to put them through every stage of the process from the going to the field for the cows to the taking of the butter to the consumer, and if that won't cure them of some of their fault finding I don't know what will.

So many of our writers are crying "Greater Production." I know there never was a greater effort put forth by the farmers around here than the last year, and yet with the shortage of help and conditions of the weather the crop is far short of last year. Yet if we have failed, I feel it is not for want of effort on the part of the majority of the farmers. While patriotism to our country rests almost altogether with ourselves. We have to depend on a higher power for our production after we have done our part.

ISABEL CLENDENING.

Welland Co., Ont.

Fall Cookery.

Devilled Crusts for Soup.—Cut dinner rolls or buns in slices ¼ inch thick, spread with butter, shake a very little Cayenne pepper over, then cover with grated cheese. Place on a hot dish and serve with soup. Nice for supper.

Elizabeth's Griddle Cakes.—Sift together 1½ cups flour, 1 teaspoon soda and ½ teaspoon salt. Beat 2 eggs; add ½ cup sour cream and ¼ cup thick sour milk, and stir into dry ingredients. Bake in small rounds on a hot greased griddle. If sweeter milk is used, use ½ teaspoon soda and level teaspoon baking powder, and beat whites and yolks of eggs separately, adding the whites last. Serve with butter and syrup or jam.

Corn Bread.—Sift together ¾ cup cornmeal, ½ cup flour, ¼ cup sugar and ½ teaspoon each of salt and soda. Beat 1 egg; add 1 cup thick sour cream, or 1 cup thick buttermilk or sour milk and 3 tablespoons melted shortening, and stir into dry ingredients. Bake in a shallow pan about 25 minutes.

Fried Bread.—Dip slices of stale bread in hot water, very quickly, then in a batter made of 1 quart sour milk, 1 teaspoon soda, butter size of an egg, melted and added to beaten eggs, and a little salt. Fry until brown. Serve with a dusting of red pepper with meat or eggs; or with butter, sugar and cinnamon as a sweet dish; or with sauce and a spoonful of jam for pudding. If liked better the batter may be omitted, and the bread fried in butter or crisco.

Baked Beans
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Beef Stew
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done. Serve

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griddle. Serv
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Baked Bean Salad.—Take 2 cups cold baked beans, a little canned tomato or catsup, 3 tablespoons vinegar, 6 tablespoons salad oil, ¼ teaspoon mustard, pepper to taste, ½ teaspoon onion juice. Mix the oil, vinegar, mustard, pepper and onion juice well together, adding the oil little by little and beating well, then mix with the beans and leave 15 minutes before serving. If the salad oil is not liked simply mix the beans with any good salad dressing.

Beef Stew.—Take 1 carrot, 4 potatoes, 2 cups brown stock or gravy, 1 teaspoon onion butter or a little chopped onion, 2 cloves, 1½ cups cold beef, 3 tablespoons cold cooked rice, pepper and salt to taste. Quarter the carrot, cut the potatoes in pieces an inch thick and parboil in a little water, then drain the water off. In a saucepan put the gravy, the sliced beef, the carrot and potatoes, rice and seasoning. Let simmer very slowly, closely covered, until done. Serve on a very hot platter.

Soft Molasses Gingerbread.—Half cup sour milk, 1¼ teaspoon soda (level measurement), ½ cup butter, 1 cup molasses, 1 egg, 2 cups flour, 2 teaspoons ginger, ½ teaspoon salt. Cook the molasses and butter until they boil. Take from the fire, add the soda, and beat hard. Next pour in the milk, the beaten egg, and the dry ingredients, mixed and sifted. Bake 15 minutes, filling the pan two-thirds full.

Cornmeal Griddle Cakes.—Two cups cornmeal, 2 cups sour milk, 1 egg, 1 tablespoon whole wheat flour, 1 teaspoon soda. Sift the dry ingredients, beat the egg, and add to it the milk and soda dissolved in a tablespoon of water. Make all into a batter, beat thoroughly and bake at once on a hot greased griddle. Serve very hot, with butter and syrup and jam.

Bread Pudding.—One pint stale bread, 1 quart milk, 1 cup sugar, 1 egg, ½ cup raisins, 1 teaspoon cinnamon, ½ teaspoon salt. Pour a very little hot water over the bread and let soak until soft, then add the other ingredients and bake very slowly in a moderate oven. Serve with cream and sugar. For a change the raisins may be omitted and the grated rind of a fresh lemon used instead.

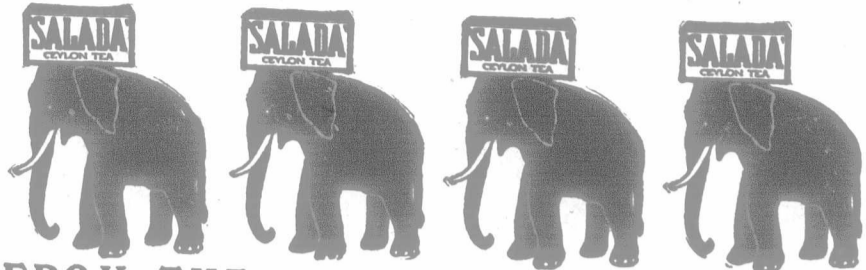
Baked Apple Dumplings.—Make good pie crust, roll as for pie and cut into rounds the size of a small plate. Pare and slice fine one small apple for each round. Lay the apple on the crust, sprinkle with sugar and nutmeg, turn the edges of the crust over the apple and press together. Brush over with milk and bake in a hot oven for 20 minutes. Serve with cream and sugar.

Sugar Cookies.—One cup sugar, ½ cup butter, 2 tablespoons milk, 1 egg, 2 teaspoons cream of tartar, 1 teaspoon soda, 1 teaspoon lemon extract, flour enough to roll. Beat the butter, sugar and egg together, add the milk, sift the cream of tartar and soda into the flour dry. Mix all well together and roll.

Spider Cake.—Two cups flour, ½ cup lard, 2 teaspoons cream of tartar, 1 teaspoon soda, 1 teaspoon salt. Sift soda, salt and cream of tartar with the dry flour. Rub in the lard, then mix with water into a soft (quite soft) dough. Press out to the size of the spider. Have the spider hot and well greased, lay on the cake and cover. Bake ten minutes on one side, then turn and bake ten on the other. This can be made on the back of the stove instead of in the oven, if preferred. Serve very hot, with butter and jam or honey.

About The Country Life.

EDITOR "THE FARMER'S ADVOCATE":
I have just been reading an article in The Advocate of Oct. 26th entitled "What a City Woman sees in the Country," and would like to protest against some of her statements. She does not approve of her neighbors methods, well, maybe her neighbors do not approve of her methods. It strikes me it is a case of "Oh, had some power the gift tae gie us Tae see oorselfes as ithers see us!" Now, I would like to know in the first place what benefit does she think would the country people get if they and the city people did "get together" as she calls it? In the second place. How does she know that the farmer does not love nature? Well I am going to give you an instance or two in my own experience, that will show that they do take note of the beauties of nature. But first let



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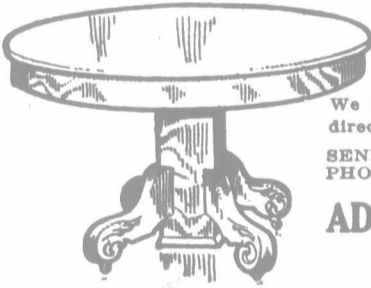
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me tell you that my husband is a country man, and has lived in the country all his life.

One beautiful October night, the children were all asleep and I was sitting in the cosy kitchen sewing. The good man was at the barn attending to the comfort of the horses. By and by I heard him come towards the house whistling cheerily. He opened the door far enough to admit his head and said, "Come out and see the Northern Lights; they are beautiful to-night." Of course I went and they were worth going to see. Or, on a summer day when there is a rainbow, he will call, "Mother, send the kiddies out to see the pretty rainbow." Now if one country man takes note of the beauties of nature, why not others? But they do not talk about those things to everyone.

Where does the writer of that article live? For she asks why do farmers not have gardens? Well we do; the farmers in our part of the country almost all have gardens, at least they grow vegetables, though some of them, ourselves among the number, grow them in rows in the turnip or mangel field. Last year we had all the radish, lettuce, cress, beans, carrots, cabbage, beets, cucumbers we could use, and in the fall we had a barrel of onions for the winter. We grow our own tomato, cabbage and celery plants. Of course this year the vegetables did not do so well on account of the wet spring. I beg her pardon, but the country people, as a rule, do not live on "pork potatoes and pie." I have eaten the most delicious dinners in farm homes.

The country people keep modern in dress with the aid of the catalogues, do they? Well I guess not. Quite a number in this locality employ a tailor and those who do not, get a good dressmaker. But buy ready mades, Oh, no! She says they scraped and sprayed their trees. Well what else had they to do? Two women with nothing to do but keep house for themselves needed to scrape trees, hoe vegetables or do some such thing for exercise. If they had a sturdy boy of eleven months to look after they would not worry whether the kitten slept in the wood pile, or on the ridge board of the shed, like Peter McArthur's turkeys.

How much does the average city woman know about modern sanitation or kitchen chemistry? Or how does the city woman know whether the country woman knows those things or not? Really I am surprised that she would admit that anyone in the country could teach her anything but she was going to learn to make apple butter. Truly if that city woman had not made me so "het up" I should have had a good laugh.

I am going to give her a piece of advice and then, I am through. That city women had better travel through the country some and then some more before she undertakes to publish statements about country people as a class, what she wrote may be true about the people in her neighborhood and still not apply to country people in general.



LUSCIOUS the pie that Elizabeth made,
Crisp was the crust and of delicate shade,
Never a flake of it soggy or sour.
Art, a good oven and Purity Flour.

"MORE BREAD AND BETTER BREAD"

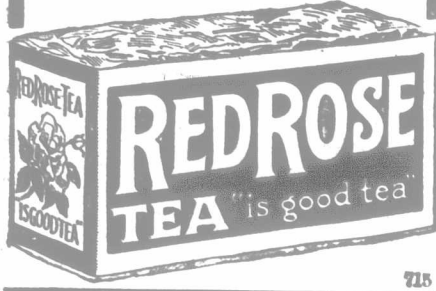
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R. R. No. 5,
HAGERSVILLE, ONT.**

How do you feel about it?

(Send in your opinion for publication)

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Many farmers are buying their SEED NOW for Spring. While it lasts, we can supply seed grain of 1915 crop at following prices.

Wheat—Marquis, Red Fyle, Wild Goose and White	
Russian	\$2.35 bus.
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The CANADA LINSEED OIL MILLS, Ltd. Toronto and Montreal

If she would change places with a farmer's wife for one month and also keep her eyes open for what the farmer is doing, she will not ask, "Why do not they do more?" but will change it to "How do they accomplish so much?"

AN INDIGNANT COUNTRY WOMAN.
[In regard to the above letter, we think the point well taken that no one can generalize from one neighborhood. Neighborhoods—even individual homes—are as different as day from night. Also the point is well taken that no one can say that farmers, on the whole, do not enjoy nature. That is one of the very things that help to keep many rural folk in the country. But farmers, as a rule, are not a voluble people; often they think more than they say, especially about things nearest their hearts. On the other hand we think the "city woman" was right when she asked why city and country people do not get together more. When things are as they ought to be, the country people will realize that the best of the city has much to give them, and city people will realize that the best of the country has much to give them, and the two classes will meet and mingle naturally and wholeheartedly, each enjoying and receiving benefit from the other. There should be no gap between city and country. There is none now between those who are educated, in the highest sense of the word.—Ed.]

The Woman Who Had Nothing to Give.

BY FRANCES CAMPBELL SPARHAWK.

"How good you are!" said the little mother, as she stood looking at her baby, whose cries of suffering had softened to occasional sobs under the skillful ministrations of Mrs. Grant, who was rocking it softly in her arms and cooing to it as she sat in a low chair in Mrs. Wight's home.

"I—good!" exclaimed the other, glancing up at her suddenly and at once looking down again to hide the flash of scorn in her eyes at such valuation of herself. She, good, when she never had a dollar to give to any of the causes she believed in so much nor even to a personal want that pressed upon her sympathy. She could never forget how it had been when Mr. Wight died and his salary, which was all his income, stopped with his breath. The neighbors who liked the young fellow and his wife had made up a purse for her. Nobody was fonder of the young couple than Marianna Grant; but her share in this purse had been so small that she always cringed inwardly when she thought of it. She had tried in her own way to make up for this deficit, not for her own comfort but to help the little woman. She had gone to friends and also to persons whom she knew only by reputation and begged them to employ Mrs. Wight to sew, or in some capacity which would enable her to support herself, her little daughter of five and her baby then eight months old. Thus it came about that, long after the contents of the purse had been exhausted, the work which Mrs. Grant had secured for her kept the wolf from the door. But what had Marianna done, she told herself, in comparison with the others? She had hated to beg a position even for another person. But really, what was it to go to a few ladies, even if at several places she did stand before the door getting up courage to ring, and even if the weather was bad, the tramp long and wearisome and her own work had to be done when she returned home? A few steps, a few words, and when refusal appeared imminent, a pressure of persuasion which it seemed to her at the time she had been inspired to make, and the thing was done, and Mrs. Wight's support secured.

But it was not of this, but of the meagreness of her contribution, even though it had cost her the much-needed new trimmings for her hat, that she thought that morning, smothering a sigh as she looked up.

"It was well I grabbed the vaseline and the hot-water bag when Elsie ran in for me," she said. "They were just the right things and it would have lost time to go back for them. See how much better he is breathing, darling. He'll soon be fast asleep. Then I must go; for I have bread in the oven."

"Too bad, you dear friend! I hope it hasn't burned," said Mrs. Wight. "You always think of yourself last."

