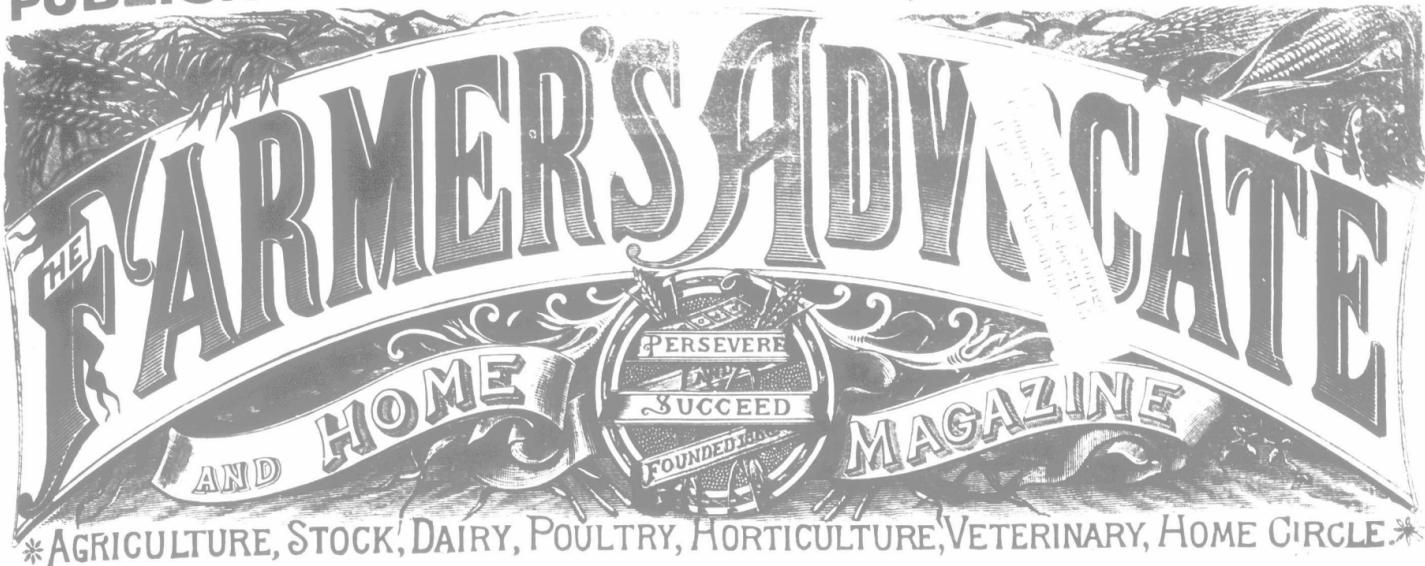


PUBLISHED EVERY WEEK \$1.50 PER YEAR



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Vol. L.

LONDON, ONTARIO, MARCH 25, 1915.

No. 1174

The Time for Active Development of Rural Telephone Systems

THE present deplorable war should not be considered an excuse for curtailing development work on independent rural telephone systems, for is it not true that the effect of the war will be, as a whole, beneficial to rural communities?

The Dominion Government's "Patriotism and Production" Campaign in the farm papers pointed out that, on account of the war, there would be a market for all the staple foods that the farmers of Canada can produce. Prices have already advanced, and the farmers of Canada should realize more from their crops this year than ever before.

This being true, the rural districts should be in a better position to finance the development of telephone systems than for some years past. The residents of any wide-awake community should have no reason for going without the benefits of telephone service.

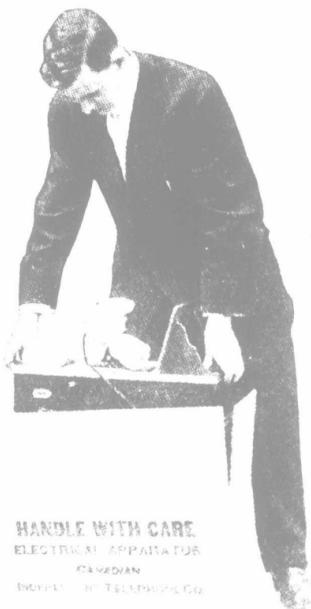
Let the new systems that have been about to organize, or in the process of organization, proceed with confidence and optimism. Let the companies and municipalities already in business go ahead at once with the proposed extensions of their systems. This is the time for active development work.

Development work is proceeding in many rural districts. In our own business, at the present time, the prospects indicate a good business for spring. Our factory is running full time with our complete force at work.

We are in an exceptionally good position to co-operate quickly and efficiently with independent systems, and to supply them with all necessary telephone materials and equipment. Our materials are the highest-grade and most efficient, which you can prove by comparing them with others in actual use on your own lines before ordering. Ask for our Free Trial Order.

Our materials are FREE on request. The No. 3 toll free telephone is the most modern way. The No. 4 toll free telephone is also available. Let us quote you on all matters. Battery, primary or igniter.

Canadian Independent Telephone Co., Limited
20 Duncan Street, Toronto, Ontario



THE illustration shows our method of packing telephones, every instrument in a separate case and ready to go on the wall. This system of packing makes our telephones easy to carry, handle and install. They are ready for use on independent systems. Installing in company telephones is the same. They come with sheets of instructions and there is no need for a specialist.

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| No. 2 " " | 12.00 " " |
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| No. 2 " " | 11.00 " " |
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| No. 2 Timothy | 4.75 " " |
| (Grades No. 1 for purity and germination) | |
| No. 3 Timothy | \$4.25 per bus. |

Terms cash with order. Bags extra at 25c. each. On all orders east of Manitoba of \$25 or over we pay the freight. We guarantee seeds to satisfy or ship back at our expense.

Ask for sample if necessary.

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Canadian-grown seed corn. Your money back if not satisfied.

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Buy your plants direct from the grower. We have been in the small fruit business for years, and keep only those varieties that we know to be profitable. Write for catalogue.

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Still left: 200 bus. O.A.C. 21 Barley, \$1.00 and 100 bus. O.A.C. 72 Oats, \$1.25; heaviest yields and good clean seed. 16-oz. cotton bags, 30c.

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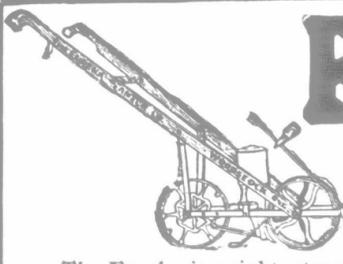
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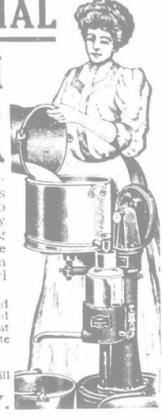
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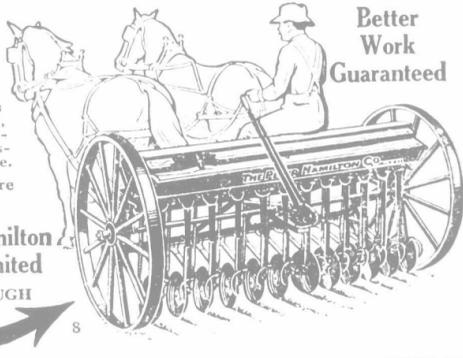
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It is 24 in. by 24 in., and it requires only 25 shingles to cover a roofer's square of 100 square ft. (10 ft. x 10 ft.). You can lay "George" Shingles yourself with the aid of a hammer, nails and a pair of snips. The nailing flange of each "George" Shingle has nail holes placed at regular intervals which act as a guide and make laying easy. The side lock is very tight-fitting, and when one shingle is nailed in place, the nailing flange is completely covered by the next shingle which effectually seals it against rain, snow or moisture. "George" Shingles interlock on all four sides, providing a roof that is practically one solid sheet of galvanized steel, fire-proof, weather-proof, wind-proof and rust-proof.

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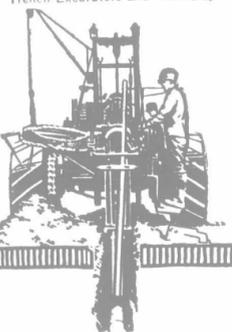
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Makes possible the greatest shooting satisfaction. This is due to its positive operation in every make of rifle and is the result of the extreme care exercised in every detail of manufacture. Insist on having Dominion .22 Cartridges—they mean more "bull's-eyes."

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And learn how to save time, labor and money by erecting your fence with Standard Steel Tube Posts.

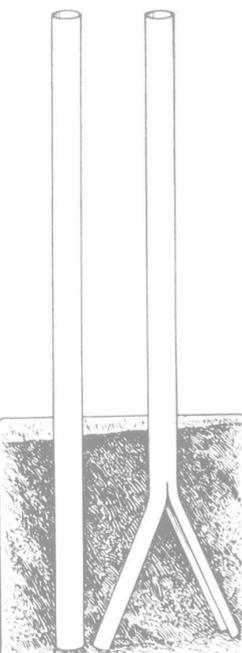
They cost less than wooden posts, but they will last forever, and you will save time and labor by using them. A man and boy can put up more fence with Standard Steel Tube Posts in a day than can three men and a boy working in the old way with wooden posts.

No post holes to dig, no cumbersome tools to carry around. Before you start putting up fence, get our prices on Standard Fence and Steel Tube Fence Posts.

We guarantee to save you time, labor and money. Write for these prices at once.