"Wouldn't you think of a baby with croup before you did of a piece of dough?" retorted Mrs. Grant. Yet she was anxious about her bread; for she never wasted anything. Her husband's income was so small that it required all her skill in managing it, to keep him and the children in comfort, with never a luxury.

"Thank you so much," repeated Mrs. Wight, still watching the child, who was now asleep.

"Don't mention it," said Mrs. Grant, as she kissed away the single tear left upon the baby face. I love to have him in my arms, the darling; it's just a pleasure. But now I must run. I'll look in again this afternoon to see how he's getting on. But I don't believe you'll have any more trouble."

"I wish I didn't have to be away this morning," said the mother regretfully, as the other paused for a last look at the baby. "But Mrs. Horner has the dressmaker, and depends upon me to do some errands for her in town." For doing errands in the neighboring city was frequently a part of Mrs. Wight's work for employers. "I have to match some colors," she added; "and that always takes time. But 'twill be all right. Elsie is a young nurse. But you'll be careful, won't you, darling?"

"Yes, mamma," answered the child of five, an anxious wrinkle upon her little brow.

"No, no, that'll never do, as baby is now!" cried Mrs. Grant. "I think he's all right. But if he should choke up again, how is Elsie to leave him to run for me? Give me a good warm wrap for him, and I'll take him home with me. Then you'll not worry, nor I either. And Elsie, come along, too, and have lunch with the children. They'll be glad to have you, and so shall I. And you'll keep me company in the afternoon."

It was true that Mrs. Grant never had money to give. But the contents of her bottle of vaseline, at need, a bite of food for the dear little girl who had many duties for so young a child—what were these things? They didn't count in the giving; or, certainly, Mrs. Grant never counted them.

Grateful tears were in the mother's eyes as she laid the sleeping child in the strong and tender arms outstretched for him. "Oh, thank you so much," she said. "Now my heart is light as a feather. And I'll come for him and Elsie the first moment I'm free. You know how it is?" she added wistfully. "But, anyway, it's a shame to burden you so."

"Burden! Fiddlesticks!" retorted Mrs. Grant. "It just makes me feel as if my Nat were a baby in arms again. I like it. So, run away to your business; and success to you."

When the children had eaten their luncheon merrily, simple as it was, and were going to school again, the oldest daughter noticed her mother's sewing thrown over the back of a chair.

"Is that my new frock, mamma?" she asked, eyeing the unfamiliar color.

"No, dearie. I'm going to take yours to-morrow. But Mary Harding got into a muddle with her new gown, poor little thing. You know, her mamma is at the hospital, and Mary has a hard time. She said she could not afford a dressmaker. I'm trying to help her out with it; it's all I can do. You are willing to wait a day or two, aren't you, Lily, dear? Mary needs this, more than you do yours, at once."

"Yes, mamma," said the child resignedly. And with a sense she could not have explained of being on the right side and sure to come out well, she kissed her mother and ran off to school. For Mrs. Grant never neglected her husband and children for outside work of any kind, even if, occasionally, she deferred them when they would not suffer from the delay. She well knew they were worth all her care.

While Elsie sat playing with her doll, recalling the chatter of the Grant children about their school, and secretly glad that the following year she would be too old to be kept at home, Mrs. Grant saw a lady coming up the walk to her house.

Her sewing dropped into her lap with a smothered exclamation of dismay. This day of all days Mrs. Eastburn had pitched upon to come to take her to one of a series of fine entertainments, as she had promised to do some day. Mrs. Grant glanced from the child, who might safely have been sent to wait at the next neighbor's, to the baby. The baby!

There he lay composing himself to sleep again after his luncheon, which he had been sufficiently recovered to enjoy. It proved that the entertainment was the last of the series. Mrs. Eastburn was so disappointed. Couldn't Mrs. Grant do something with the baby? Bring him with her? Never in that condition. No iron cable could bind more firmly than the iron duty which bound her to that baby. She could not help remembering, as she sat, sad-eyed, after her friend had left, how very few entertainments came into her own life, and how much she had allotted upon this one.

But the baby waked and fretted a little, and she took him up. And Elsie remarked how the sun seemed always to shine in Mrs. Grant's house. Then Mrs. Wight returned radiant with success—but so soon after Mrs. Eastburn had gone!

Mrs. Grant did not speak of her disappointment. Home must be cheerful for the others came into it. And then, of course, it was babyish to mind losing a little pleasure. It was much more to her that the child seemed quite recovered as she gave him to his mother, and that Mrs. Wight was giving such satisfaction in her work. After the latter had gone, Marianna sat down again to the gown that Mary Harding had botched, and wondered, as she worked, how much of the entertainment Mrs. Eastburn would remember to retail when she ran in on the way home, as she had volunteered to do?

The following month there came a call to give to a charity in which Mrs. Grant had great interest and faith. But it was not her duty to let Nat go without a pair of whole shoes, if the little fellow did seem to wear them out faster than any other child ever did. So, she had no money to meet the call.

"Some day, when the children grow up, they will help," she said to herself. "Then it won't be that, always, I have nothing to give."

Nothing to give! Her guardian angel hearing her, smiled so broadly that somewhat of the radiance overflowed into Marianna's heart and warmed it. She did not feel so badly as she knew she ought to do. She could not tell why, except that she was sure that some day it would be all right.—American Cookery.

The First Loaf.

Jane Carlyle, the wife of Thomas Carlyle, possessed sterling and heroic qualities which she displayed in the performance of her nearest duty. In one of her letters, quoted by Laurence McTiernan in "The Personal Equation," she tells how, making her first loaf of bread, she recognized that the spirit in which one does the work nearest at hand is what really counts.

"We were very poor," writes Mrs. Carlyle, "and further and worst, being an only child, and brought up to 'great prospects,' I was sublimely ignorant of every branch of useful knowledge, although a capital Latin scholar and a very fair mathematician.

"It behooved me, in these astonishing circumstances, to learn to sew. Husbands, I was shocked to find, wore their stockings into holes, and were always losing buttons, and I was expected to look to all that. Also, it behooved me to learn to cook. So I sent for Cobbett's 'Cottage Economy,' and fell to work at a loaf of bread.

"But knowing nothing about the process of fermentation, or the heat of ovens, it came to pass that my loaf got put into the oven at the time that myself ought to have been put into bed. And I remained the only person not asleep in a house in the middle of a desert.

"One o'clock struck, and then two, and then three, and still I was sitting there, in an intense solitude, my whole body aching with a sense of forlornness and degradation, that I who had been so petted at home, whose comfort had been studied by everybody in the house, who had never been required to do anything but cultivate my mind, should have to pass all those hours of the night in watching a loaf of bread, which might not turn out bread after all.

"Such thoughts maddened me, till I laid down my head on the table and sobbed aloud. It was then that somehow the idea of Benvenuto Cellini, sitting up all night watching his 'Perseus' in the furnace, came into my head,

and succeeded all, in the statue of that each found to

Cur The D upon his Canada.

Sir Sam other 100, Canada b has to be

The rec Wilson wa of the Un publican c the most h of the cour

BOB LONG ELECTED!

No Re-Count Necessary

Leave it to the working-man, and his comon-sense will give a straight vote every time. That's why there is a land-slide for the new BOB LONG OVERALL. The working man—the union man—recognizes value, and he is strong for the real goods BOB LONG puts out in his all-union "Sunshine" factory, where everything is honestly made by honest labor.

This new BOB LONG 300 drill selected pick and pick ironclad cloth stands a strength test of sixty-eight (68) pounds to the square inch under hydraulic pressure; comes in two attractive shades, light, clean blue and dark steel grey; always looks neat and trim, and washes like a piece of fine linen. You get a new suit every time for the price of a wash.

Large, roomy legs and seat, high, broad-fitting bib, reinforced pockets throughout, self-locking, non-rustable suspender slides, adjustable suspenders, rivetted buttons, strong, springy elastic webbing, one-piece back, hand trimmed, union made, and every garment guaranteed. As comfortable as an old shoe, and a bear for wear.

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Tell us if you have any trouble getting these goods from your dealer - we will see you are quickly supplied!



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R. G. LONG & Co. LIMITED

TORONTO



WINNIPEG

and suddenly I asked myself, 'After all, in the sight of the Upper Powers, what is the mighty difference between a statue of Perseus and a loaf of bread, so that each be the thing one's hand has found to do?'

Current Events

The Duke of Devonshire has entered upon his duties as Governor-General of Canada.

Sir Sam Hughes has stated that another 100,000 men must be recruited in Canada by spring, even if compulsion has to be resorted to.

The recent election by which President Wilson was again returned as president of the United States, defeating the Republican candidate, Hughes, was one of the most keenly contested in the history of the country. Wilson's majority, how-

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WILLIAMS
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ever, has been finally placed at 403,312, popular vote.

Prohibition has been carried in Michigan and in Virginia by large majorities.

During the past week there has been considerable rainfall along the Somme, but slight gains on the part of the Allies are continuously reported. Rains have been of positive help to the Roumanians, as along the Transylvanian front the rivers have been changed into raging torrents, very effective in holding back the advance of von Falkenhayn's troops. In the Stokhod region of Volhynia the Germans have driven the Russians back, but this repulse may be due to the fact that Brusiloff has despatched troops from the Volhynian lines to reinforce the Roumanians. In the meantime von Mackensen has been steadily retreating from the Dobrudja, with the Russo-Roumanian troops pressing hard upon him. It is hoped that the critical stage is over in Roumania.

Credit Cleaning-out Sale

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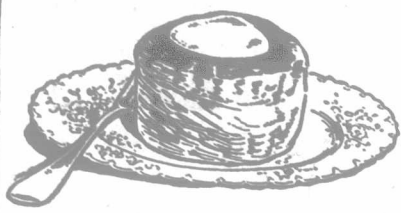
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Mr. Arthur Marston, half-mile north of Paris, on

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

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



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A delicious dessert made from a recipe in the Lantic Sugar Cook Book which tells how to make many new sweets and desserts.

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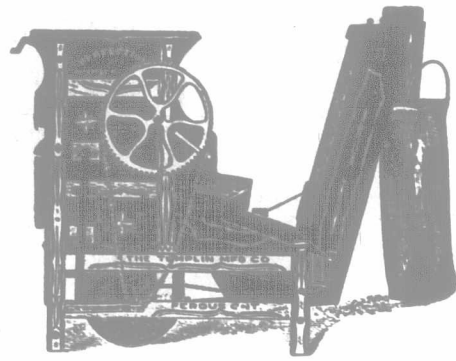
is best not only for the table but for cooking. The extra "FINE" granulation dissolves instantly, saving labor and giving high sweetening power.

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For cook book send a red ball trade-mark cut from the package.

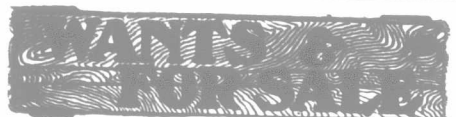
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THE PERFECTION SEED AND GRAIN SEPARATOR



Will assist you to increase your production in 1917. Will pay for itself in one season. Wherever tried it gives satisfaction. If it is good enough to be used on the Government Farms at O. A. C. and Prison Farms at Guelph, and Harrow, Ont.; Farnham and St. Casimer, Portneuf, Que.; Fredericton, N. B.; Truro, N. S.; Charlottetown, P. E. I., and Indian Head, Sask., it is surely good enough for everybody. Turns twice as easy as any other mill, and will do work no other mill will do. Full particulars in Circular A by writing for it.

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

CALIFORNIA SUBURBAN FARMS, NEAR LOS Angeles for sale; easy payments. Write E. R. Waite, Shawnee, Oklahoma.

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When writing please mention this paper.

Facts and Fallacies About Tuberculosis.

Although there are many things that we do not know about consumption, or tuberculosis, there are some that we do and a few that we are in the act of learning.

We do not know, for example, what makes for susceptibility and what for immunity. Strong and robust persons are sometimes stricken down with it; invalids and convalescents from other diseases are no more susceptible to it than are other people, and it is possible to live for an entire lifetime in the condition known as "run-down" or "weak" without becoming tuberculous.

People still speak of consumption as "inherited," but it is not inherited. A child may be born with a certain tendency to it, but if proper measures are taken early enough, and kept up steadily and long enough, this tendency can be overcome. A child whose parents before him, and their parents before them, perhaps for generations back, have been poor breathers, will probably inherit a small, meager chest, and will therefore be the natural victim of the consumption germ as soon as it reaches him. That child will have to be taught to breathe. The tendency to pigeon-breast can be overcome, and a narrow chest de-

veloped to normal capacity; but to do this, the child must be kept constantly in good air, and taught how to develop and use the lungs. A pigeon-breasted child who is being brought up on the coddling process—oversheltered, over-fed and overclothed—is in as much danger as if he lived under the famous sword hanging from a hair.

Another long-lived fallacy, which is a great pet with many people, is that other diseases "run into" consumption. A man comes down with an attack of typhoid fever or pneumonia; after the attack is over his convalescence is slow and doubtful; finally, unmistakable signs of tuberculosis appear, and he says, "I had pneumonia, and it ran into consumption." But if he had been examined before the pneumonia started, he would have been found to be already consumptive; in fact, it would really be more sensible to say that his consumption "ran into pneumonia."

It must be remembered that consumption may be present a long time before the germs begin to appear in the expectation. In spite of hygienic precautions, we must all come in contact with the germs of consumption many times in a lifetime. These germs we shall either breathe in or swallow. We cannot escape them. But there is an armor that is germ-proof. It is an invisible armor, woven of oxygen—fresh air.—Youth's Companion.

OUR NEW SERIAL STORY

Serial Rights Secured from the Bobbe-Merrill Publishing Company.

The Brown Mouse

CHAPTER V.

THE PROMOTION OF JENNIE.

If Jennie Woodruff was the cause of Jim Irwin's sudden irruption into the educational field by her scoffing "Humph!" at the idea of a farm-hand's ever being able to marry, she also gave him the opportunity to knock down the driver of the big motor-car, and perceptibly elevate himself in the opinion of the neighborhood, while filling his own heart with something like shame.