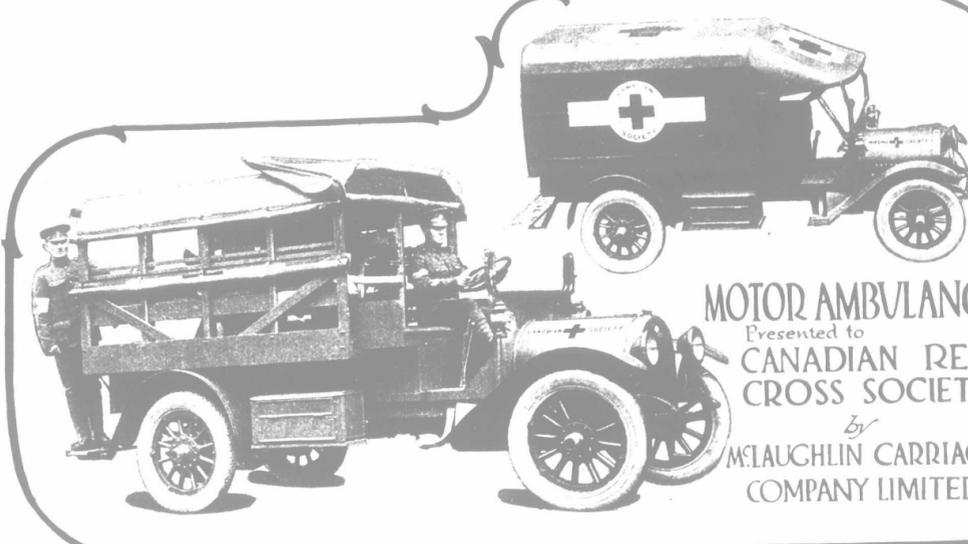
Address:

Standard Tube & Fence Company, Limited
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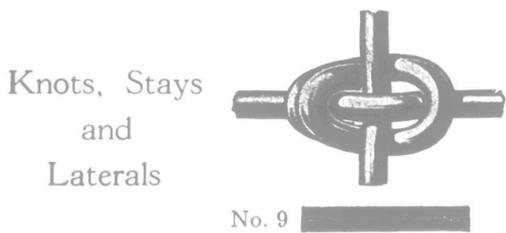
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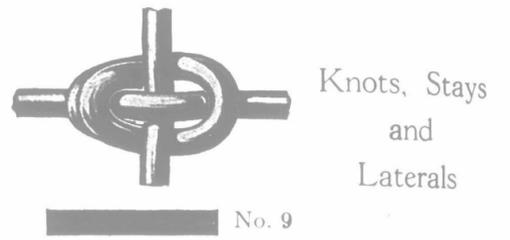
When Writing Advertisers Will You Kindly Mention The Farmer's Advocate

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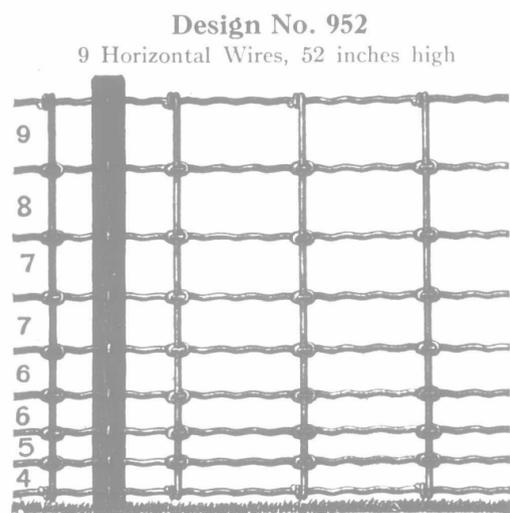
Full Gauge No. 9 Wire Throughout "CANADIAN" Fence



Heavy "Canadian"
costs no more
than lighter
fences



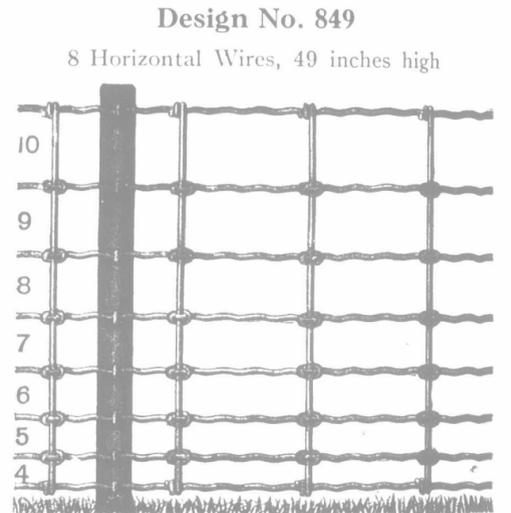
A few of the many styles of "CANADIAN" FENCE that will meet your requirements.
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Its Big Wires Means More Strength.

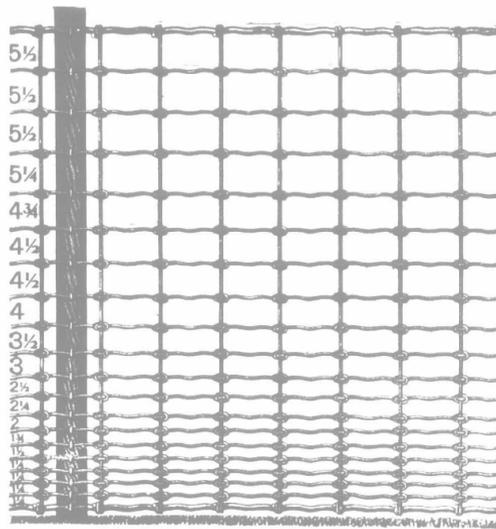
Its Heavy Galvanizing Means Longer Life.

Its Stock Proof Weave Means Greater Security.



"CANADIAN" Poultry Fence

**Top and Bottom
Wires
FULL GAUGE
No. 9**



**Intermediate and
Upright Wires
FULL GAUGE
No. 13**

We can supply in this design 72, 61, 50 or 48 inches in height.

BUY "CANADIAN" AND GET MORE FOR YOUR MONEY

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The Canadian Steel & Wire Co., Limited

Winnipeg, Manitoba

Hamilton, Ontario



Vol. L.

LONDON, ONTARIO, MARCH 25, 1915.

No. 1174

EDITORIAL.

It is spring! The man at the wood pile has dug up last year's straw hat.

Both political parties curry their privileged pets the right way.

Patriotism at home and paper soles for the men in the trenches.

Dividends first is the watchword of a good many of our watered-stock patriots.

A reader asked us the other day whether Peter McArthur's fable was a real fable. Was it Peter?

The farmer is solemnly reminded by one of the big city newspapers that if he tills his farm better it will become more valuable. He had long suspected as much.

Clover seed is expensive—too expensive to risk getting a "catch" by sowing too little seed. Ten to twelve pounds per acre is a much safer seeding than five or six.

Naval warfare has made great strides since the days of Drake. Two British superdreadnoughts more than equal in weight the entire 129 ships of the Spanish Armada.

The biggest industry in this country, unorganized, gets little attention from parliament, while smaller industries, organized, ask what they like and both parties hasten to grant their desires.

Fall wheat, which has suffered from spring frosts, may be benefitted by a stroke with a light harrow, and clover slightly heaved may be squeezed down by rolling as soon as the land will carry the horses.

To receive a square deal in the educational, fiscal and transport affairs of the country, will be more tangible to the farmer than a pat on the back that he is a fine fellow, and an assurance that his industry is becoming prominent.

Commonly heard on city streets—"My, but this war must be a harvest for the farmer!" Ask some practical feeder who is trying to produce beef and pork under present conditions what he thinks about it.

A serpent in the garden is said to have originated most of the trouble in the world, but the old hen and her brood are keeping it going. Moral: If you would add years and happiness to the life of your wife and family surround the vegetable and flower plantation this spring with a high and close woven wire fence.

In October last potatoes by the car load imported from the State of Dakota were sold in Saskatchewan where there was an alarming shortage for \$1.10 per bushel. Perhaps if this country were to build a few more transcontinental railways and present them to the Big Interests, some of the thousands of bushels of potatoes going to waste in Eastern Canada might be carried to the West where the people are hungry for them.

This is No Time to Throw Mud.

Both political parties at Ottawa seem to be sparring for position. They expect something is going to happen, and if we are to believe the party press that something is an election. Some time ago we heard a great deal about the "party truce" which was established at the special war session last fall, but there never was a "truce" in the party press. Nasty little paragraphs have appeared in papers politically biased to one side or the other ever since that war session. They have gradually carried more and more of the sting of partyism, and now each side in the House is accusing the other of caviling to bring on an election. At this time nothing could better suit the purposes of Canada as a nation within an Empire at war than a suspension of hostilities on the part of two political parties. We have followed Britain's lead in other things, why not follow it again in connection with parliamentary procedure? Great Britain stands out pre-eminently as the fountain-head of good government and over there government and opposition are working together, are talking together, are thinking together for the good of the nation. In Canada it is different. Under cover of the white flag of truce the political mire has been and is being stirred up, and the sharpshooters and snipers on each side are busy throwing mud at the other fellow on the floor of the House as well as through the ever-ready press. Canada is engaged in a more serious business than should permit of political mud-raking. It requires the best ability of our statesmen to look after our real national welfare rather than to ferret out party inefficiencies, which are all too numerous no matter which party is in power. Let our representatives in parliament guard well our country at this time, and let them join hands to pilot our great ship of state until it reaches the harbor of peace to which we all look forward. Mud-slinging, loyalty and disloyalty cries, and carping criticisms of past party records are not in order now. There is a bigger and more important task before our country, and our politicians on both sides should be men of larger calibre than to break a "truce" in which the thinking public concurs over anything, but important business vital to the present interests of Canada.

Test Plots and Seed Plots.

It will not require a wide field of observation to convince that there is a great deal of gross carelessness and neglect practiced in the handling of seed grain from the growing crop to the seed in the drill. "Seed selection" is an unknown term on all too many farms, and because of careless or shiftless indifference many farmers continue year after year to sow anything that retines seed and leave the rest to Providence. It does not generally prove profitable to leave too much to Providence. The grower must do his part. We are hearing the need of greater production this year. There is no doubt but that the individual farmer would like an increased production every year, and would profit in the end by increasing the output of his farm. He knows that good seed is a first consideration, and so should always plan to sow the best. Why not a few test plots and some special seed plots in 1915 to form the nucleus of the farm's pure seed supply for future years? Get some good, clean, plump seed, pure as to variety and free from weed seeds, and sow it by itself on a

specially-prepared plot. Guard it carefully; keep it separate at threshing time; clean it well; if necessary hand pick, and see how soon you will have a good business in seed grain, bigger yields and larger returns from the farm. Get the best varieties for your district. It may be necessary to run through a test experiment on small plots with two or three leading varieties to determine which suits your purpose best. Establish the variety on the place, and stick to it until it fails to produce good crops and good seed. It is not necessary to "change seed," provided good seed, specially selected, is always sown. In fact yields may be substantially increased by this practice. Try it and be convinced. Start a little plot work with seeds this year, and make your own farm the source of the best seed.

What is Your Cropping System?

"What crop rotation do you follow on your farm?" "Oh! We find it difficult to stick closely to any set rotation, and so our crops do not follow each other in any regular order." The foregoing question brings forth the answer given in a large percentage of cases, and when it is answered thus, as it is by many fairly successful as well as by scores of struggling farmers, the questioner wonders how it is that recognized beneficial features in farming are not brought into effect on every farm in the country. But there is no need to wonder. The fault is generally with the man, and not with the system or with the farm. It is the same in all other business. One man, eminently successful, has system for everything; another, struggling to keep his head above water, is the victim of an inefficient system usually due directly to his own carelessness or indifference. True, there sometimes seems to be a larger proportion of poor-system farmers than poor-system men in any other business. But are there? We do not have the same opportunities to see the shortcomings of the other fellow's business. We venture to say that much of it is not done under the best possible system, but town and city business seems to demand more system than the farm to prevent a crash. The soil is a patient worker for its tiller, and it does its best with the conditions under which it is operated, system or no system. However, an improved system invariably increases returns. Different crops feed at different depths, and require different amounts of the various plant foods. Even the careless farmer knows that oats after oats after oats is not good practice; neither is wheat after wheat. In fact in these days of progressive agriculture cereal after cereal is not considered conducive to largest crop yields. "What are you going to sow on the back ten acres?" "Oh! I guess oats again." Oats in 1913, oats again in 1914, and oats once again in 1915 without manure; small wonder that the yield is around twenty bushels per acre when it should be sixty bushels. The same is true to a degree of other crops. Why not a rotation? The excuse most frequently brought forward for lack of cropping system is failure of clover to catch, which naturally upsets plans. This is sometimes a valid reason, but too often the failure is due to lack of system, fields run down by continuous cropping, and the sowing of too little seed. Manure and cultivate a field as hoed crop or summer-fallow one year in three or four; grow on it one cereal crop, and one or two clover hay or pasture crops in that time, and sow from ten to twelve pounds of clover seed per

The Farmer's Advocate AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

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acre ahead of the drill in a good seed bed, and there will be little cause for complaint about bad catches of clover. This overcome, rotation should be assured. We do not say which is the best rotation. This depends on the farm, the farmer and his particular method of farming. For the general farm the three-year or the four-year is good. The former consists of cereal, clover, hoed crop; the latter of cereal, clover, hay or pasture, hoed crop. They are simple, satisfactory, systematic, sensible, saving on plant food, and profitable in every way. Now is the time to start if a beginning has not already been made. Introduce system into farm cropping.

Deposits That Pay Big Interest.

A few days ago it was our privilege to drive for over forty miles through one of the most prosperous farming sections of Old Ontario, and in that drive we saw more deposits which will surely turn in big interest to farm owners than in any one drive previously taken. These deposits were not composed of cash in chartered banks or loan and savings societies, but constituted big heaps, little heaps, and thickly-spread coverings of fresh farmyard manure. Acres and acres of fall-plowed and sod land have received a "heavy coat." There is no soil-mining on these farms. At two places at which we called we found large numbers of live stock—big cattle, finished and fat, little cattle, full and well fed, fat pigs and nursing litters, little lambs and big sheep, and massive work horses, brood mares and growing colts. One farm of 208 acres was carrying seventeen horses, one hundred cattle (of which sixty were feeding steers), forty-nine hogs and nearly forty sheep. The other farm of 240 acres had nearly eighty cattle and some had recently been turned away, a large number of sheep and pigs and the necessary horses. Is it any wonder that there was manure in the

fields? These farmers are not farming for a year or for five years. They are in the business to stay, and they fully realize that the best returns over a period of years come where the investment is made in farm stock and equipment, and the deposit in the fields is what produces the bumper yields year after year, which feed the stock to turn in greatest profit to the owner, and at the same time build up the fertility of his land until he is assured of good crops in any season. Grains and all kinds of feed are high-priced this season, yet they have gone into live stock, and the farm has not been robbed. If the owners get market price for their feed by selling it as finished live stock this season they will be doing fairly well—better than the man who sells his feed and has no fertilizing deposit for his fields. The men whose well-drained, naturally fertile fields are covered with a heavy coat of barnyard manure from grain-fed stock have little cause for anxiety about crops. Crops cannot help but grow on such soil. The soil is well fed, the crops all well fed, the stock is well fed, and so it goes. Returns are such that we venture to say that no small proportion of the \$100,000,000 which our authorities tell us Ontario farmers have in chartered banks at the present time is made up of surplus from this kind of stock farms. And yet the returns from this land depend upon the deposit of manure now in the fields, which in turn depends upon live stock kept. Crops, feed, net returns—all depend upon live stock and the farmyard manure which yields big interest.

Nature's Diary.

A. B. Klugh, M.A.

During the summer of 1914 the U. S. Biological Survey conducted a census which is of much interest to all lovers of wild life. Early in the year a circular was sent out to the 250 voluntary observers of the Survey, in which the following explanatory statements are made: "This bureau desires to obtain a series of bird censuses, beginning with this summer, taken during the breeding season, with a view to ascertaining how many pairs of each species breed within definite areas. Such censuses will serve for determining whether the present laws are effective, and whether game or insectivorous birds are increasing or diminishing in numbers. The area under observation should not be less than 40 acres—a quarter of a mile square—nor more than 80 acres, and should include the farm buildings, with the usual shade trees, orchards, etc., as well as fields of plowed land and of pasture or meadow. What is wanted is a census of the pairs of birds actually nesting within the area. Birds that visit the area for feeding purposes should not be counted, no matter how close their nests are to the boundary lines. The height of the breeding season should be chosen for this work, and starting at daylight the observer should zigzag back and forth across the area, counting every male. Early in the morning at that season every male should be in full song and easily counted, and every male can safely be taken as representing a breeding pair. The census of one day should be checked and revised by several days of further work, in order to insure that each bird is actually nesting within the area, and to make certain that no species has been overlooked. The final results of the census should be sent to this bureau about June 30, and should be accompanied by a statement of the exact boundaries of the selected area, defined so explicitly that it will be possible to have the census repeated in after years. The name of the present owner of the land should be given, together with a careful description of its character, whether dry upland or moist bottom land, the number of acres in each of the principal crops, or in permanent meadow, pasture, orchard, swamp, roads, etc., the kind of fencing used, and whether there is much or little brush along fences, roads or streams, or in the permanent pasture.

If there is an isolated piece of woodland comprising 10 to 20 acres near we should like to have a separate census of it, and still a third census desired is that of some definite area forming part of a much larger tract of timber.

The above are three kinds of censuses desired, and it is hoped that you will volunteer to take one or more of them this season.

The results of this preliminary census show that the average number of breeding birds on farm land in the North-eastern States is one pair per acre. The census also shows that, under strictly farm conditions it is possible to very largely increase the number of breeding birds. One piece of farm land of 49 acres had 137 pairs, or 2 2/3 pairs to the acre, another farm of 40 acres has 157 pairs, or 4 pairs to the acre. In this latter case the owner had specially protected and encouraged the birds, thus proving that the number of breeding birds can be increased in this manner.

Another result of the census is the information given as to the relative abundance of the various species. The most abundant species on the areas covered by this census is the Robin, the House Sparrow coming second. For every 100 Robins reported there were 49 Catbirds, 37 Brown Thrashers, 28 House Wrens, 27 Kingbirds, and 26 Bluebirds.

In this census no reports are apparently given from Canada, though on the map appended an observation station is marked in the Dominion, apparently at, or near Winnipeg. It would be of great interest if we could conduct a census on the same lines in Canada, and I would suggest that readers of "The Farmer's Advocate" who are interested in bird-life undertake a census on forty or eighty acres of their farms, following the directions given above. If there is any point upon which more information is desired in regard to the making of such a census I shall be very glad to answer any queries. I should suggest the second week in June as the best time for making a census in the southern portions of Canada, and the third week in June in the more northerly parts. The results of the census should be sent in to me during the first week of July. Of the three kinds of censuses mentioned above the first, of the birds breeding on farm land, is obviously the most important, and also the easiest to conduct, not only from the open character of the country, but because the birds found on such land are nearly all common and well-known species.

The N. S. Biological Survey will conduct another census during 1915, and it will be interesting to compare our results with theirs.

Schools for the Home.

The United States Commissioner of Education, P. P. Claxton, is urging the sensible view that the home is the most important institution in the land, and, therefore, arts and sciences pertaining to home-making are of first importance in the country's schemes of education. Naturally the demands of industry and agriculture upon the teaching provided in the schools are making themselves felt as never before in Canada and in the American Republic, but the home and family are of prior concern, because in the home the activities of the nation find their roots and take on their character. Beyond any question probably the most serious social troubles in Canadian and American life grow out of defective home conditions and the want of proper home training. Thinking people are gradually coming to realize the need for a thorough recasting of plans, purposes and methods in the work of the public schools, if they are to make the rising generation really intelligent about the life we live and the work we do. The old and excessively classical and bookish forms of education are inevitably passing, and while it is essential that the application of principles underlying the industries of the farm and work-shop receive a conspicuous place in order to material success, the making of character is after all the real foundation. In recognition of this growing need in education, Prof. Benj. R. Andrews, of the Teachers College of Columbia University, has been for a couple of years engaged in an enquiry into the status of education for the home in school and college by direction of Commissioner Claxton, the results of which will be an important contribution to the subject.

Far from discouraging breeders of pure-bred stock, cutting off the supply from other lands should prove an incentive to make bold strides to produce here what cannot be imported for breeding purposes. It is the stockman's opportunity.