The fat man who had said "Cut it out" to his driver, was Mr. Charles Dilly, a business man in the village at the extreme opposite corner of the county. His choice of the Woodruff District as a place for motoring had a secret explanation. I am under no obligation to preserve the secret. He came to see Colonel Woodruff and Jennie. Mr. Dilly was a candidate for county treasurer, and wished to be nominated at the approaching county convention. In his part of the county lived the county superintendent—a candidate for renomination. He was just a plain garden or field county superintendent of schools, no better and no worse than the general political run of them, but he had local pride enlisted in his cause, and was a good politician.

Mr. Dilly was in the Woodruff District to build a backfire against this conflagration of the county superintendent. He expected to use Jennie Woodruff to light it withal. That is, while denying that he wished to make any deal or trade—every candidate in every convention always says that—he wished to say to Miss Woodruff and her father, that if Miss Woodruff would permit her name to be used for the office of county superintendent of schools, a goodly group of delegates could be selected in the other corner of the county who would be glad to reciprocate any favors Mr. Charles J. Dilly might receive in the way of votes for county treasurer with ballots for Miss Jennie Woodruff for superintendent of schools. Mr. Dilly never inquired as to Miss Woodruff's abilities as an educator. That would have been eccentric. Miss Woodruff never asked herself if she knew anything about rural education which especially fitted her for the task; for was she not a popular and successful teacher—and was not that enough? Mr. Dilly merely asked himself if Miss Woodruff's name could command strength enough to eliminate the embarrassing candidate in his part of the county and leave the field to himself. Miss Woodruff asked herself whether the work

would not give her a pleasanter life than did teaching, a better salary, and more chances to settle herself in life. So are the officials chosen who supervise and control the education of the farm children of America.

This secret mission to effect a political trade accounted for Mr. Dilly's desire that his driver should "cut out" the controversy with Newton Bronson, and the personal encounter with Jim Irwin—and it may account for Jim's easy victory in his first and only physical encounter. An office seeker could scarcely afford to let his friend or employee lick a member of a farmers' road gang. It certainly explains the fact that when Jim Irwin started home from putting out his team the day after his first call on the Simms family, Jennie was waiting at the gate to be congratulated on her nomination.

"I congratulate you," said Jim.

"Thanks," said Jennie, extending her hand.

"I hope you're elected," Jim went on, holding the hand; "but there's no doubt of that."

"They say not," replied Jennie; "but father says I must go about and let the people see me. He believes in working just as if we didn't have a big majority for the ticket."

"A woman has an advantage of a man in such a contest," said Jim; "she can work just as hard as he can, and at the same time profit by the fact that it's supposed she can't."

"I need all the advantage I possess," said Jennie, "and all the votes. Say a word for me when on your pastoral rounds."

"All right," said Jim, "what shall I say you'll do for the schools?"

"Why," said Jennie, rather perplexed, "I'll be fair in my examinations of teachers, try to keep the unfit teachers out of the schools, visit schools as often as I can, and—why, what does any good superintendent do?"

"I never heard of a good county superintendent," said Jim.

"Never heard of one—why, Jim Irwin!"

"I don't believe there is any such thing," persisted Jim, "and if you do no more than you say, you'll be off the same piece as the rest. Your system won't give us any better schools than we have—of the old sort—and we need a new kind."

"Oh, Jim, Jim! Dreaming as of yore! Why can't you be practical! What do you mean by a new kind of rural school?"

"A truly-rural rural school," said Jim.

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The name that stands for Quality in Farm Machinery

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THE LISTER GRINDER

Write for price of our famous Grinder outfit comprising 5 H.P. Lister Engine and a 9 1/2 Lister Grinder.

Write for Catalogue to Dept. "G"

R. A. LISTER & Co. Limited TORONTO

POULTRY AND EGGS

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

FOR SALE — BRED-TO-LAY STRAIN, single-comb White Leghorn cockerels. \$1.00 each. A. Gilmore, Glenelm, Que.

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

RED FEATHER YARDS, LONDON, CANADA, produce Canada's greatest layers and winners. Cockerels from "Red Princess" and "Nest Bug", the two greatest Red layers in Canada, \$5.00 each. Catalogue free.

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Crate-fed chickens, live or dressed. Large fowl, live or dressed. Good veal calves, dressed. Light hogs, dressed. Lambs, 40 to 50 pounds.

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Sent free for one month's trial. Write for particulars.

"1900" WASHER COMPANY
357 Yonge Street Toronto, Ont.
(Factory, 79-81 Portland St., Toronto)

NOVEMBER

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"I can't pronounce it," smiled Jennie, "to say nothing of understanding it. What would your tralalooral rural school do?"

"It would be correlated with rural life," said Jim.

"How?"

"It would get education out of the things the farmers and farmers' wives are interested in as a part of their lives."

"What, for instance?"

"Dairying, for instance, in this district; and soil management; and corn-growing; and farm manual training for boys; and sewing, cooking and housekeeping for the girls—and caring for babies!"

Jennie looked serious, after smothering a laugh.

"Jim," said she, "you're going to have a hard enough time to succeed in the Woodruff school, if you confine yourself to methods that have been tested, and found good."

"But the old methods," urged Jim, "have been tested and found bad. Shall I keep to them?"

"They have made the American people what they are," said Jennie. "Don't be unpatriotic Jim."

"They have educated our farm children for the cities," said Jim. "This county is losing population—and it's the best county in the world."

"Pessimism never wins," said Jennie. "Neither does blindness," answered Jim. "It is losing the farms their dwellers, and swelling the cities with a proletariat."

For some time, now, Jim had ceased to hold Jennie's hand; and their sweetheart days had never seemed farther away.

"Jim," said Jennie, "I may be elected to a position in which I shall be obliged to pass on your acts as teacher—in an official way, I mean. I hope they will be justifiable."

Jim smiled his slowest and saddest smile.

"If they're not, I'll not ask you to condone them," said he. "But first, they must be justifiable to me, Jennie."

"Good night," said Jennie curtly, and left him.

Jennie, I am obliged to admit, gave scant attention to the new career upon which her old sweetheart seemed to be entering. She was in politics, and was playing the game as became the daughter of a local politician. The reader must not by this term get the impression that Colonel Woodruff was a man of the grafting tricky sort of which we are prone to think when the term is used. The West has been ruled by just such men as he, and the West has done rather well, all things considered. Colonel Albert Woodruff went south with the army as a corporal in 1861, and came back a lieutenant. His title of colonel was conferred by appointment as a member of the staff of the governor, long years ago, when he was county auditor. He was not a rich man, as I may have suggested, but a well-to-do farmer, whose wife did her own work much of the time, not because the colonel could not afford to hire "help," but for the reason that "hired girls" were hard to get.

The colonel, having seen the glory of his side in the great war, was inclined to think that all reform had ceased, and was a political stand-patter—a very honest and sincere one. Moreover, he was influential enough so that when Mr. Cummins or Mr. Dolliver came into the county on political errands, Colonel Woodruff had always been called into conference. He was of the old New England type, believed very much in heredity, very much in the theory that whatever is right, in so far as it has secured money or power.

He had hated General Weaver and his forces; and had sometimes wondered how a man of Horace Boies' opinions had succeeded in being so good a governor. He broke with Governor Larrabee when that excellent man had turned against the great men who had developed Iowa by building the railroads. He was always in the county convention, and preferred to serve on the committee on credentials, and leave to others the more showy work of membership in the committee on resolutions. He believed in education, provided it did not unsettle things. He had a good deal of Latin and some Greek, and lived on a farm rather than in a fine house

in the county seat because of his lack of financial ability. As a matter of fact, he had been too strictly scrupulous to do the things—such as dealing in lands belonging to eastern speculators who were not advised as to their values, speculating in county warrants, buying up tax titles with county money, and the like—by which his fellow-politicians who held office in the early years of the county had founded their fortunes. A very respectable, honest, American Tory was the colonel, fond of his political sway, and rather soured by the fact that it was passing from him. He had now broken with Cummins and Dolliver as he had done years ago with Weaver and later with Larrabee—and this breach was very important to him, whether they were greatly concerned about it or not.

Such being her family history, Jennie was something of a politician herself. She was in no way surprised when approached by party managers on the subject of accepting the nomination for county superintendent of schools. Colonel Woodruff could deliver some delegates to his daughter, though he rather shied at the proposal at first, but on thinking it over, warmed somewhat to the notion of having a Woodruff on the county pay-roll once more.

To be continued.

The Windrow

"The Poetry Review of London," says *Literary Digest*, "is melancholy reading nowadays. After nearly every poem there is an editorial note telling us that the poet died in battle. The number of young men whose genius has suddenly flowered in the war is astonishingly large, and that so many of them have died soon after proving that they were poets brings clearly before us war's ravages in the world of letters." Among those who have perished since Rupert Brooke was Captain Julian Grenfell, D. S. O., whose poems are remarkably vivid and rich in imagery and language.

There is a renewed demand that the German motto "Ich Dien" (I serve), borne by the Prince of Wales and the Royal Welsh Fusiliers, shall be changed. "Patriotic Welshman" writes "Today": "It seems to me little less than a scandal, in view of all the crimes of the German nation, that our Prince, and one of the noble regiments of our gallant Army, should continue to sport a badge with the inscription in German. Cannot we have an order in Council substituting the Welsh words "Eich Dyn' (Your Man)?" Other suggestions are that the words shall be translated into English, or that the motto should be "Gwasanaethaf." Welsh for "I serve."

One of the wonders of the war is the development of new methods of treating sickness and wounds! Science, which which has been pressed into the service of destruction, has also been the willing handmaid of healing and prevention. We expect that the story of the sanitation of our armies will one day be written and prove of enthralling interest. We of the Red Cross are more directly interested in the healing of the sick and wounded, but we must not forget that those who labor to prevent disease are also "under the Red Cross."

A recent article by an American writer, reprinted in *World Wide* from the American *Outlook*, gives a description of the revolution in nursing caused by the application of a casing of wax, paraffin and resin, called "ambrine," to wounds caused by burning, frost-bite and gangrene. This wonderful process not only immediately eases pain, but also encourages a new growth of skin by which the disfigurement, which is to a sensitive man worse than death itself, may be avoided. The limb, when painted or sprayed with this solution, is left to dry and is then swathed in gauze and cotton to keep the wax unbroken. The face is covered with a gauze veil. The name of the French surgeon who has made this wonderful, yet simple discovery, is not given. Again, in *The Lancet*, the official organ of the British medical profession, we read of wounds treated entirely by saline irrigation, or in other words, by a continual stream of salt and water always dropping on



Which?

Even professionals find it difficult to distinguish between the natural human voice and that voice reproduced on the Phonola. The reproduction of vocal and instrumental records on the new Phonola is so life-like and clear as to make it an unalloyed delight to the auditor. Well might the artist—violinist or singer—exclaim with Dromio, "Methinks you are my glass and not my brother." A new tone-control device on the Phonola enables it to play—

with a marked absence of clicking or blurring—any style or make of disc record. No other voice-reproducing machine has this device; it is exclusive to the Phonola alone. Ask to have the Phonola demonstrated; critical as you are, you'll be delighted the moment you hear it. Prices run from \$15 to \$250.



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Guelph, Ontario

DECEMBER 1st to 8th, 1916

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Monday, Tuesday, Wednesday, Thursday, December 4th, 5th, 6th, 7th

W. W. Ballantyne, President

R. W. Wade, Secretary

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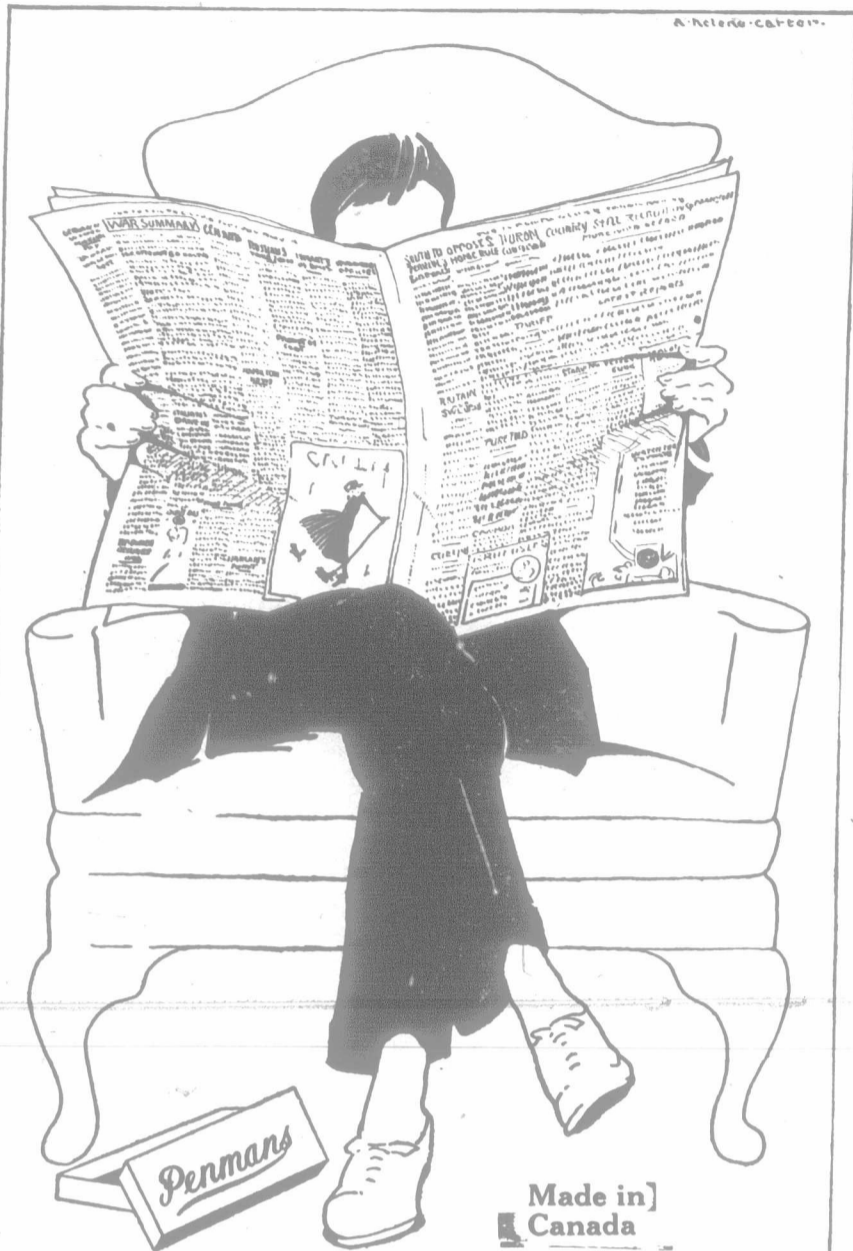
This is not a food, but a remarkable tonic composed of roots, herbs and bark. It invigorates the hens' digestive and reproductive organs, enabling them to eat and digest more food and turn a larger proportion of it into eggs.