THE HORSE.

Out Through the Feed Hole.

Editor "The Farmer's Advocate":

More than thirty years ago I tried strapping a piece of chain to a mare's hind leg for kicking in the stall, and was glad enough to get into the manger and out through the feed hole of the box stall. The way that chain flew for about a minute was a surprise to me, and she did not stop kicking until she got rid of the chain. I simply give this as a word of caution.

Durham Co., Ont.

W. A. BEEBE.

London's Shire Horse Show in War Time.

Editor "The Farmer's Advocate":

Another London Shire Show has come and gone, and once more one feels convinced that in the English heavyweight horse we have the best cart horse in the world. One had only to look at the upwards of 530 horses in the Agricultural Hall to realize how like-as-peas they all come, strong, sturdy, hard-wearing sorts, standing on the best of short legs and the roundest and soundest of big blue hoofs. Perhaps there may be too much hair on the heels of the modern show Shire, and that is the only fault one can hurl at the breed as being glaring. As to the merit of the Shire, there is no gainsaying. From the time of Henry VIII. to the present moment the standard of the Shire—for he is the old English cart horse—has been carefully maintained and nurtured. In the days of Bakewell the prevailing color was black, and at the time of Arthur Young's tour through England he mentions the black bred as being quite distinct from the Suffolk. The weighty old cart horse found ready homes on the stronger lands of Middle England, Derbyshire and Nottinghamshire, although the Fenlands, Lancashire and Cheshire are areas which have of late years given the other districts a hard fight for high honors in the ring. To-day the Shire horse flourishes amazingly all over England, because his tractability, his immense strength and his willingness to work at any task where power is necessary, whether in front of a plow or molder, or in the shafts of a brewer's dray, a miller's wagon, or between the rails at a busy railway goods yard, place him first as a draft horse. There was a day in his history when soundness was not a strong point with the Shire, but the Shire Horse Society of the present day, at its first show, in 1880, decided that no prize should be awarded to a horse that could not pass a veterinary examination for soundness. Many were the horses debarred from entering the ring in those early days, but the number has gradually dwindled down to "nothingness." In the course of years the color scheme of the Shire has materially changed, for the blacks were originally brought from Flanders and predominated right through the breed for centuries, no longer hold sway, and the prevailing colors are bays and browns. The levelness and uniformity existing among the selected animals at Islington is always remarkably striking. Along with improvement round the coronet has come better feet, and there is now no occasion for farmers to complain of bad and contracted feet in the Shire. There are no more upright pasterns or round bone or curly hair. There is rather a lot of silky hair, but that is only said by the way. As far as action is concerned, the average modern Shire is able to use his limbs with freedom enough for getting over a good day's work in the collar. Let future breeders and exhibitors realize that if a prize is to be won in the ring, pace and action at the walk and trot must be developed just as much as it must be shown to a buyer who is wanting a horse to shift a load that is something near that horse's own weight. The Shire of to-day scales close on a ton weight. He can certainly pull one.

For this show—the 36th, by the way—the sum of £2,230 was given in prize-money, and a fine representative entry of good quality horses it brought out. When I tell you that the Agricultural Hall at Islington was crowded with people, who stood four deep round the ring, you will still say you cannot understand us, for, after all, Britishers do take a deal of weighing up. Their Majesties the King and Queen and Princess Mary visited the show on the championship day, and, although the King's colts and fillies got fairly well up into the placings, they are not yet "top hole," much as everyone would like to see them at the head of affairs.

The male championship was full of interest this year, because the title-holder of 1913-14 was barred from coming into the ring again, and we were bound to have a new stallion hero. But we were disappointed, because we all thought that the black eleven-year-old stallion Danesfield Stonewall, owned by F. E. Muntz, who had run up for championship title in 1913-14, would surely take a lot of beating this time. He came out and won his class for senior stallions all right, and his show was exquisite. He is perhaps the most massive horse in England, about 1½ tons weight, and as becomes a son of Hendre Hydrometer, he is stylishly moulded with it all. But when it came to the championship he was "downed" and "outed" by Lord Rothschild's much younger horse, Blaisdon Jupiter, a seven-year-old son of Montford Jupiter, bred by a tenant-farmer of Gloucestershire, and a wonderful substance horse, with a stately and well-laid-on head and neck, great width and four famous feet—as wide as soup tureens! Blaisdon Jupiter had won the class for 16.2 and over stallions, four years old and under ten. He cleared all of his height well out, and looked a perfect picture in the final try-out for the championship. Here, when drawn up against the massive Danesfield Stonewall, one

could see that Blaisdon Jupiter had the more compact body and the much neater look-out. That did it, and for the third year running Danesfield Stonewall got the reserve medal. He is the horse H. M. the King once told the groom that he should have won the championship at Islington. The same groom walked him round the ring before his King again and looked longing eyes at the three judges, but, while one of them stood out for Stonewall, he was outweighed by the other twain.

Blaisdon Jupiter was bred by a tenant-farmer (i.e., an agriculturist who pays his yearly rent to his landlord). This farmer has been joked to death this week by his friends because he sold the future London champion for £50 to one of the many enterprising buyers who are always scouring the countryside of England on the lookout for possible "flyers." This £50 colt changed many hands until Lord Rothschild got him at 600 guineas. "Never mind," said one joking friend to this unsophisticated farmer at the ringside, within my hearing, "you'll get £10 and a gold medal for being his breeder; come and buy us a bottle," and the poor chap took his joyous friends out and gave them wine, but his heart must have been bleeding all the time. If, at the original sale he had only opened his mouth a bit wider and said "£200," he would still have got it. But he'll know better in future I'll be bound.

Last year's champion mare, Messrs. W. & H. Whitley's Lorna Doone, one of tremendous scope, size, substance and hair, romped home again with the premier female title, albeit J. G. Williams' Snelston Lady, as yet only a four-year-old, must now stand in direct succession to the title, for, although beaten here, she is hard to get away from, and, with Lorna Doone out of the way next

real live officials behind it, knowledge of its ability will spread Canada-wards.

History tells us that the Shire is the heavy horse that has stood its ground for countless years. It emanates from the old British black war horse upon which the men of old, when knights were bold, fought with something akin to a spiked telegraph pole and encased in a suit of armor.

GENERAL NOTES.

The farmers of Britain are just now "feeling a draught" for the want of labor and horses on their farms. The proposition to bring in child labor—youngsters between 12 and 16—is finding favor all round. Wheat once quickly soared up to 60s. per quarter, and fell again, but as I write it has gone back to 60s. There are some who declare it will reach 90s., but the Government has promised to inquire into the cause of the rise. In Parliament, and out of Westminster, it has long been recognized that the operators in the Pit at Chicago are responsible for the world rise in the price of wheat. Let the Dardanelles once be opened and prices will come tumbling down.

The balance sheets of most of our premier Horse-breeding Societies have been issued, and make good reading. The Shire Horse Society has a nice little nest-egg of £14,960 and a membership of 4,318. Every stallion of note is now to be found upon a register opened by the Board of Agriculture for the benefit of owners who do not mind having their stallions vetted and earmarked as sound.

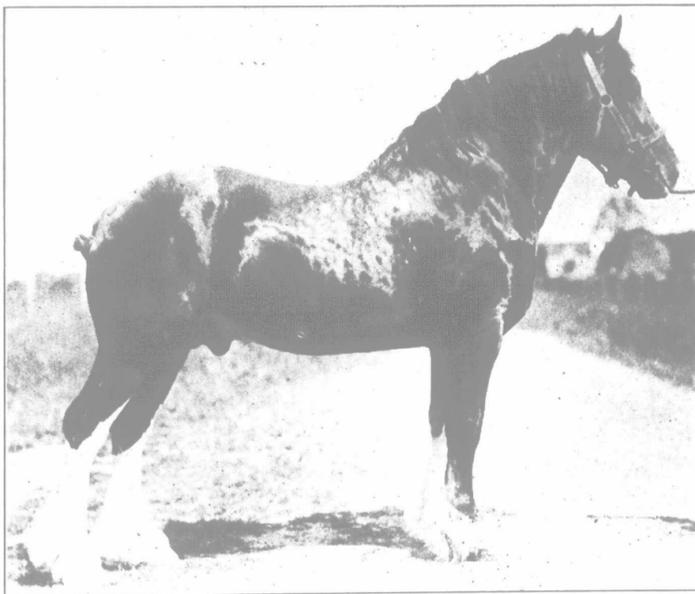
The Hunters Improvement Society has a reserve fund of £4,984 15s. 11d. and a membership of 1,935. The National Pony Society, the youngest of them all, has a bank balance of £330 11s. 6d. and a membership of 767. It is going out of its way to give encouragement to mountain and moorland breeds.

The Clydesdale Horse Society is 2,394 strong in membership. Canada took 161 head of the 837 Clydesdales exported in 1914. The Society has something like £10,000 in hand.

His golden wedding has been celebrated by the Earl of Coventry, the Hereford cattle expert breeder and feeder and authority upon steeple-chase racing and hunting. The City of Worcester have made him a Freeman and given him a silver model of a six-inch Howitzer gun and an address, in remembrance.

Three hundred and twenty-six Sforthorn bulls sold at Perth, Scotland, recently, averaged £64 apiece. Forty-three animals ran into three figures, and in older bulls 450 guineas was chief price paid. In yearlings, a third-prizewinner, Duncan Stewart's realized 1,050 guineas, William

Dulke buying him. The MacLennan Cup winner (first prize) went for 620 guineas. South American buyers were the keenest operators here. G. T. BURROWS.



A Young Clydesdale.

A good type of horse to sire drafters.

year (this being her second win), Snelston Lady, a daughter of Slipton King, bred in Derbyshire, is certain to get her name on one of the 50-guinea gold cups.

Some excellent fillies were seen out in the ordinary classes, and Britain does not lack females that are destined to carry on the work of maintaining the great horse of old; i.e., the armor-plated war horse of other ages and the heavy-haulage gun-puller of Flanders to-day. What a career for one type, which also is to-day the tenant-farmer's sheet anchor.