At a monthly cost of one egg per hen, Ovatum will add several to the monthly average. Buy it from your dealer in 25c. and 50c. packages or in 10-lb. bags, or if he hasn't it, write us for prices and also for information on Gardiner's Pig Meal, Calf Meal, Sac-a-fat and Ontario Feeders' Cotton Seed Meal,

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Made in Canada

More Profit on Hogs

Countless tests prove that hogs put on more flesh, fat and bone, when fed Harab Digestive Tankage. Take two hogs the same age for example. Feeding one on Harab Digestive Tankage and the other on any ordinary grain feed. When ready for the market, the hog fed on Harab Digestive Tankage will weigh from 30 to 40 pounds heavier, and bring from \$3.00 to \$5.00 higher price than the other. You know hogs crave for meat; Harab Digestive Tankage satisfied that craving. It is guaranteed to contain 60 per cent. protein, 13 per cent. bone phosphate of lime, and 8 per cent. fat—the best flesh, bone and fat producers.

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is sold by nearly all feed dealers. If your dealer does not stock it, we will supply you. Here's an opportunity to satisfy yourself on this feed at a small cost. We will send you (freight paid to your station) a 125-pound sack of Harab Digestive Tankage and directions for feeding, for \$3.45, or 500 pounds for \$13.00. This offer for Ontario and Quebec only. Follow directions and more profits are assured. Please mention the name of your feed dealer when ordering. Send Post Office or Express order to

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

the wound. This discovery was made by a distinguished British scientist, Sir Almoth Wright, and the article describes the revolution it has caused in both naval and military hospitals where surgical dressings are becoming out of date except when a wound has to be protected during traveling.

Once again, it is probably well known to most of our readers, that quite early in the war it was discovered that the best healing was obtained for suppurating wounds by exposure to the sun in the open air, rather than by constantly changed dressings.

In the monthly report issued by the *Comite Americain pour les Blesses Francais* in Paris (June, 1916), we read of yet another system employed by the famous French surgeon, Dr. Alexis Carrel, who, after thorough chemical sterilization of the wound, closes it with a zinc oxide adhesive plaster, and foretells to a day, we are told, when a wound will be completely healed.—Canadian Red Cross Bulletin.

There exists in Canada an Arts and Crafts Association, whose province it is to encourage the manufacture of hand-made articles,—furniture, home-spun rugs, enameled jewelry, pottery etc.,—with the hope of bringing into use things that are more individual and artistic than those ordinarily made with machines; also with the hope of providing workmen with the pleasure that comes from making things from start to finish. Those interested in this society will be pleased to read what is being done along similar lines in our sister colony, Australia. We quote from *The Australasian*:

Following on the success of the recent Australian toy exhibition, the Arts and Crafts Society on September 8 and 9 held a highly interesting exhibition of Australian-made pottery, with a view to encouraging this craft work. A large number of both useful and ornamental articles were displayed in the society's rooms at Clyde House, Collins Street. Included among them was a large flat jardiniere, which had been entirely built up by hand work, its coloring being a rich china blue, while the ornamentation revealed a "dragon" design. This artistic bowl had been executed by Miss Valerie Correll. Highly attractive, though not decorative, was the large exhibit of Bendigo pottery, in brown and buff coloring, as it included oval and round casseroles, coffee and cocoa jugs, bulb bowls, and teapots, some of which were minus the long spout which so frequently receives a knock and is broken off. These were made with a deep, narrow lip instead of a spout. The young Victorian artist, Mr. Merrick Boyd, was responsible for the largest and most decorative exhibit, and he also practically demonstrated clay-throwing on a potter's wheel, and at the same time gave instructive little talks about this craft. He first was seen wedging the clay, so that all air is expelled; then, from a large handful placed on the flat revolving wheel he gradually modelled a tall vase symmetrically moulded at the neck. This was then decorated with a brush, oxide being used to give the desired coloring. The baking and glazing work was fully explained, and examples of the completed article could be seen in great variety in his exhibit. This comprised a unique tea-set in a rich deep blue color, candlesticks, urns, vases, fern bowls, and jardiniere. In all, the decorative effects are typically Australian, for gnarled tea tree and native bears stand out in relief on some, and in others brush work has depicted landscape scenes in effective coloring. Apart from the pottery exhibits, there was a display of old pewter and copper, comprising tankards and quaintly shaped jugs and pitchers, most of which were sent in by Professor Sir W. Baldwin Spencer and by Mrs. A. Gilfillan.

Gossip.

Attention is directed to the fact that the Southern Counties' Ayrshire Breeders' Club Sale will be held at Tillsonburg on December 28, instead of December 6, as announced in our sale dates on November 9.

The Purpose of a Live-stock Show. The International Live-stock Exposition, held annually at the Union Stock Yards, Chicago, has one advantage over most other live-stock shows. It is

held on the very grounds where thousands of animals are handled in a commercial way every day of the year. This gives an atmosphere to the Exposition such as cannot be created upon any grounds in connection with the ordinary fair or national exposition. When a great collection of pure-bred live stock is brought together it makes its own atmosphere, which is inevitably that of the show-ring and of the breeding pen. The purpose for which all these high-class animals are bred and owned is often lost sight of, especially by the masses of the people who are not themselves experts. At the International, in Chicago, one has only to look about him to see the purpose for which all this breeding is done, namely, the commercial supply of meat and labor. This gives a healthy atmosphere to the Exposition, such as in the end will be felt throughout the length and breadth of the cattle and horse producing interest of the country. After two years of quietude on the part of the International Live-stock Exposition, great preparations are being made for this year's coming event, which will be staged from December 2 to 9.

A Rubber Age.

This is a Rubber Age.

Say this to the average man and compare the present period with the Stone Age, the Iron Age, and such prehistoric times, and he will laugh at you. But let him consider, and he will realize that the laugh is on him.

This is the Rubber Age, and without rubber the world would be a far worse world to live in than it is to-day. The articles of rubber we use to-day are numbered by the thousands. Rubber gives us protection from fire; we use it in illness; in the details of our mechanical equipment; for our comforts, and to safeguard our health in damp weather.

To the average person rubber has become so common that he does not appreciate the fact that he is using it so commonly, but say "Rubbers" to him, and he will reply: "Oh, yes—I buy rubbers frequently for myself and family."

And it is likely, too, that this year he will buy more rubbers for himself and his family than he ever did before, for the high cost of shoes, the mounting price of leather, has made this average man, this man of moderate means, begin to think of ways and means of saving his shoe leather from the ravages of snow and water—the two worst enemies of leather.

This is a Rubber Age, and we Canadians should thank Great Britain for the fact, for Great Britain made cheap rubber possible to us. To be sure, there was rubber before, but never rubber in such quantities—never rubber on such an economical basis. Today crude rubber costs 17 cents a pound. Before the war it cost \$1.25. Six years ago it cost \$3.00. Again, Britain must be thanked for her part in making this an age of rubber.

The manner in which all this came about is briefly told; yet it is interesting. Back in 1893 all the world's rubber came from South America and was shipped principally to the United States. The same year native workers in Java, Sumatra, the Malay States and Ceylon began setting out rubber trees. Their wages were paid with money supplied by the British Government, the land was purchased in the same way, and the British Government kept its finger on the whole affair until seven years later, when these plantations began producing. Four tons of rubber came from them the first year of production. The same year Brazil turned out approximately 50,000 tons of rubber.

This year Brazil will produce approximately 50,000 tons of rubber, and the British-fostered plantations will produce over 150,000 tons. Thus it is that Great Britain controls the rubber market, and has brought the price of crude rubber to such a level that the man with a family, the man who lives on what he earns from day to day, will pay no more for the rubbers and overshoes to protect his high-priced shoes than he did before these days of soaring prices.

Questions

1st—Question to "The Farmer's Advocate" department from...
2nd—Question...
3rd—In...
4th—When veterinary or enclosed.

Mare has last spring... The urine... and dark... strains and after urination without res...

Ans.—The calculi (stone) internal ad no good. to remove the adminis hyoscyamus as a drench relief. Saltp to increased this nature

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Ans.—The or distempe a disease of known in th mentioned h the formatio and if such is All abscesse be freely lam out three tir 4 drams of times daily, If they will drench with little whiske difficulty in dangerous to medicine can tongue out o of this trou veterinarian.

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Ans.—The about the treatment. The vagina warm water v then dressed to the pint. a truss consi or other su against the ropes secure to the front may be cure respond to t

Questions and Answers.

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

Veterinary.

Urinary Trouble.

Mare has had urinary trouble since last spring. She urinates frequently. The urine has a strong smell, is thick and dark, and sometimes bloody. She strains and groans for a few minutes after urinating. I have given saltpetre without results.
 H. M.

Ans.—The symptoms indicate cystic calculi (stones in the bladder.) The internal administration of medicines does no good. A veterinarian may be able to remove them. If there be no calculi the administration of 2 oz. tincture of hyoscyamus in a pint of cold water as a drench twice daily should give relief. Saltpetre stimulates the kidneys to increased action, hence in a case of this nature it makes matters worse.
 V.

Strangles.

Nine-year-old horse had three boils which broke out under his jaw. He refused food, got quite stiff, and apparently went blind and went crazy. I also have a seven-year-old mare that is breaking out the same way, but she eats well and appears in perfect health.
 W. L. D. S.

Ans.—These horses have strangles or distemper. While this is principally a disease of young horses, it is not unknown in those of all ages. In the first mentioned horse the symptoms indicate the formation of an abscess on the brain, and if such is the case he will not recover. All abscesses that can be seen should be freely lanced and the cavities flushed out three times daily until healed. Give 4 drams of hyposulphite of soda three times daily, and feed on laxative food. If they will not eat and can swallow, drench with new milk, new eggs and a little whiskey, but if there is much difficulty in swallowing it will be very dangerous to attempt to drench. The medicine can be placed well back on the tongue out of a spoon. In severe cases of this trouble it is wise to employ a veterinarian.
 V.

Miscellaneous.

Wants a Dog.

Can you tell me where I can buy a pure-bred English bulldog pup?
 G. H.

Ans.—Better advertise in "The Farmer's Advocate" for one.

Line Fence.

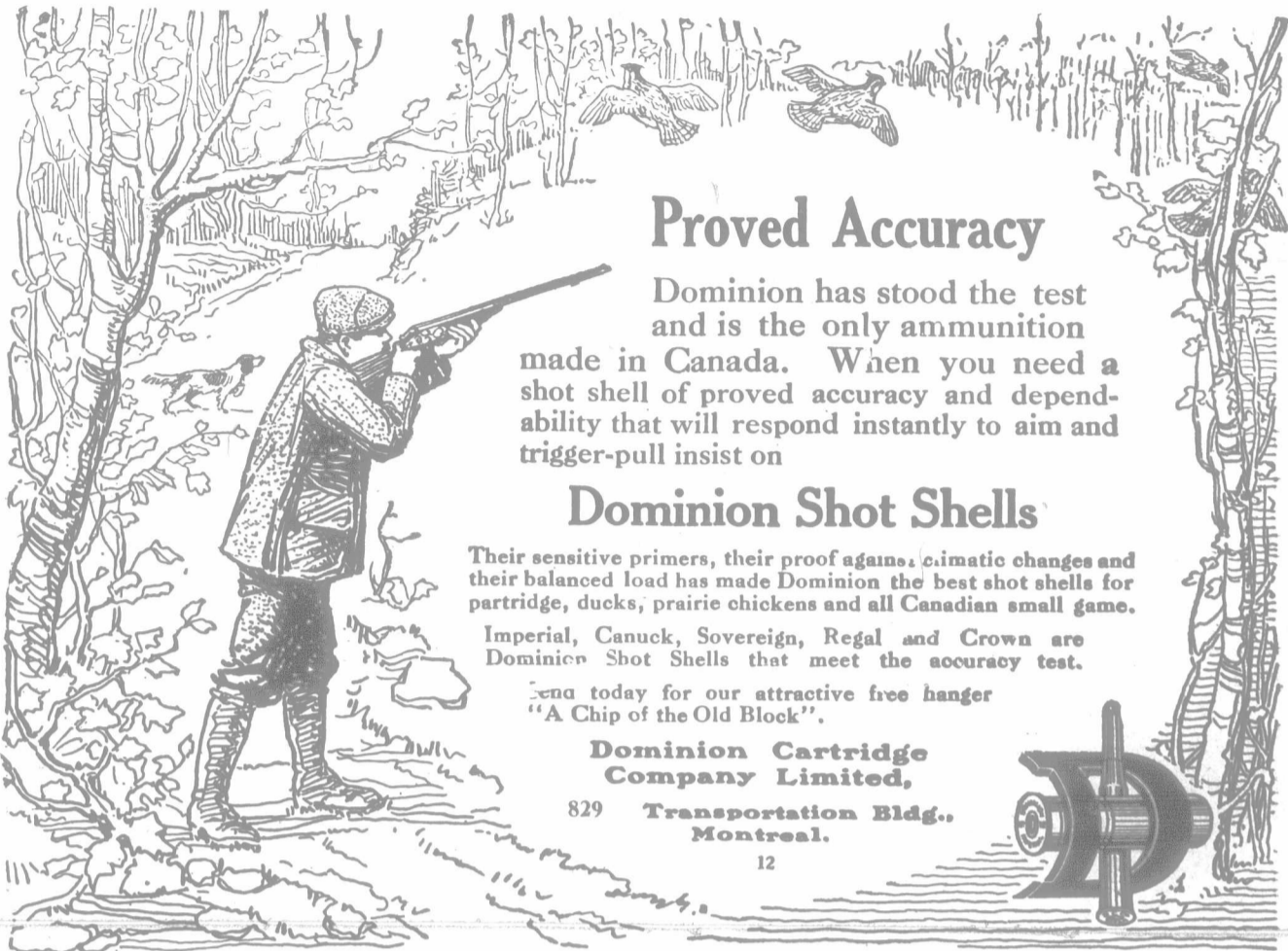
How long must a line fence be down that they can't compel you to move it? Tell the number of years. There was a new fence laid about 10 years ago or so.
 Ontario
 A. Mac.

Ans.—Generally speaking 10 years, but there is no hard and fast rule, and in the particular case there may be circumstances such as to take it out of the general rule.

Inversion of Vagina.

Have a cow, which when given too much succulent feed inverts her vagina sometimes as much as 10 inches. Have raised a slanting platform for her to stand on in the stall. I put the parts back again, and perhaps she is all right for 3 or 4 days. Then, the same thing happens again. What drugs should I give her to strengthen her in those parts? Would same trouble be worse next time. She is about 14 years of age. Calved a month ago.
 J.D.M.

Ans.—The raised platform behind is about the only practical method of treatment. Drugs have little effect. The vagina should be washed with warm water with ten per cent. laudanum, then dressed with alum water, 2 ozs. to the pint. After putting it in place, a truss consisting of a piece of leather or other substance should be placed against the vulva and kept there by ropes secured to something attached to the front of the animal. Mild cases may be cured but bad cases seldom respond to treatment.



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 Their sensitive primers, their proof against climatic changes and their balanced load has made Dominion the best shot shells for partridge, ducks, prairie chickens and all Canadian small game.
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This is the machine that has put "washing by power" in an entirely new light. Its wonderful simplicity makes its operation a mere question of putting the clothes in the tub and taking them out again. We would like to tell you the complete story of this splendid machine. Will you not write for the booklet describing it?

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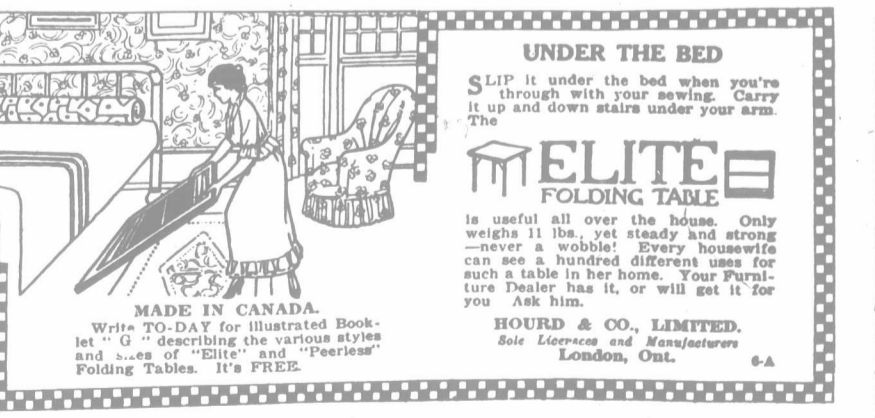


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 SLIP it under the bed when you're through with your sewing. Carry it up and down stairs under your arm.



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is useful all over the house. Only weighs 11 lbs., yet steady and strong—never a wobble! Every housewife can see a hundred different uses for such a table in her home. Your Furniture Dealer has it, or will get it for you. Ask him.

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Field Bindweed.
 I am enclosing a sample of a weed which I find growing in a small area of my farm. As yet there is only a round patch of it about 25 feet in diameter. I would like to know its name and best plan of eradicating it or at least keeping it in check.
 G. G.

Ans.—The weed received at this office is a sample of Field Bindweed. It is a perennial weed and is believed to be one of the most persistent to be found on Ontario farms. However, it does not spread rapidly of its own accord, but may be scattered over the field by cultivating implements as it has long, fibrous, underground root stalks which may be trailed and when dropped will take root in the soil and send up new growth. These roots are of a wiry nature and are hard to kill. We have known fields to be cultivated once a week for the entire summer, thus preventing any green growth from showing on the surface. However, the next season, traces of this noxious weed were still to be seen. With a patch about 25 feet in diameter we would advise digging it out and burning the roots. Under no consideration would we plow, cultivate or harrow through it when working the rest of the field. Better work the patch by itself until you are sure the bindweed is cleaned out. It may be a little awkward doing so but it will save work in the end. Some have tried putting salt on the green plant, but it requires so much to have any effect on it that nothing else will grow for several years. We recall having seen one very thick patch of bindweed where salt had been applied and it apparently increased the growth of the weed rather than diminish it. However, we believe there was too light an application made. Small patches have been destroyed by smothering with a pile of manure. Whatever method is used thoroughness in the work is required.

Arrangements have been made by which live stock exhibited at the Guelph Winter Fair may leave Guelph Thursday evening, December 7th, by fast freight for Toronto in order that they may be exhibited at the Union Stock Yard Show, on Friday, December 8th.

Thirty-five thousand women are now serving as clerks in Canadian banks.

One eighth of the nation's expenditure in Holland is set apart for the maintenance of Belgian refugees.

How many hairs has a Bear?



We doubt if there is any person in Canada who is not interested in Furs, and who does not admire their beauty, softness and warmth; but how many have ever thought of the great number of hairs required to cover a skin to produce this warmth and softness?

The actual number of hairs on any given skin can be actually determined by mathematics and an abundance of patience.

We have cut a piece out of a black bear skin, one inch square in size—have sealed and deposited it with the bank and are giving

\$300.00 IN PRIZES

to the 64 persons who are nearest correct in their estimate of the actual number of hairs on that one square inch of black bear skin.

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When Writing Please Mention Advocate

Questions and Answers. Miscellaneous.

Building Stone Wall—Stalls and Mangers.

1. Is there any rule in building a stone wall for barn, in regard to the doors and windows? Are any part of them measured out or are they counted the same as though it were a solid wall?
2. Please give measurements of the most convenient and satisfactory mangers for horses, also for cattle.
3. Also the width of single stall for both horses and cattle.

Ans.—Local builders state that when the breaks in the wall are few the wall is considered as a whole, but when many large doors and windows must be considered they usually make some reduction. Apparently it is a matter governed by local conditions and one upon which the contractor and employer should agree before the work is commenced.

2. Generally speaking, the concrete manger, not too deep, is most suitable for cattle. These have been illustrated from time to time in the columns of this paper and readers will probably be able to refer back to them. Regarding horse mangers there may be some differences of opinion. Many horse-men work in their own ideas in order to obtain convenience and utility. The swing manger is quite satisfactory and possibly our correspondent is acquainted with the manner in which they are built and operated. They are usually hinged at the bottom on a piece of small piping and can be drawn into the feed alley in such a way that the side of the manger towards the horse will make the wall complete between the alley and stall when the manger is pulled forward to be filled. Not long ago we saw a modification of this plan which was giving very good satisfaction. The manger was three feet deep and three and one-half feet wide where the hay was fed. A width of twelve inches at one side of the manger was used as a grain box and it was sixteen inches deep. The twenty inches beneath this was used as a water tank. When the manger was pulled towards the feed alley, the water was uncovered so the horse could drink and only under unusual circumstances will chaff or foreign matter fall into the water basin. The ordinary manger with one end used as a grain box is usually satisfactory, and, as a means of keeping the horses from tossing the hay out into the stall, small iron frames can be thrown on top of the hay but they should be open enough that the hay can be eaten without any inconvenience.

3. Three and one-half to four feet is the common width allowed for cattle. From five to five and one-half feet is usually ample for horses.

D. Smith, Glanford Station, Ont., a noted breeder of Shorthorns and a winner at the fat stock show at Guelph, has changed from the Dual-Purpose cow to the Holstein. Mr. Smith has found milk to be the most profitable, the production of beef on his farm now taking second place. He made his first Holstein purchase a few months ago from the Riverside Herd, owned by J. W. Richardson, Caledonia, Ont., and has since added others from the same herd for a foundation, which included several first-class individuals and heavy producers. Nearly all are sired by King Johanna Pontiac Korndyke, whose 10 near relatives have made official records that average 34.94 lbs. butter in 7 days and include several world's ex-champions. "King" now has 18 R. O. M. or A. R. O. daughters as yearlings, and up to junior three-year-olds with large records, and whose average per cent. fat is around 4 per cent. or better. Mention may be made of Jemima Wayne Korndyke, whose dam is in the R. O. M., and is a sister of Jemima Johanna Wayne, 33.23 lbs. butter 7 days, 116.11 lbs. butter in 30 days. Another is Totilla Korndyke of Riverside, a sister of Lady Aggie Totilla of Riverside, 30.48 lbs. butter in 7 days, 119.18 lbs. butter 30 days. Mr. Smith is bound to come to the fore with a herd of profitable producers. Mr. Richardson has several young herd-headers for sale, sired by "King" or from his tested daughters, and a visit to "Riverside" will be a pleasure and of profit to intending buyers.

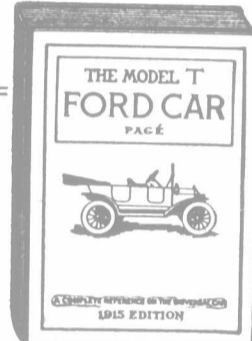
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Mail the coupon to-day, before you forget it. You will say the values we offer are the greatest you ever saw. References—Bank of Nova Scotia, or any publication in which we advertise. If you don't want to cut this paper, write a postcard or letter for samples, and mention this paper.

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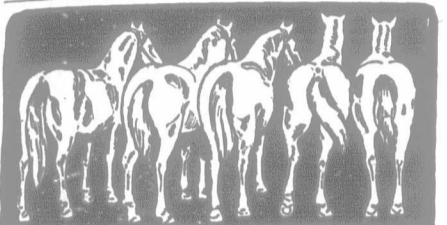
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Aberdeen-Angus Cattle. Several choice imported sires "Pradamer" for sale. Apply
A. DINSMORE, Manager, "Grape Grange" Farm, Clarkeburg, Ont.
1 1/4 miles from Thornbury, G.T.R.

Gossip.

2 Percherons at Simcoe Lodge.

There are very few horse-importing firms in Canada better known to readers of "The Farmer's Advocate" than Hodgkinson & Tisdale, of Simcoe Lodge, Beaverton, Ont. In the old days their Clydesdales were known in every showing throughout Ontario, and in the past six or seven years since Percherons have made up the large end of their importations, this breed has gained as many laurels at Toronto, Ottawa and London as did the Clydesdales in other days when they were at their best. At present, while both breeds are still represented, Percherons are the big feature of the stables. These are all made up from their last importation which, by the way, were the last Percherons to leave France for any country before the war broke out on the memorable day in August, 1914. They were not only fortunate in getting away at just the right time, but were also fortunate in having selected only young horses. This importation even included a couple of foals. One of these, now a three-year-old, is still in the barn, and while we could easily say he is without doubt the best three-year-old imported colt in Canada (he being the only one) we will put it mildly and say, the one that beats him will surely know he has had competition. Mr. Tisdale at present is expecting to exhibit at Guelph; it will be interesting to note his success. Jovial, a big, strongly made six-year-old grey, is the oldest Percheron in the stables. He is a straight-moving, pleasing fellow all round, and has done one of the heaviest seasons at the barn of any horse in the stud. Laxis, another grey, one year younger, is of the right type. He is also an excellent mover, with the best of fit and underpinning, but does not show quite so much draft quality as the six-year-old, Jovial Monitor, a dark grey, is now a four-year-old, and was brought out as a yearling. He is one of the better quality colts, could stand perhaps a little more weight, but should make close to 1,800 lbs. before spring. Miraton, the same age, is the lightest grey of the lot, and needs considerable fitting before he will look his best. He is, however, doing exceedingly well since he came off the route. The two brood mares, Meta 4426 and Listo 4425, are the only two Percheron mares on hand at present. The 1915 foals are both horse colts, got by the 1914 and 1915 Toronto champion, Ichnobate. Both mares will be foaling again soon to Jovial. In Clydesdales the choice is not quite so varied, the five-year-old horse, Douglas' Heir (imp.), got by Black Douglas, a son of Revelanta, and out of a dam by Montrave Matchless, is one of the best breeding sires in Canada to-day, but he will be retained in the stud. King's Top Knot, a seven-year-old horse, got by Ganymede, and out of a dam by the well-known sire Top Knot, has done an extraordinary season and looks like a money maker for years to come. There is not a better moving horse in the barns. Edward Moir, by Royal Edward, is another six-year-old horse, a little plain, but his get have been winning right along at all the local shows.

Ortis D. Or, the Kentucky Thoroughbred stallion by Melton, and out of a dam that never stood third all through the American circuit in her day, is also offered for sale at a greatly reduced price. Address all correspondence to Hodgkinson & Tisdale, Simcoe Lodge, Beaverton, Ont., and mention "The Farmer's Advocate" to insure prompt attention.