The Duke of Westminster won the junior stallion championship with Eaton Fenland King, got by his rising young stallion Eaton Nunsuch, out of a tenant-farmer's mare. The junior champion mare was Sir Arthur Nicholson's Roycroft Forest Queen, also bred by a farmer.

The most successful lines of blood were those represented by the offspring of Childwick Champion, who won 12 class prizes between them; Tatton Dray King, 8 prizes; Lockinge Forest King, 7; Redlynch Forest King, 6; Babingley Nulli Secundus, 6; and Norbury Menestrel, 5. In one class five out of the first six prize-takers were got by Lockinge Forest King, and even the two remaining winners in the same class were from dams by him. I wish I could persuade the farmers of Canada to seriously consider the Shire as an ideal farm and town horse. The breed has never had the real advertisement on your Continent it deserves. Its Society does not beat the big drum sufficiently, and the Clydesdale is getting all the "bunce" just now. But it won't be for long, as the old song says. The Shire is going to boom in England. Perhaps, with some

Many believe that a horse with good teeth does not require to have his grain ground, while others think it is saving to grind all grain fed. At the Illinois Experiment Station experiments indicated that grinding the grain for horses doing very hard work effected a saving of ten per cent. in the rations required. This is a big item, with feed at the present high level and one worthy of the consideration of all owners of farm work horses. It was found, also, that it requires twice as long for horses to consume ground grain when fed dry as when the same quantity is fed thoroughly dampened. It does not always pay to grind grain for horses. Much depends upon the convenience of the mill or the distance grain must be taken to be ground. Where power is available at home it will surely pay to grind, and even where it is necessary to haul only a short distance grinding will prove profitable. Greatest economy in grinding comes when horses are being worked to the limit, as in spring seeding, and the old saying that grinding makes the feed go farther has something in it, even in the case of the horse with the best of teeth.

In feeding ground grain, allowance must be made for the increase in bulk due to grinding. It requires more by measure but less by weight. In

Should Grain be Ground for Work Horses?

Illinois it was found that horses at heavy labor required from one and one-fifth to one and one-third pounds of grain and from one to one and one-fourth pounds of hay per hundred pounds of live weight per day in order to maintain their weight. Grain should be fed in three equal feeds, but the heavy ration of hay should be given at night. Some feed a heavy feed of hay at night, and about an equal quantity divided into the two feeds, morning and noon. We believe feed might often be saved by cutting out the noon feed of hay, feeding a light feed in the morning and a manger full at night.

LIVE STOCK.

How System Foretells Prosperity.

When visiting farms throughout the country one must be impressed with the consistent system that prevails where buildings and farms are up-to-date, and the almost total absence of system where the surroundings have the appearance of hard times. Recently, while passing through a stable that was quite modern, we noticed a record sheet fastened conveniently to the wall. Although the cows were grades and not a dairy breed at that, the sheet was there which told the value of each cow in dollars and cents at the end of the month. The question arose, was the barn, excellent silo, convenient stable fittings and all the other conveniences a result of good stock husbandry and the record sheet, or were the record sheet and barn itself evidences of system and good management on the part of the owner throughout all his farm operations?

System makes for efficiency, and there is nothing within the reach of farmers to-day that will accomplish so much. It is all very well to say this and that are trivial things and do not matter, yet the degree of indifference that stockmen show to the small things of the farm is exemplified in the whole herd and in its surroundings. Taking into consideration the growing of crops, harvesting and dispensing them day after day to steers for two or three years and further considering other expenses, it must be granted that the producer of beef gets as small a margin as the producer of most any article of universal use. How can he then afford to neglect the leaks that so quickly drive a commercial concern to the wall, and force that industry to pay cents on the dollar?

It is a pleasing sight to see scales and a record sheet in the stable. In addition to their use in measuring value they indicate the existence of a system and promise ultimate prosperity.

Cost of Feeding Pigs.

Editor "The Farmer's Advocate":

In reply to your request for experience in feeding hogs, here are some figures for you. These hogs were fed by a boy at our place in a "pig-feeding competition" last summer. Although he did not win the statement may be worth while for publication in "The Farmer's Advocate". I am giving you the amount of feed consumed by these four pigs, and it may be worked out at present prices of feed:

Four pigs six weeks old at \$4 each—\$16; 720 lbs. shorts; 520 lbs. chop, barley and oats; 150 lbs. oil cake; 800 lbs. skim-milk. At 26 weeks old these pigs weighed 680 lbs. Feed soaked 12 hours and fed twice a day.

Peel Co., Ont. GEO. DOWNEY.

[Note.—Figuring these feeds at market prices at time of writing the feed would be worth about \$28, valuing the skim-milk at \$3. Adding this to the \$16 original value would make \$44, total cost besides labor and at 8 cents per lb. the pigs would bring \$54.40, leaving \$10.40 profit.—Editor.]

Black Teeth in Pigs.

Editor "The Farmer's Advocate":

In your issue Feb. 11, page 229, your answer to a question about black teeth in pigs, I dispute. Have lost several youngsters by not removing them, whether black or wolf teeth. In the last litter the pig refused them milk before they were eight hours old, and the next day they seemed strong enough and broke off eight in each of the thirteen pigs, leaving no short teeth. Some neighbors have lost some too, but they just seemed to bother the last two or three years here.

Simcoe Co., Ont.

W. M. M.

[Our veterinary editor in reply to this statement reiterates that "black teeth" is not a disease in pigs, but avers that never will all people be convinced. Once in a great while one of these teeth may be so long, sharp and misplaced as to injure cheek or tongue and should be removed, but it is not a disease.—Editor.]

Horns Vs. Profitable Gains.

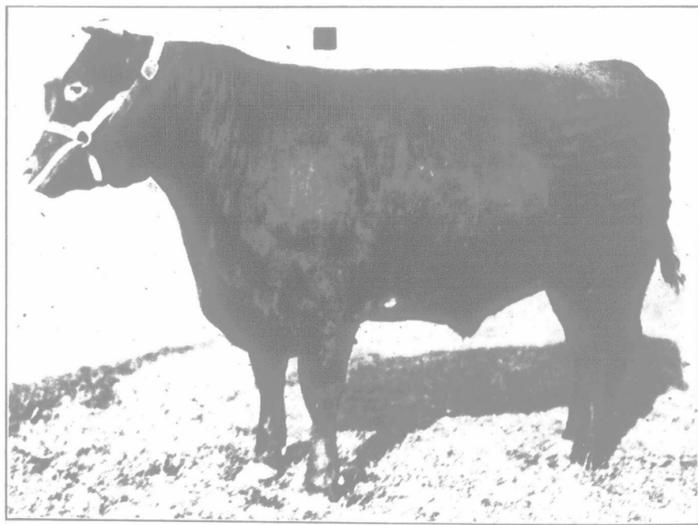
Horns on cattle are becoming unpopular. This statement applies chiefly to the feeder kind that probably will be run together in lots of three or four to a carload in size. Horns, originally, served a purpose but that necessity for, protection has long since passed away, and instead of being useful, horns on cattle are now a nuisance of the worst kind. Dehorning is a practice that may save many dollars to stockmen, and who is there that does not need to economize in the industry to-day in order to return the profits that satisfy? Generally stockmen like to run their feeder steers loose in a large box stall or yard, and that is where the horns are put to a use that decreases gains, and furthermore, when a man's eyes and face are in danger the arguments for dehorning stand indisputable.

The process at the start is simple indeed. It has been explained time and time again, yet during this spring we have noticed many calves that have been allowed to start horns which must result in nothing less than obstacles to their profitable finishing and that of their mates. A stick of caustic potash moistened and rubbed on the buttons some time before the calves are three weeks old will prevent their growth, and help to bring about a polled animal. The feeder prefers the animals without horns; they feed better, they ship better, and they reach the slaughter house in better shape. This is enough to warrant the raiser of beef cattle making liberal use of the caustic potash this spring.

Dock All The Lambs and Castrate The Males.

Perhaps March and April are the two months when most of the lamb crop is dropped in Ontario and Eastern Canada. It is timely, then, to consider the question of docking the lambs. While the practice of leaving lambs run until sold with long tails is, we believe, not so prevalent as formerly, the fact remains that too many lambs are still allowed to run the entire summer undocked. Docking is not, under the best conditions, a

dangerous operation, and it should not be attended by any serious loss. Once in a while a lamb which has been allowed to run until six weeks or two months old, and has become very fat, bleeds to death when the tail is amputated, but where the proper care is given a lamb of this age should not die. However, it is not advisable to let lambs go until this age before docking.



Would There Were More Steers Like This.

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All things considered, the best time to dock lambs is when about two weeks old. Many good shepherds "tail" their lambs earlier than this, some believing that a week is a good time. With strong, lusty youngsters, they will not be set back very much if docked at a week old, but with the general run of the lambs, twins, singles, and those having poor-milking dams, two weeks is the better age. At this age the lamb is in the best possible condition to withstand the shock, and it will not bleed, as a general thing, so profusely as if left longer. In docking the lambs, the best method we have found by practical experience, is to stand the lamb on "all fours" and with a sharp knife cut the tail from below upwards, allowing the knife to slip between the segments of the vertebra at about the second joint from the junction with the body. When cut in this manner, the knife does no permanent injury; it simply divides the vertebra, and the shock is not great. We have seen lambs docked by placing the tail on a board, holding the lamb on its rump and the operator removing the tail with a sharp chisel and a quick blow with the hammer. This is more injurious, because very often the vertebrae

are not divided, but are crushed and healing is accomplished more slowly and the lamb receives a greater set-back. Cutting from below with the knife all that is necessary is to double the tail down over the knife and to cut through; the sharper the knife the better.

Lambs should be watched for a time after docking. If the blood continues to spurt from the wound and the flow streams away for any length of time, the youngster will soon be weakened. Very often a handful of flour or like material touched to the wound will cause a clotting of the blood and stop the flow. As a general thing, the very fat lamb bleeds most, and it is advisable to have some soft cord handy, and if bleeding is too profuse, tie this cord tightly around the stump for a few hours. This will stop the bleeding and save the lamb. In the case of older lambs, about which there is danger, it is well to tie the string before amputating the tail. As a precaution, the knife used should be sterilized in some antiseptic solution. This is not often done on the average farm, but it might save trouble later on, and is very little inconvenience at the time of docking the lambs.

At the time of docking all male lambs not intended for breeding purposes (and this should include all grades and scrub pure-breds) should be castrated. Thousands of dollars are lost annually by breeders persisting in raising "buck" lambs to feed off. Before cutting the tail, clip off the end of the scrotum and draw the testicles. It is a simple operation, and done at the time the lambs are docked does not set them back appreciably. Cutting the end of the scrotum ensures a free opening at the bottom and no later trouble ensues.

The Value of Dairy By-products for Hogs.

Last week we answered a question regarding the value of skim-milk for pig feeding. Since then in looking through a new bulletin sent out by the Dominion Department of Agriculture and prepared by J. B. Spencer, the following came to our notice:

"So valuable are the by-products of the dairy viz., skim-milk, butter-milk and whey, that they are regarded by many farmers as indispensable in the rearing of young pigs, and it must be acknowledged that, although many feeders are rearing hogs profitably without these foods much better and cheaper results are possible when a limited amount of milk can be added to the ration. This is especially true in the case of pigs only recently weaned. Milk, being rich in ash and protein, is peculiarly adapted to the building up of the muscles and bony framework of growing animals.

"Better results are obtained from skim-milk or buttermilk when fed in conjunction with some cereal rich in starch, such as corn or barley, than when fed with other meals too rich in protein, such as gluten meal or pea meal. It has been found that milk is most valuable when fed in small quantities, viz., from 3 to 6 pounds of milk for each pound of grain fed.

"When feeding 2 pounds of milk per head per day, 163 pounds of milk effected a saving of 100 pounds grain.

"When feeding 3 pounds milk per head per day, 323 pounds of milk effected a saving of 100 pounds grain.

"When feeding 5.4 pounds milk per head per day, 533 pounds milk effected a saving of 100 pounds grain.

"When feeding 15.7 pounds milk per head per day, 734 pounds milk effected a saving of 100 pounds grain.

"When feeding 17.1 pounds milk per head per day, 882 pounds milk effected a saving of 100 pounds grain.

"As a result of a very exhaustive experiment conducted at the Wisconsin Station it was found that:—

"When feeding 1 pound corn meal with from 1 to 3 pounds separator skim-milk, 327 pounds skim-milk saves 100 pounds meal.

"When feeding 1 pound corn meal with from 3 to 5 pounds separator skim-milk, 446 pounds milk saves 100 pounds meal.

"When feeding 1 pound corn meal with from 5 to 7 pounds separator skim-milk, 572 pounds skim-milk saves 100 pounds meal.

"When feeding 1 pound corn meal with from

7 to 9 pounds separator skim-milk, 823 pounds skim-milk saves 100 pounds meal.
 "Average of all, 542 pounds skim-milk equals 100 pounds meal.
 "When mixed grains are worth \$1 per hundredweight, skim-milk fed at the following quantities per day is worth as follows per hundredweight:

- 2 pounds per day—54 cents per cwt.
- 3 pounds per day—31 cents per cwt.
- 5.4 pounds per day—18.6 cents per cwt.
- 15.7 pounds per day—13.6 cents per cwt.
- 17.1 pounds per day—11.33 cents per cwt.

These results are corroborated by the findings of the Cornell, and also of the Utah Station. Danish investigators also found that the relative gain obtained from milk increased as the quantity fed was decreased. As a result of their experiments they conclude that under ordinary circumstances 600 pounds of milk may be considered equivalent to 100 pounds of rye or barley meal.

"Buttermilk has a very similar feeding value to skim-milk, varying, of course, with the amount of water added.
 "Whey also has a very high feeding value when fed in conjunction with a liberal grain ration. Prof. Day found that when feeding about 2 pounds of whey to 1 pound of grain, from 750 to 800 pounds of whey effected a saving of 100 pounds of grain. Very similar results were obtained at Wisconsin."

The Deadly Disease—Calf Scours.

Strong, vigorous calves, when from one to two days old, get stupid, and in a few hours a diarrhoea sets in. Veterinarian called it inflammation of bowels, but treatment did no good. First one lived three days, but died in great agony, throwing head around against side. Second lived but a day, and did not show such severe signs. Third took sick when 24 hours old, and diarrhoea set in a few hours later. Four calves from same herd have escaped disease, and are doing well. Cows are all well housed and well fed, and in good condition. Fed silage with cut straw and shorts. Would a mouldy piece of silage cause the trouble?

2. Are shorts best chop for milking cows fed six quarts twice daily?

J. W. W.

Undoubtedly the trouble which our correspondent has had with his calves is contagious scours. The Veterinarian was correct, no doubt, in his diagnosis of inflammation, which had been caused by the severe scouring of the calves. The germs of the disease gain entrance to the system through the cord or raw surface around the new born calf's navel string. The disease is generally called "white scours," but the discharge of watery faeces is not always white. The disease generally affects calves from a few hours to a few days old, but in some cases the young animal dwindles along for several days, and sometimes weeks, and eventually dies of pneumonia or inflammation. The disease often is found coincident with an outbreak of contagious abortion, and the germs thrive in the absence of light and presence of moisture, so that it is absolutely necessary to lighten up the stable and keep it clean.

The cow about to freshen should be placed in a clean stall before parturition, and there should be an abundance of clean, dry bedding in the stall. The young calf's navel cord should be tied 1 1/2 to 2 inches below its junction with the body with a disinfected cord and the navel string, and all raw surface around it be disinfected by an application of a 5 per cent. carbolic acid solution. This should be repeated, until the navel cord shrivels up. The navel of the calf should be treated in the same manner as the navel of a colt is treated to prevent joint ill.

Some years ago an internal formalin treatment was advised through the columns of "The Farmer's Advocate," and correspondents reported that it was successful in curing the disease. Other correspondents reported that the local treatment to the navel cord had prevented the disease on calves dropped in stables infected by the organisms. The internal treatment consists of diluting 1/2 oz. of formalin with 15 1/2 ozs. of water. The calf is then fed a teaspoonful of this solution to a pint of milk three or four times daily. The water should be boiled before using, and the solution kept in an amber-colored bottle to prevent chemical changes taking place.

In any treatment of a scouring calf, the first step should be a dose of one to two ozs. of castor oil in milk. Immediately following this, give the formalin treatment in a little milk. Some claim they have had good results from giving a tablespoonful of the formalin solution three times daily in place of a teaspoonful, but this would be safer with older calves. The calf at from one to three days old, and weakened by disease, is not strong enough to stand very heavy doses. It is always well to isolate the scouring calves from the other calves around the place.

For the ordinary form of scours caused by un-

clean conditions, sudden changes of temperature or too much milk, try powdered chalk, 2 ozs.; powdered catechu, 1 oz.; ginger, 1/2 oz.; opium, 2 drams; peppermint water, 1 pint. Give one tablespoonful of this mixture in milk night and morning. It is always well to give a dose of castor oil previous to starting this mixture.

A correspondent some years ago recommended the following mixture: Take from 1 to 2 tablespoonfuls of spirits of turpentine, 1/2 cup of raw linseed oil and 1 egg, and put it in a bottle with a pint of new milk; shake, so as to mix, and give to the calf from a bottle warm; afterwards feed sparingly a pint of new milk twice a day for three days.

Another correspondent reported good success from giving a cupful of strong black tea almost cold. The dose was repeated four to six times daily. We have little faith in this remedy, but it is cheap and not harmful, and might be tried.

An Irish paper some time ago recommended the following: Take 1/2 lb. tea; 5 pints nice clean water; the amount of bread soda which will lie on a shilling; boil all down to 3 1/2 pints, then take 1/2 pint of the best whiskey and 1/2 lb. of loaf sugar; grind the sugar and mix with the whiskey; stir and light with a match; burn 1 1/2 minutes; then strain the tea, and mix all together. Of this mixture give 1 pint three times daily with a quarter pint of good new milk, but no more. When the scours stop, the whiskey may be discontinued, but keep on with the tea.

Some stockmen use burnt flour, and we have seen bad cases stopped by the use of raw eggs. The stockman took the egg, cracked the shell up fine, and put the whole well down the calf's throat, giving him two or three of these a day, and in a short time the scours ceased. It is a simple remedy. It is not harmful in any case, and it is worth a trial.

There is a difference between contagious scours and the ordinary form of scours, and they must be treated differently. The former being very deadly, and far more dangerous, requires more drastic action. The formalin treatment applied locally to the navel of every young calf, is the best preventive, and, as far as we are able to find out, the internal formalin treatment is the best method of attempting a cure. It is a deadly disease, and the calves being attacked at so early an age, are very likely to succumb. To prevent the ordinary form of scours, the calves should be kept out of drafts, should not be fed from dirty pails, and should always be fed frequently, and in small quantities, rather than in large quantities at infrequent intervals. Avoid over-feeding.

It is unlikely that the scouring is caused in this case by bad silage.

We do not think shorts the best feed for a dairy cow.

Pig Profits.