Sandy in the Trenches.
"Some Scotsmen stationed in the firing line, on a cold afternoon hunted around for wood to build a fire, there being no charcoal handy. An English officer on duty at their left saw the smoke and asked the Scotties: "Aren't you asking for trouble?" They thought not. A few minutes later the Germans began to 'strafe' the trench. Finally one shell exploded just in front of the parapet. Sandy climbed up the trench steps, turned around and said: 'lock, throw on a bit of wood; they ha' nae got our range yet.'



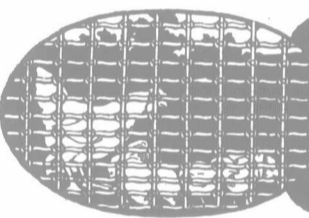
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A Real Fence—Not Netting
Strongly made and closely spaced—making it a complete barrier against large animals as well as small poultry. Top and bottom wires No. 9—intermediate No. 12 wire—made by the Open Hearth process which time and other tests have proven to be the best. Send for catalog. Ask about our farm and ornamental fencing. Agencies nearly everywhere. Agents wanted in unassigned territory.
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For Sale 2 imported Clydesdale Stallions, one French coach and two Hackneys ranging in price from \$500 to \$1,200, on easy terms. All are show horses. Warranted sound and sure, good workers and quiet to handle.
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I am now offering a number of in-foal young mares from Imp. sires and dams, bred from Scotch and Canadian winners and champions for generations. They represent the highest standard of the breed's quality and breeding. **B. Rothwell, Ottawa, R.R. 1, L.-D. Bell Phone.** Farm, 3 miles from city.

Clydesdales We have still left some exceptionally good drafty stallions, ranging in age from one to eight years, prizewinners, including champions; also in-foal mares and fillies. There is a horse boom coming. Buy now.
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Have several young bulls and heifers for sale. Satisfaction guaranteed.
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We can meet visitors at Burlington Jct. at any time if notified.
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Daily Sales of Pure-bred Live Stock

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

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PLASTER HILL SHORTHORNS

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

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

Brownlee Shorthorns

Offers a choice lot of young bulls ranging in ages up to nine months and sired by the Nonpareil bull, Royal Saxon. See these before buying elsewhere. Could also spare a few females.

Douglas Brown, Bright, R.R. 4, Ayr Sta., G.T.R.

Gossip.

Het Loo Holsteins in Ontario.

A little over six months ago the Holstein fraternity in Canada were somewhat startled by the announcement that W. L. Shaw, of Newmarket, Ont., had purchased the entire herd of Het Loo Holsteins from Dr. Harwood, of Vaudreuil, Que. Naturally Ontario breeders welcomed so noted a herd, and doubly so when it was learned that Gordon H. Manhard, in whose hands the herd had developed so many thirty-pound cows, would also come along with the purchase and continue to superintend things as usual. Very few beginnings were ever made under more favorable circumstances. With a whole herd of record producers, headed by the noted sire, Pontiac Korndyke of Het Loo; an experienced herdsman who knows every cow in the barn, and last but not least, one of the most modern stables that ever housed a dairy cow, it is little wonder that every Holstein breeder in Ontario has his eyes on the Het Loo herd. Pontiac Korndyke of Het Loo, the sire mentioned above, is still at the head of the herd. As a show individual, he is without doubt one of the very best sons of the great sire, Pontiac Korndyke, which at present has over 100 A. R. O. daughters and nearly 50 proven sons. He is also a brother to eleven 30-lb. cows, including the three first 37-lb. cows of the breed. Until recently the next sire in service has been the noted young bull Avondale Pontiac Echo, the sire of which, King Pontiac Artis Canada is by King of the Pontiacs, and out of a 31-lb. cow. His dam, May Echo Sylvia, is the champion-milk cow of the world from one to one hundred days. In fact, her 7-day milk record of 1,004 lbs., from which she made 41.05 lbs. of butter, will no doubt go unchallenged for years to come. Besides several of the best record cows which will freshen soon to this sire there are already several young things in the herd at present which are got by him. One of these, a 7-months-old bull and a show calf in every respect, will be retained in the herd. The dam of this calf is the noted show cow Oakvale Elsie Johanna, which started off as a two-year-old, winner of the dairy test at Ottawa; at three years she held the Canadian 7-day record with 27.81 lbs. of butter; as a four-year-old she made 29.17 lbs., and last season at six years she made 31.75 lbs. She is sired by Korndyke Butter Boy Johanna. Oakvale Inka Johanna, a 30.12-lb. cow, still in the herd, is a half-sister and has a splendid six-months heifer calf which is also sired by Avondale Pontiac Echo. Another thirty-pound cow in the herd which has made a splendid showing, is the three-year-old cow, Mildred Pietertje Abbekerk. As a two-year-old in the R. O. P. she made 18,125 lbs. of milk for the year, and freshening again this year as a three-year-old made 30.41 lbs. of butter in 7 days, and will finish her year in the R. O. P. with over 20,000 lbs., her highest day milk this year being 101.2 lbs. She has a nice 11-months' heifer in the herd by Pontiac Korndyke of Het Loo as well as a half-sister which, as a yearling, has exceptional promise. This is only a line on the thirty-pound breeding that is in the herd. They are advertising a three-months-old bull calf from Roxie Concordia, 30.12 pounds and sired by Avondale Pontiac Echo. He is an exceptionally strong, rugged calf, mostly white, and his own dam's and sire's dam's records average over 35 lbs. for 7 days. This is the best bred calf they have at present for sale, but there are others with plenty of official backing to head the majority of herds, and all are, we understand, priced at figures which should make them go fast. Visitors at the farm are always welcome.

Holsteins at Auction.

December 5 has been claimed by J. C. Boeckh, Willowdale, Ont., as the day for his public auction, when he will sell about 20 pure-bred Holsteins. Included in this number are several young cows, some choice young heifers, one 18-months old bull and two bull calves. The majority of the young things are by Sir Lyons Hengerveld Segis while others are by Grace Fayne 2nds, Sir Colantha and Prince Abbekerk Mercena. In the lot are several prominent winners at Toronto. Surely the breeding and individuality are right. See the advertisement elsewhere in this issue and send for a catalogue.

Mr. Married Man---Do This

Write out instructions for your wife to follow with reference to earning an income for the support of herself and your children after your death.

After you have found out how "easy" it is to write out these instructions, figure out how "easy" it is going to be for your wife to carry them out.

The task we think will convince you that you must maintain as much life assurance as you can possibly afford in order that your family shall not be dependent upon the charity of others, if you should die.

Don't put it off. Don't say that you expect your business to be in such shape that your family will have nothing to worry about. Think of all the men who do not own \$500 in real money today who were worth thousands of dollars two years ago.

If you haven't all the life insurance you can afford write for our booklet entitled "The Creation of an Estate." It will interest you.

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Shorthorn Bulls---Shorthorn Females

A HERD THAT YOU WILL LIKE

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

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

Dual-Purpose Shorthorns

One young bull, 18 months old, dam qualified in R.O.P., sired by College Duke; also number of females. Address:

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

Escana Farm Shorthorns

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

Mail orders a specialty. Satisfaction guaranteed.

MITCHELL BROS., BURLINGTON P.O., ONT. Jos. McCrudden, Manager. Farm ¼ mile from Burlington Jct.

ROYAL BREEDING SCOTCH SHORTHORNS HIGH-CLASS TYPE

of high-class, fashionably-bred Scotch Shorthorns in calf to Sittyton Sultan's Dale, a Mina-bred son of Avondale, dam by Whitehall Sultan, is of interest; come and examine my offering.

A. J. HOWDEN, COLUMBUS, ONT. Myrtle, C.P.R., Brooklin, G.T.R.

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

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

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

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dual-purpose strain. All sired by choice bulls and registered and offered at prices to live and let live.

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Our Shorthorns are of the most noted Scotch families and the Scotch (imp.) bulls, Joy of Morning (imp.) =32070=, Benachie (imp.) =69954=, and Royal Bruce (imp.) =80283= have been used in succession. Two choice bulls of breeding age and heifers for sale. Also sheep and swine.

Erin Station, C.P.R. L.-D. Phone. GEO. D. FLETCHER, Erin, Ont., R.R. 1

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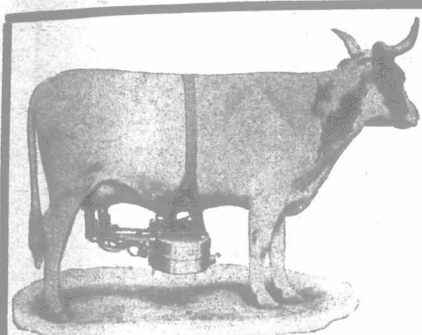
Eight roan and red heifers about twelve months, big, well-bred heifers of fine quality, also ten young bulls of our usual high class kind.

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Riverside Holsteins

Herd headed by "King Johanna Pontiac Korndyke" a brother of Pontiac Lady Korndyke, 38.02 lbs. butter in 7 days, 156.92 in 30 days—world's record when made. His ten near relatives have official records that average 34.94 lbs. butter in 7 days. His daughters have made good in official test. The present R. of P. cow of Canada was bred here. Choice young bulls for sale.

J. W. RICHARDSON, R.R. No. 2, Caledonia, Ont.



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has these advantages over other machines: Transparent celluloid milking tubes instead of rubber ones which harbor germs and are difficult to clean. Pail and teat cups are suspended from the back of the animal. The udder has no weight to carry. The pail cannot be knocked over and the teat cups cannot fall on the stable floor and suck up straw or filth. The OMEGA milks fast and milks clean.

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1 YEARLING BULL

Bull calves from 10 months down. Could spare 10 cows or heifers, bred to the great bull, KING SEGIS PONTIAC DUPLICATE. R. M. HOLTBY, Port Perry, Ont.

With the Canadian Wood Cutters in France.

During the months of April and May of this year the writer was attached to the engineers as officer in charge of a party of soldiers engaged in cutting timber for the trenches in one of the French National Forests in rear of the firing line.

Here he had an opportunity of seeing some of the steps taken by our Gallic Allies toward preserving one of the most valuable of their national assets. Forestry was not a subject that the writer had ever given much consideration to, but the striking difference between the care taken by the French and our criminal carelessness in this respect, especially in Northern Ontario, was enough to impress the most indifferent of citizens.

The forest itself consisted of about seven square miles, and was divided into six "series," each series being further subdivided into thirty "coupes," the trees in each coupe being of about the same age.

A macadamized road traversed the forest from end to end and from the centre, where the chief forester's hut was situated, well made and drained earth roads ran in stellar fashion through each series.

The coupes were similarly marked off by boundary stones and a cleared path about six feet wide, often with a bricked centre to give a secure foothold to horse traffic. There were no watch towers or fire guards, a fact that I commented on, and was assured by the old forester was unnecessary.

Each series was under the charge of a separate forester who also acted as gamekeeper in those series in which game was permitted to live. Pheasants were plentiful in every series; rabbits, or rather hares, were only tolerated in the alternate ones, which were carefully fenced with a rabbit-proof netting and gates, a stiff penalty being awarded for leaving the gate open. A small variety of deer was also plentiful, but the writer did not see any at close enough range to identify. They were not much larger than a goat and about the same color as our own deer. One only saw them as a patch moving across the avenues of the trees in the distance.

Our work in the forest consisted of felling small trees, mostly oaks and ashes, up to nine inches across the butt, for use in the trenches as dugout props, etc. Smaller stakes were also cut for use in wire entanglements and in revetting the sandbag walls of the trench. The majority of the actual felling had been done before the writer's arrival, and when he took over command we were merely getting out the logs from some of the inner coupes where work had been stalled by the mud and cleaning up the brushwood and stumps from the other coupes.

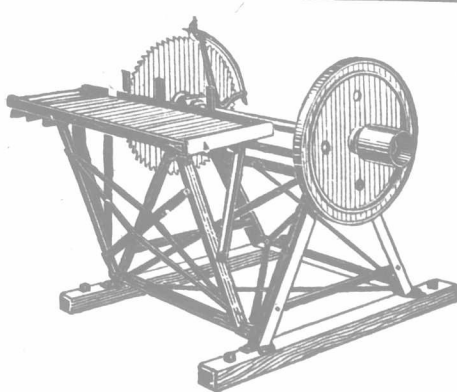
Logs were handled on sledges we built for the purpose and skidded quite nicely through the mud, unusually large ones being hauled singly, butt first.

The brushwood was first thrown into piles and then on the coupe being cleared of logs it was bundled according to its nature into "fascines," or "firewood." The former were bundles ten or twelve feet in length and as many inches in diameter, made by laying the branches alternately "butt and brush," and bound here and there after "choking" with withes or iron wire. They were largely used in road building across swampy ground, and if you ever wish to punish infantry just march them a few miles across a road made of this material. At Valcartier we experienced one road of this sort, through which the horses sank to their flanks when the fascines, which had not been properly tied, started to spread.

They are, of course, only used for temporary roads, filling in shell holes, etc., but in France were employed to form a cushioning layer several feet below the stones of the paved roads.

Brushwood that was too short for fascines was trimmed of its finer branches and cut into four-foot lengths, which were also bundled and ultimately went to the trenches in the form of charcoal.

Anything left after the firewood was cleared was burnt and the ashes then had to be spread over a considerable



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Pure Bred Holstein-Friesian Cattle

Also Stock and Implements

will be held at the farm of J. C. Boeckh, Willowdale, on

Tuesday, December 5th, 1916

Sale will commence at 12 o'clock noon.

Herd consists of nearly TWENTY HEAD, including a number of young cows, several choice young heifers, one 18 months' bull, and two bull calves.

The majority of the younger things are by the well known and highly bred sire Sir Lyons Hengerveld Segis, and others are by Grace Fayne 2nds Sir Colantha and Prince Abbekerk Mercena. Included in the lot are a number of prominent winners at Toronto. Write for catalogue at once.

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

AUCTIONEER, J. H. PRENTICE

King Segis Pontiac Paul 15940

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

Also Berkshire and Yorkshire Swine

Larkin Farms

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35 LB. BULL FROM THE HET LOO HERD

(His dam and sire's dam average 35.55 lbs. of butter in 7 days) 3 months old and a show individual. Sire, Avondale Pontiac Echo, a son of the famous May Echo Sylvia, World's champion milk cow; Canada's first 40 lb. cow. Dam, Roxie Concordia, 30.02 lbs. butter; 676.5 lbs. of milk in 7 days.

We also have a 17 months' bull by King Pontiac Artis, Canada, and out of a 25 lb. sister of the great May Echo. Another, same age by Dutchland Colantha Sir Mona, and from the noted 25 lb. show cow, Cherry Vale Winner. Come and see these, you will like them.

Gordon H. Manhard, Sup.

W. L. Shaw, Newmarket, Ont. Stops 69 Young St., Toronto and York Radial Cars.

HOLSTEIN CATTLE

Our present offering is a bull born February 1916. Dam gave 106 lbs. milk a day, sire's dam 116 lbs. a day. Nicely marked and a show bull. We make a specialty in foundation stock.

D. C. FLATT & SON,

R. R. No. 2, Hamilton, Ontario

DUMFRIES FARM HOLSTEINS

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

HOSPITAL FOR INSANE, Hamilton, Ont.

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

CLOVER BAR HOLSTEINS

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

ORCHARD LEIGH HOLSTEINS

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

Only One Son of King Segis Walker

left. Born April 14th, 1916. Dam, sister to Rag Apple Korndyke 8th, the \$25,000 bull Individually as good as his pedigree. Photo and pedigree on application. A. A. FAREWELL, OSHAWA, ONT.

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Use it on any case—No matter
what else has been tried—and if
three boxes fail to relieve, we
will refund full amount paid.
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BEST EVER USED

Dear Sirs—Enclosed find \$1.00 for 1 package
of Tonic Heave Remedy. I used a package
last year and completely cured a case of Heaves
of some 3 years' standing.
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all the accumulated assets be-
long to the policyholders?

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A few young bulls for sale from Record of
Performance dams, imported and Canadian-
bred, sired by Auchinbrain Sea Foam
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years. Producing
ability from 8,600 to 11,022 lbs. If that sort of
production appeals to you, we have heifers all ages
and young bulls for sale. **Thos. J. McCormick,**
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Offers two ten-months-old Ayrshire bulls by
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Write at once. Bred-to-day White Leghorn
cockrels. **DUNGANNON FARM, Cobourg, Ont.**

JERSEY BULLS. For sale—Knoolwood's Raleigh,
sire Fairy Glen's Raleigh (imp.), 22 daughters
R. O. P.; dam Eminent Honeymoon (imp.) R.O.P.
596 lbs. butter; reserve champion on island. Capt.
Raleigh ready for service, sire Knoolwood's
Raleigh, dam Mabel's Post Snowdrop; first as calf,
1914, first Junior Champion, 1915, 2nd 1916, Tor-
onto. Milked 38 lbs. day, 6 per cent. milk, first
calf. Ira Nichols, Burgessville, Ont. R.R. No. 2.

area so that the rain would carry the
potash contained in them back into the
soil. There is little waste in France.
Even the chips made in felling the
trees were not wasted, being gathered
up in bags by old women and children
who scoured the coupes as soon as they
were vacated by the soldiers.

The stumps, too, had to be cut level
with the ground, not the easiest method
of felling a tree, but saving in the course
of a few years many thousand feet of
timber.

There is another reason for cutting
the stumps so close and that is for the
purpose of replanting, the French
trusting to the sprouts the stump is
bound to send up the following spring
to fulfil this important work. Fed by
the huge stump roots, trees we had
felled only in March had shoots three
and four feet in height by the end of
April. The healthiest of these shoots
would be banked around with a little
earth later by the forester, and the re-
maining shoots trimmed away and
gradually the new tree would replace
the old. It seemed an ideal system.

When the trees reach a diameter of
six or seven inches they are branded
with the year the former tree was felled
and with a number which is entered on
the forest registry, and the history of
the new tree begins. It ends when the
standing timber is sold and the tree
marked with a large "X" scored in the
trunk by the forester and the purchas-
er, whether, as in our case, the British
Government or a private individual,
fells the tree, cuts the stump level with
the ground again, and leaves nature to
do the rest.

Quite different is our system of
swinging the axe waist high and leaving
behind us a mass of stumps surrounded
by piles of brushwood waiting only for
the match of a careless smoker to com-
plete the devastation that we have
begun. Think of the saving for Canada
if every man cutting a tree could be
made to level the stump and protect the
young tree during the first few years
of its growth. In France every roadway
is outlined with beautiful trees, not for
picturesque effect, though the result
is artistic in the extreme, but because
the roads are the nation's, and the nation
knows the value of its standing timber.
We on the other hand seem to fail to
realize the value of ours.—**FREDERIC
C. CURRY,** in Canadian Forestry Journal.

Questions and Answers. Miscellaneous.

Killing Thistles.

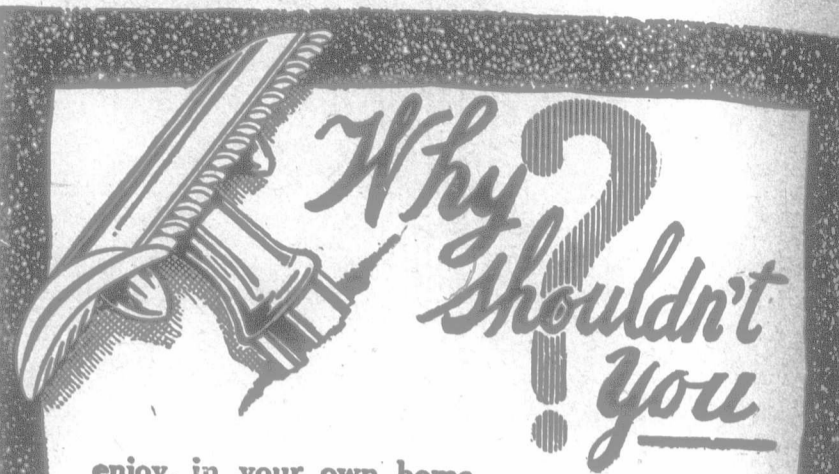
1. We have a field of oat stubble,
soil is of rich, clay loam, which has been
very thistly for past two years. I would
like to sow it with barley next spring,
and wheat next fall. When would you
advise plowing, this fall or next spring
so as to kill thistles? H. M.

Ans.—1. The season when thistles
can be most easily killed is when they are
coming in flower. The nature of the
soil influences the system of cultivation
followed. So far as the thistles are
concerned we would plow this fall and
on most soils spring crops do better on
fall plowing than on spring plowing.

Whitewash Recipe.

I have seen a recipe for whitewash
for stables printed in the Farmer's
Advocate, but I have mislaid the
numbers. Consequently, when I wish
to make use of it I haven't got it to
hand. I wish to whitewash my building
and would like to make as thorough a
job as possible of it, so would like to
see the recipe again printed in your
columns. R. D. H.

Ans.—Take half a bushel of unslaked
lime, slake with warm water and cover
it to keep in steam; strain the liquid
through a fine sieve or strainer, add
a peck of salt previously dissolved in
warm water, 3 pounds of ground rice
boiled to a thin paste and stirred in
boiling hot, then add one-half pound
of Spanish whiting and one pound of
glue, which has also been previously
dissolved by soaking in boiling water.
Add five gallons of hot water to the
mixture, stir well and allow it to stand
a few days protected from dirt. Whether
applied with a brush or spray-pump,
it gives best results if put on hot. One
pint properly applied will cover about a
square yard, which will give some
idea of the amount required.



enjoy, in your own home,
as smooth, clean and comfortable a shave
as the city man, or as anyone else in
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Ask him for our list of harness specialties. Or write to us,
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G. L. GRIFFITH & SON, 68 Waterloo St., Stratford.

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Two yearling bulls; one's dam has a 4-yr.-old record of 8,971 lbs. milk, 3.94% fat. Her dam is Briery
of Springbank and is a half sister to Briery 2nd. One won 3rd at Toronto; his dam has a record of
10,000 lbs., testing over 4%. Also bull calves for sale and a few females. Prices reasonable.

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We have three good young bulls fit for service, from Record of Performance cows and sired
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R. R. 1, St. Thomas, Ont.

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For the next fortnight we are making a special offering on young bulls, bred from the highest pro-
ducing families ever introduced into Canada. Brampton Jerseys and their descendants hold all Jersey
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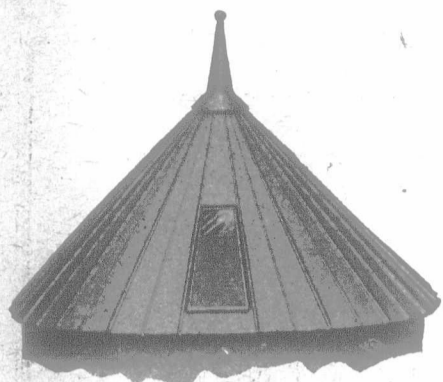
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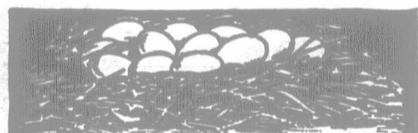
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Champion Oxford flock of Canada. Choice Oxfords of all ages for sale. Prices reasonable.
E. Barbour & Sons R. R. 2, Hillsburg, Ont.

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A few young rams for sale. Good breeding and quality.
C. E. WOOD, Freeman P.O., Ontario

For Sale 30 Pure Shropshire Ram Lambs, born 1st part of April; from \$10 to \$15 each, including pedigrees. Young ewes and ewe lambs at moderate prices. Also pure Jerseys and Ayrshires, all ages, both sexes.
H.E. Williams, Sunnylea Farm, Knowlton, Que.

LINCOLN SHEEP Shearing rams and few ewes and ewe lambs; also some registered Shorthorn bulls, reds and roans. Prices reasonable.
C. A. POWELL, R. R. No. 1, Etrick, Ontario

Questions and Answers.

Miscellaneous.

Removing Rust.

Can you give a good recipe for removing rust from a stove and also from nickel plated material?

SUBSCRIBER.

Ans.—A recipe for removing rust from iron which gives fairly good results is ground pumice, 30 grams; oleic acid 20 grams; tallow 2 grams; paraffine 4 grams. The last three ingredients are melted together and the powdered pumice is stirred in. Another method is to cover the rusted parts with sweet oil well rubbed in and next day cover with finely powdered, unslaked lime. Polish with this until the rust disappears. One-half ounce of emery powder mixed with one ounce of soft soap and well rubbed in will also remove rust from iron and steel. For nickel-plated articles cover the stain with oil or grease for a few days and then remove the rust by rubbing a little ammonia. If this does not remove it, try very dilute hydrochloric acid. When dry polish with whiting.

Selling a Horse.

A sells a horse to B, telling B, who is not much experienced in handling horses that the animal is not sound, he having been stifted when a colt, but it does not interfere with him doing any kind of farm work and he is a good free horse on the road and not afraid of automobiles. The horse was sold for \$65 on a two days' trial and was delivered to B on October 13. On October 24 A sees B about buying the animal and B admitted he liked the horse when he drove it the night before better than he had during any time he had used him, but he wished to consult his wife before finally consenting to keep it. It was agreed between A and B that B and his wife should again drive the horse on the afternoon of October 24, and B mentioned that if his wife—who was not accustomed to driving horses—could handle him satisfactorily they would decide to keep him and let A know. As yet A has received no word, but believes that B has had every opportunity to prove the horse as represented, as, according to the neighbors he has been used practically every day. Can A collect the price of the animal from B?

W. P.

Ans.—According to the information given A can collect, as, by not returning the horse at the end of the two days' trial, B virtually acknowledges that he is satisfied with the horse.

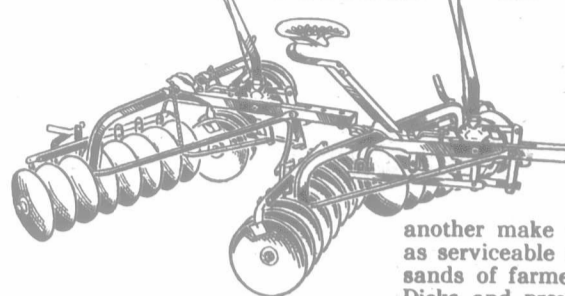
Open Season for Fur-bearing Animals.

What is the open season for catching skunks, muskrats, raccoon, mink, weasel, black squirrel and rabbits?

J. M.

Ans.—The open season for muskrat is from the first of December to the first of May. Muskrats cannot be speared at any time, nor shall any muskrat house be cut, speared, broken or destroyed at any time. Open season for mink is from the first of November to first of May. We do not believe there is any closed season for skunk or weasel, and it is useless to hunt raccoons during the summer as the hides would be of no use. Open season for hares from first day of October to 15th day of December, both days included, and except that between the fifteenth day of December and the thirty-first day of December of any year, both days inclusive, the wood hare, or cotton-tail rabbit may be taken, killed or destroyed by means of snares, ferrets, or any other means than shooting. However, a wood hare or cotton-tail rabbit may be taken, killed or destroyed in any manner by the owner, occupant of lessee of any land upon which it causes actual damage to trees or shrubs, or by any member of the family of such occupant, or lessee, or by any person holding a written license or permit from such owner, occupant, or lessee, and any of these animals killed under this subsection shall be handed over to the nearest officer of the Game and Fisheries Branch. The open season for black or grey squirrels is from the 15th day of November to the first day of December in any year, both days inclusive.