Editor "The Farmer's Advocate":

In your issue of March 4 you ask your readers what it costs them to produce pork. I think it possible that one feeder out of a hundred or so may be able to raise pork at 6 cents per lb. live weight with feed averaging \$29.00 per ton, but I must frankly admit I cannot, although I think I can raise them at present prices (7 1/2 cents per lb.) and show a small profit by putting them away at about 175 or 175 lbs. live weight. I had two sows farrow last October, and one raised 9 pigs. As it was rather late I did not wean them until they were 9 weeks old. Another reason I left them on the sow so long was that I had no milk for them. The other sow for some reason or other would not take her pigs, she killed 4 out of 13 and I raised the others by hand. Of course, these had to have some milk. I gave them some milk with a little sugar in it every 3 hours day and night for about one week; then I put a small quantity of oatmeal in it gradually increasing it, and as I made it stronger I let them go a little longer between meals. I also put in a small quantity of oil-cake, and changed the milk very slowly for water as they got older. I put in a small amount of boiled potatoes and apples in this feed, also some chop. By the time they were 6 weeks old their food consisted of shorts, oat chop, oil-cake and a very small amount of corn chop with some boiled potatoes. By that time I was feeding them 5 times a day, and by the time they were 7 weeks I was feeding them just 4 times, which I have continued to do ever since. In addition to their other feed they have had a mangel or two a day from the time they would eat them. There is always ashes in their pens. I thought when I started to feed them it would have been just as well to have left them in with the sow and let her kill them as I did not think they would have done any good, but they are not much behind the other bunch, although they are not nearly so even. They are not quite 5 months old, the best of them weigh 145 lbs. each, but they only average 125 lbs. each. The other 9 average 135 lbs. each, which makes the 18 2,310 lbs. The total cost has been as follows: Shorts, \$49; corn chop, \$30; barley, \$7.50; oats, \$8.50; oil-

cake, \$5.25; oatmeal, \$1.00; about 15 bushels of mangels, \$2.25; about 20 gallons new milk, \$3; and perhaps 50 cents worth of sugar, \$1 worth of potatoes, and about \$5 of apples, making a total of \$113 from birth to one lot and from weaning for the others. The one lot at birth cost about \$12, and the other lot at weaning time about \$20, making a total of \$145. The 18 pigs at present have cost about \$6.20 per 100 lbs., but if I keep them until they average 175 lbs. or so they will cost nearer \$6.50 per 100 lbs. Still, there is considerable work done on a farm for a smaller profit than the hog will show, even under present conditions.

Wentworth Co., Ont.

C. J. BAILEY.

FARM.

Boiling In.

By Peter McArthur.

Sir Jingo McBore wouldn't fail
 To make a calf drink from a pail;
 But the calf would be trimmed
 For the milk would be skimmed
 And he'd boss it by twisting its tail.

When we got ready to do our small-scale sugar-making, we selected a narrow cradle knoll that stood high and dry, and was convenient to the brush pile we had made when trimming the thorn hedge a couple of years ago. As the wind was from the northwest we dug in a trench on that side for our fire-box, laid an iron across the front for a grate and a couple of buggy axles across the top to hold up the pan, and proceeded to boil in. Of course, it was not as good as an arch or a modern evaporator, but it did surprisingly well. We had a good draught and the brush was dry, and we found no trouble in "putting in" over thirty pailsful in less than a legal day. The next time we had a good run we found that the wind had shifted to the south-east, so we dug our trench right through the little hillock and shifted our pan. With an uprooted stump at the back to keep all the heat from blowing through, we soon had it going like a stove, and the sap went in "like all possessed." There was just enough breeze to make a good draught, both sap and fuel were handy, and when we got well started I lit my pipe with a coal and began to enjoy life. The birds had come back over night and were singing everywhere, just as if there were no wars with their horrors in the world. With plenty of pleasant work to do in the warm sunshine I found that I, too, could throw off the night-mare for a while. I even found that although I have been giving considerable attention to Sir Jingo McBore for some time past—figuring out how much he stands to gain by the new tariff—I was not very bitter against him. In fact all the thoughts I had about him came in rhyme.

The tariff makes moneyed men grin—
 No matter who loses, they win—
 They have marshalled their forces
 And tapped our resources,
 And Sir Jingo McBore's boiling in.

I said that the fuel was handy, didn't I? Well, I'll qualify that. Between the thorn pile and the fire there is a barbed wire fence, and trying to get over that fence with a load of thorns was just about as ticklish a job as discussing the tariff without losing one's temper or making the other man lose his. I might pursue the simile further and say that discussions of the tariff are much like "the crackling of thorns under a pot," but there are a lot of wise men at it just now so I must be careful. I finally solved my fuel problem by breaking up the thorn bushes into convenient lengths for firing and then throwing them over the fence. As this brush has been drying for two years most of the thorns rattled off while the branches were being broken, and I was able to handle the stuff with leather gloves without getting prodded more than a couple of times. One satisfaction about the work was that I was clearing away an unsightly pile of trash and was not using any wood that might be used for the house. Timber is now so scarce that I am averse to cutting any but wind-falls, and even the tops and the brush that falls from the trees every winter make first-class summer wood. Where good wood is used to make maple syrup the fuel usually costs more than the result is worth. But the thorn made a good fire with plenty of heat, and helped me to overcome my dislike for the hedge that was foisted on the farm many years ago by schemers who got most of their pay for making a hedge before the time had come to complete it—and they never did the hard work of slashing and trimming it. I don't know what kind of thorn it is, but it is about the quickest growing timber on the place and it spreads like thistles. Though we trimmed it two years ago it needs trimming again this spring, and if we confine ourselves to tapping

fifty maple trees each year we can get all the fuel we will need from the hedge. I understand that using waste material in this way, to produce by-products, is highly approved of by the scientists, and I expect to get a whole lot of good marks for using the pesky stuff in this way.

Some farmers are getting excited
When they think of the things Mr. White did
But he needn't care if
They rage at his tariff
Poor Sir Jingo McBore is delighted.

When we sugared-off or rather syruped-off I thought I had proven conclusively that it makes a great deal of difference what kind of land the maples grow on. The syrup was a beautiful amber, and full of the divine flavors that make true maple syrup worth protecting by law. The bush we are using this year stands on a gravelly knoll, and the trees are second growth timber of the thriest kind. Last year we made syrup from trees on a clay bottom, and it was almost as black as tar and lacked much of the quality it should have. We had some of it left over and could compare it with this year's product—and there was no comparison. The new syrup was in every way delightful—the old merely tolerable. I thought I had the matter settled, and was beginning to blow about the addition I was going to make to the scientific lore of maple-sugar making when a visitor stopped one of my rhapsodies to ask:

"Were there any soft maples among the trees you tapped last year?"

I admitted that there were.
"Then that accounts for it. One soft maple will blacken all the syrup in a whole bush. It is the soft maples that make the difference and not the land on which the trees grow."

So now I have to try my experiments all over again before I can be sure. And I suspect that there may be some truth in what the visitor said, for I seem to remember that soft maple bark was one of the ingredients of a pioneer ink for which I once saw a recipe. Truly the way of the amateur scientist is hard.

Disposal of Farm Sewage.

In spite of the many advantages of farm life the city dweller's home is more conveniently equipped and more modern in regard to its water supply and disposal of sewage than the common farm house. Because this is so is no reason why the rural dwelling should not and cannot be just as modernly equipped. The fact of the matter is, it can be and should be. Women of the country deserve as much as the city women, and they most of all merit a home with some modern conveniences, now easily installed. The obstacle to installing modern conveniences in the home has always been the disposal of the sewage, but people are beginning to know that it is a simple matter. They are beginning to enquire about it, hence this article.

HOW BACTERIA WILL HELP

If solid matter and liquid are confined in a tank for some time, forms of bacterial life will establish themselves in the contents and transform the solid matter into liquid and gas. Furthermore, if the resulting liquid be drained off in the surface layers of the soil, there are bacteria there ready to pounce upon the effluent and change it into plant food. Vegetation then takes the matter up where the small organisms leave off and transform the once objectionable sewage into plants edible for animal or man. All the matter resulting from the decomposition and fermentation in the tank may not enter into plant life, but it will be retained in the soil where it will do no harm.

WHERE THE WORK MAY BE DONE.

Assuming a water system is installed in the house, the next step is to dispose of the sewage in some way. A septic tank recommends itself for this work through its effectiveness. A very simple tank will render the desired service, and any handy farmer can easily construct the tank. In the first place, a general explanation of the system would not be out of place. There should be at least two compartments in the tank, and the last compartment, where the valve is placed, should not be more than three feet nor less than two and one-half feet deep. For every occupant of the dwelling there should be at least three cubic feet of space in each compartment, and for every cubic foot of space in one compartment, or in one-half the tank, there should be 13 feet of 4 inch field tile laid, as will be explained later. The soil pipe from the house carries the disposal to the large compartment, as indicated in figure 1.

Here, through the efforts of bacteria, decomposition takes place, and liquids result which are carried over by an overflow pipe into the second compartment. In this part an automatic valve (c) is installed which trips at the proper time, allowing the liquid to flow out into a line of field tile, where percolation takes place and the soil swallows up the effluent.

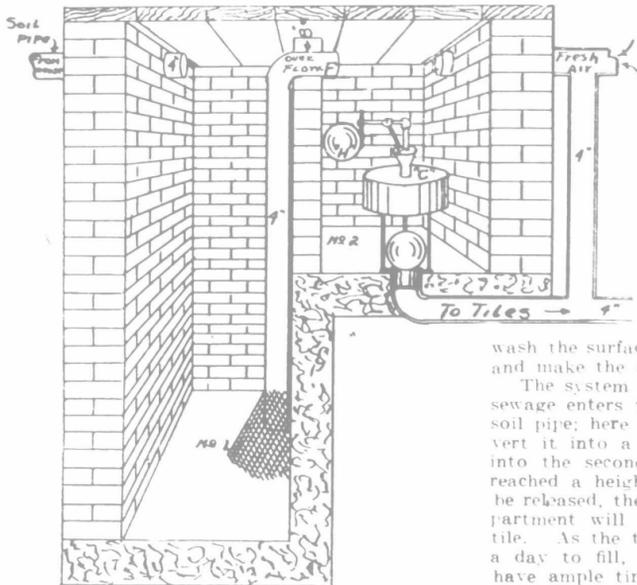
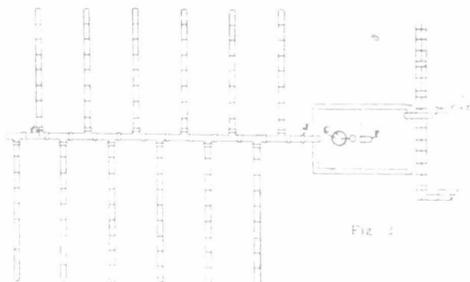


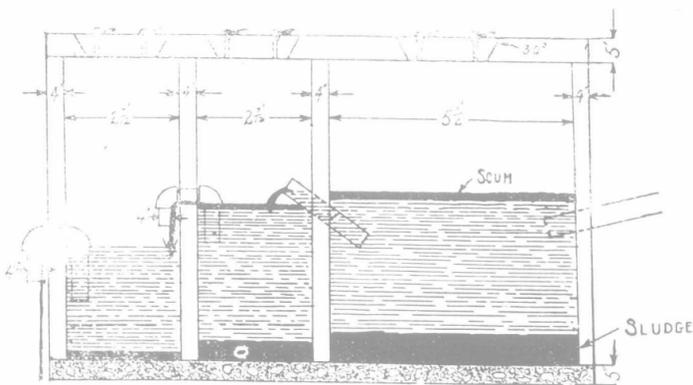
Fig. 1—Septic Tank with Valve.