Sizes for Horses or Tractors



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

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I have eighty head of very fine yearling ewes for sale, also a number of yearling rams for show purposes or flock headers, fifty head of ram lambs and fifty head of ewe lambs, all bred in the purple. All recorded and first-class individuals. No grades handled except by order.

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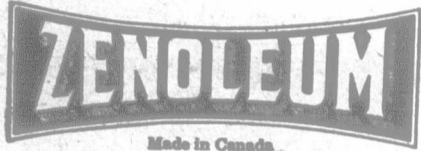
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FOR SALE

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Meadow Brook Yorkshires. Sows bred, others ready to breed: 20 sows, 3 to 4 months old, and a few choice young boars. All bred from prizewinning stock. Also one Shorthorn bull, 18 months old.
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TAMWORTHS

Young sows bred for Nov. and Dec. farrow, and a nice lot of boars ready for service. Write
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Yorkshires Sows bred, others ready to breed, and younger boars 2 and 3 months, from carefully selected stock.
Shropshires Ewes, 2 to 4 years, ewe and ram lambs. Write us your wants.
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Cloverdale Berkshires and Shropshires—In Berkshires I can furnish boars or sows, all ages, pairs not akin. All breeding stock imp. or from imp. stock. In Shropshires can furnish rams or ewes, any age, from imp. stock. Prices reasonable.
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Morrison Tamworths and Shorthorns Bred from the prizewinning herds of England. Tamworths, both sexes, 140 to choose from. Shorthorns, 5 bulls, from 5 to 10 months old, reds and roans, dandies. Females of the best milking strains. Chas. Currie, Morrison, Ont.

YORKSHIRES and OXFORDS Choice young pigs, both sexes; two boars fit for service. A few good ram lambs. We guarantee satisfaction.
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DUROC JERSEY SWINE A few choice sows bred, both sexes, all ages, bred from imported stock. Heading herd: Farough's King =2012=, Brookwater, B.A.B.'s King 5042 from U.S. Importer and breeder. CHARLES FAROUGH, Maidstone, R. R. No. 1, Ont.

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Yorkshires of best winning strains. Choice lot of suckers, both sexes, at right prices. Also Mammoth Bronze Turkeys. White Embden Geese, Indian Runner Ducks, and bred-to-lay S.-C. Brown Leghorns.
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Please mention "The Advocate."

Questions and Answers. Miscellaneous.

Poultry Pointers.

I keep 100 pullets but I cannot get them to lay as other people do, according to their statements. Pullets are hatched in March and April, brought in off the range about the first of September when they weigh from 4 to 6 pounds. The henhouse is clean, and a good laying mash and all other necessities are kept in front of them all the time. I feed the very best of scratch feed which is given them once a day at half past two P. M., at the rate of 4 quarts to 100 pullets. About the end of September I get a few eggs, but they do not keep it up. I would like a few pointers on handling the pullets.

2. Is cotton-seed meal as good as linseed meal for birds when they are moulting, or for growing pullets?

3. Is it advisable to breed ducks to their parent drake?

4. At what age does the male bird get these terms, cockerel, cock bird, and mature bird?

5. I would like your opinion of electricity for running incubators and brooders. Perhaps some of your subscribers who have had experience could also give information on it. SUBSCRIBER.

Ans.—1. According to the weights given the pullets are nearing maturity in September and naturally one would expect that they would lay well during the winter. Sometimes it is unexplainable why one person is able to secure eggs from his flock while the neighbor with identically the same bird, reared approximately the same, is unable to get any returns. There is a possibility that your pullets moult in the fall, and if they do egg laying will be delayed for some weeks or even months. The feed going to furnish the development of the bird and to the growing of feathers, rather than the production of eggs. Birds that have been forced during the summer are very liable to moult especially when hatched as early as yours. However, poultrymen recommend the early hatched pullets for winter egg production. The pen must be clean, dry, well ventilated and free from drafts.

Many find the curtain front house very satisfactory. Pullets commencing to lay will consume a large quantity of feed and they require a certain amount of exercise. Grain, green feed, and meat feed must be included in the ration. A system of feeding which has given very satisfactory results is to feed grain early in the morning, buried deep in the litter on the floor so that the birds secure exercise in searching for it. Corn and wheat are very good grains for winter feed, and a half handful to each bird in the morning will probably be enough. It will be no harm to scatter a little grain in the litter again at noon, in order to keep the birds busy and green feed can be supplied in the form of mangels, sugar beets, turnips or cabbage. Clover or alfalfa leaves are also satisfactory. In the mash which you give during the afternoon it is well to add about ten per cent. of animal meal; green cut bone or cooked meat. These should be thoroughly mixed together in the dry state. Some add steamed clover leaves to the mash and find it an advantage. A little whole grain may be fed again in the evening and a plentiful supply of pure water should be within easy reach at all times. During the cold weather equal parts of shorts, bran, oat chop and cornmeal are very satisfactory for the mash. If milk is available it could be fed in place of so much animal food. As an egg producer it is equal in value to any of the meat foods. Sour milk has a slightly greater value than sweet milk.

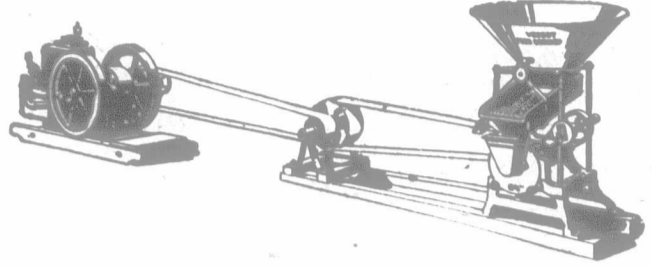
2. We would prefer linseed meal.

3. It might be all right for one generation but it is not advisable to make a practice of it as too close breeding has a tendency to weaken the constitution and decrease the size of the offspring.

4. A cockerel is a male bird under one year old; a cock bird is a mature bird.

5. Running incubators and brooders by electricity may be said to be in the experimental stage. However, we believe it is proving satisfactory and is certainly much more convenient than the lamp. An even temperature can always be obtained and the danger of fire is largely eliminated.

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THE highest of all compliments is being paid to Vessot grinding plates—imitations are now being offered for sale. We appreciate the compliment, however, more than our customers will appreciate the imitation plates. Therefore, to protect our customers as well as ourselves, we have arranged to mark every genuine Vessot grinding plate with the raised letters, "SV" showing plainly in the face of the plate near the center. It will, therefore, be easy for you, hereafter, to identify any plate offered to you for use in your Vessot feed grinder.

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

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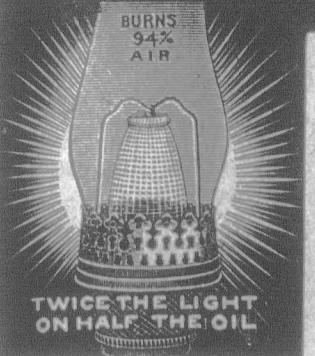
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We can make no promises on these engines except that if we have any of them left when your order reaches us, you will get a

1 1/2 H.P. Engine for.....	\$ 60
5 H.P. Engine for.....	180
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If they are sold out your order will be cancelled and returned to you. We want our warehouse emptied to care for our 1917 engines.

CHAPMAN ENGINE & MFG. CO., LIMITED
DUNDAS, ONTARIO

No Crop Produces Profits Like a Maple Grove

Take any crop that you grow and figure out how much profit you have left after paying for ploughing, seed, fertilizing, cultivating, harvesting, labor, keep of horses, wear and tear on machinery, etc. Add to your cost a month of hot, dry weather and you are lucky to come out even.

Now go to your nearest neighbor who has a sugar bush with up-to-date equipment, and ask him to tell you honestly how much syrup and sugar 100 average size maple trees will produce, how much he sells it for, and what it costs to make it.

You will find that, acre for acre, a sugar bush will produce a bigger profit than any other crop that you grow—and with less cost for equipment, with less labor, and in less time—besides the sugar season comes at a time of the year when no other work can be done.

Maple products are now higher in price than at any time in the history of the industry—let us show you how to produce the highest quality syrup and sugar and obtain the highest prices.

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They will not break off and instead of becoming dull will wear sharper with use. By this method your horse is always sharp shod and you eliminate all the danger and worry of Winter travel.

RED TIP HORSESHOE CALKS are cheap, easy to get, easy to put on and will absolutely hold up any horse on any pavement or road, no matter how slippery. They will save time, money and annoyance.

Go to your horseshoer today and have your horse fitted with **RED TIP HORSESHOE CALKS** and remember that genuine **NEVERSLIP HORSESHOE CALKS ALWAYS HAVE RED TIPS.**

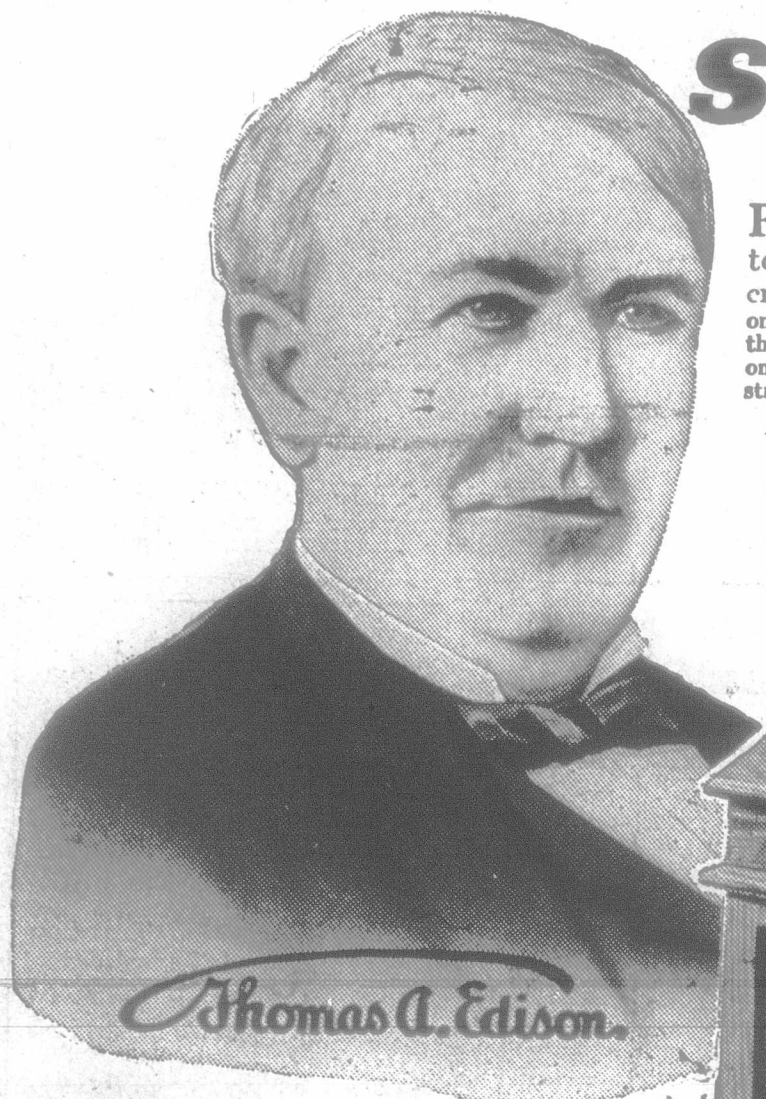
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Success for Mr. Edison

Life-Like Music At Last!



For years, the world's greatest inventor worked night and day to make the music of the phonograph true to life. At last he has been crowned with success. Just as he was the first to invent the phonograph, so is he the only one who has made phonograph music life-like. And now we make this great, rock-bottom offer on the genuine New Edison, the phonograph invented by Thomas A. Edison. Now that you can get the best on this wonderful offer, you need no longer be satisfied with anything less than Mr. Edison's great instrument. Just read below how easily you may have the genuine New Edison in your home.



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Yes, we will send you the New Edison, the product of the world's greatest inventor's genius, the phonograph with the wonderful diamond stylus reproducer and your choice of the latest Diamond Amberol Records on free trial without a penny down. On this offer, you can now have the genuine Edison, the instrument which gives you real, life-like music, the finest and best of all phonographs at a small fraction of the price asked for imitations of Mr. Edison's great instrument. *Seize this opportunity.* Send the coupon now for free catalog.

A Happy Home

Happiness is life—and real happiness is found only in a real home. And by a real home I do not mean a house with a yard or farm around it. Oh, no! A real home is the place where the happy and united family gather together for mutual enjoyment and recreation. And the Edison makes this possible, for it stands supreme as the greatest home entertainer. It will mean more than entertainment and merriment, more than an hour of amusement, yes, it will mean genuine pleasure of the lasting sort—helpful entertainment and culture of the most beneficial kind. It will mean the family united—a new home.

Rock-Bottom Direct Offer—

If, after free trial, you decide to keep Mr. Edison's superb new instrument, send us only \$1. Pay the balance on easiest kind of monthly payments. Think of it—a \$1 payment, and a few dollars a month to get this wonderful new style outfit—Mr. Edison's great phonograph with the Diamond Stylus reproducer, all the musical results of the highest price outfits—the same Diamond Amberol Records—yes, the greatest value for \$1 down, balance on easiest monthly terms. Convince yourself—free trial first. No money down, no C.O.D., not one cent to pay unless you choose to keep the instrument. Send coupon.



Entertain Your Friends

Get the New Edison in your home on free trial. Entertain your family and friends with the latest up-to-date song hits of the big cities. Laugh until your sides ache at the funniest of funny minstrel shows. Hear the grand old church hymns. Hear the crashing brass bands, the waltzes, the two-steps, the solos, the duets and quartettes. You will sit awe-stricken at the wonderful grand operas as sung by the world's greatest singers. You will be moved by the tender, sweet harmony of quartettes singing those old melodies that you have heard all your life. Take your choice of any kind of entertainment. All on free trial. Then, after the trial, send the outfit back at our expense if you choose. Or keep it on our great rock-bottom offer. Send the coupon today!

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