It is necessary to have the tile laid on the level, so one part of the area in which the tile are placed may not become saturated when the upper part is dry. In order to accomplish this, the tank should be so located that the bottom of the valve in the second compartment will be on a level with the main tile leading to the system of



System of Field Tile.

field tiles. An overflow pipe connects the first and second compartments, starting ten or twelve inches from the bottom of the first. As a safeguard, the opening in the first compartment should be protected by a wire screen the size of a bushel, with a mesh not exceeding three-quarters of an inch. The soil pipe carrying the sewage to the tank



Septic Tank at Weldwood.

should be connected with the closet, bath and sink, and extend upwards through the roof. In this case it would serve to carry off excessive gases and emit them into the atmosphere high enough so they would cause no inconvenience to the dwellers. Also, in the second compartment a pipe admits fresh air; this passes freely over the partition, space being left between it and the roof of the tank, and out through the soil pipe. The

automatic valve is caulked into a four-inch cast-iron bend, as ordinarily used by plumbers, and which is securely built into the bottom of the tank during construction.

The system of tiles for distributing the effluent through the soil is illustrated in figure 2. Some systems have been installed with sewer pipe for a main drain, but in all cases ordinary field tile should be laid for laterals. All laterals may be laid from one side of the main, or they may be placed as indicated in the illustration. Local conditions and field levels will govern this to a large extent. The field tile should not be laid deeper than one foot from the surface, and not closer together than two feet, in light soil, and a greater distance in heavy soil. They should also be laid on the level, for reasons previously given. The tank itself should be constructed of brick or stone and made impervious to water. Concrete work will answer the purpose if care is taken to wash the surface of the walls with a cement wash and make the structure water-tight.

The system operates somewhat as follows: The sewage enters the first compartment through the soil pipe; here bacteria operate upon it and convert it into a liquid form. It flows slowly over into the second compartment, and when it has reached a height where the unlocking valve will be released, the whole contents of the second compartment will flow out into the system of field tile. As the tank requires from twelve hours to a day to fill, it will be seen that the tile will have ample time to empty themselves into the soil before the second flush takes place. To prevent gases from escaping into the atmosphere, a plank floor should be placed on top of the tank and this covered with about six inches of soil.

A SEPTIC TANK AND FIELD DRAIN.

Another system may be explained which has been in operation on "Weldwood Farm" for two winters and one summer, and has given perfect satisfaction. The principle involved in this system is similar to the one already described, but there is no valve which admits of flushing, and the effluent leads to a main drain in the field and ultimately empties in a bush about one-half mile away. The tank in this case was built with three compartments, thinking that the decomposition carried on in the tank would be more complete, and that no evil consequences could result from emptying it into the bush or field. The tank is built partly of old brick, because they were at hand, and cement, but it appears that a total cement structure would have answered the purpose just as well. The tank itself is five feet high, 5 feet wide and 12 feet long, over all. The partitions are 4 inches thick, and the illustration will give the remaining dimensions. The location of the tank is responsible for its depth. Had it been placed farther down the slope, two and one-half feet of this depth could have been dispensed with, as it was only added to bring the tank to the surface of the ground. From six to ten individuals occupy the dwelling, but the full capacity of the tank was never required. The soil pipe leading from the house is of sewer pipe, and is laid with a fall of about 1 foot in 80, the last tile having a sharp dip into the tank. Between the first and second tank a sewer pipe is laid, as indicated in the illustration, one end being lower than the other, in order to avoid the scum which is liable to gather on the tank and to prevent any circulation which is detrimental to successful decomposition. An iron pipe with two elbows was procured to lead from the second into the third compartment, but the expense of this proved rather too much, and were it being done again probably a sewer pipe would be used to lead from the second to the third compartment. The last outlet, or the one leading to the field tile, was made of iron, also, and there is no reason why this could not be ordinary field or sewer pipe. The fluid of the last tank trickles out slowly into the field main drain. So far this system has been highly satisfactory. During the time of its installation it has only been cleaned out once, and no disagreeable odors have been noticed emitting from the tank during the last year.

A CESS PIT

Where a closet has not been installed in the house, but where people wish to avoid the ordi-

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nary foul compost at the rear of the house, an cess pit might be installed a short distance from the dwelling. If this be dug about 6 or 7 feet deep and walled up with large stone, fermentation will take place in the contents of this tank and the whole amount of fluid will gradually percolate away into the soil. A light sandy soil will be, of course, more efficient in this regard, but in connection with such an accommodation there is always the danger of the material finding its way into the channels that may eventually feed some well or spring and thus pollute the water supply of the home. However, many of them are used with very satisfactory results, and in spite of the danger of pollution it is wise sometimes to install such a system for the presence of a compost anywhere in the vicinity of the dwelling is very undesirable.

Farming Lacks System.

Editor "The Farmer's Advocate":

We hear a great deal of discussion on the matter of farm finances, and most of those discussing the subject look to increased capital as a means of solving the problem, but increasing the capital is only going to make the load that much bigger, for there is just that much more capital on which we should pay interest, and if we can't pay interest on a small capital, can we on a larger capital? Certainly, those who need (not want) more capital would be helped if they could get it at cheaper rates of interest, but not helped, nine times out of a hundred, in the matter of expressing a bigger dividend on the present investment. Capital comes to all industries that prove they are upon a sure footing, and as soon as the farming of the majority is on as sure a footing and as well systematized as other business it too will receive all the capital it can use. In all probability it is as easy to get capital for farming as for the ordinary retail business. In other words, it's just as profitable as the ordinary retail business, but that isn't saying much for it.

Take a modern farm, try to make it pay a reasonable interest on the investment, and how many can afford to buy it, with the object of dividends in mind, at what it cost after passing through the hands of three or four generations? How many farmers can prove by facts and figures that it does pay? Let me quote from the Business Man's Library on the subject of systematizing business: "Factories to-day are being run less and less by the authority of experience only, and more and more by the authority of figures and facts. The superintendent and manager of long experience and intuitive knowledge only is forced to make room for the younger man of less experience, perhaps but who modernizes his work by jurisdiction of figures alone." A factory is a paving producer, as a rule. How about the farm?

No, farming is not going to be solved by more capital, but it can and will be solved by system, and, on a rational system, with a good business working set of books at the back of it to keep tab on its methods. One thing is certain, that, when the farmers know what the cost of production is, as it now stands, and they have to keep accounts of some kind to do so, they are either going to reduce these costs by systems, or fix both the marketing price and the cost of placing the produce on the market. I don't say how it is to be done, but it will be by some system, and the first step will have to be an accomplished fact. That first step is systems and figures obtainable on nine-tenths of the farms. Then nine-tenths of the farmers can work intelligently and together on a known basis toward a common goal.

Let me show you how system works out and the need of books to work it. I quote from a book written by an advertising specialist: "There is a dealer in Michigan who, until about two years ago, had just an ordinary retail grocery business. He wasn't really making any money, he wasn't really going ahead. Like most retailers who are not successful he had a lot of petty troubles in the way of bills which annoyed him some at times. One day he began wondering if all retailers were hard up. When a dealer gets to feeling that way he is in a fair way to learn something—if he is not a dead one. This dealer looked about among retailers in Michigan, and soon came to the conclusion that some retailers were successful, that some of them were continually forging ahead. When he found this out, he began asking himself WHY the successful ones WERE successful? What enabled them to reach into his territory and draw his trade away from him? As he investigated further, he found that the average retailer doesn't usually know so very much about his business; that he doesn't usually know for SURE just where he stands; that the average retailer runs his business by guess.

He found, on the other hand, that the most successful retailers, the ones who took business away from him, had complete information on their sales, their purchases and their expenses, by lines of goods, by departments, by clerks, etc., every day. When he learned this he decided to eliminate GUESSWORK from HIS business, too,

and to provide himself with the information which the successful retailers provided themselves with.

He made an outline of all the information he knew of any successful retailer getting. Then he went to his books and tried to get the same information about HIS business. But the information he needed wasn't there. His system wouldn't give him the information he needed. But he didn't know how to get a bookkeeping system. Of course he knew that a public accountant could install one, but he had visions of enormous charges for the service. One day he mentioned his problem to a salesman from a big Detroit wholesale house. The salesman liked the idea, and promised to see if he couldn't get his house to help the dealer out.

It so happened that the house had just installed a number of machines in its accounting department and was about to lay off one of its bookkeepers. Instead of laying him off, he was sent out to help the dealer open a set of books which would give him the information he wanted. The dealer insisted on a complete system. He wanted to know about all there was to know about his business once in every twenty-four hours, how much profit he made on each clerk's sales (the hired man's time), which lines of goods sold the easiest (for us, pure-breds or scrubs), how much he lost through each of a score of leaks (chores, small loads to market, lack of tools, poor seed), and a lot of other things. . . . Within three weeks the dealer was getting the information he wanted, and he was feeling the effects of that information upon his ability to make his business pay. In one year HE INCREASED THE VOLUME OF HIS BUSINESS 300 PER CENT. A few manufacturers suffered because he found some lines of goods didn't pay, and he refused to carry them (the cow that the farmer keeps, the one that doesn't keep him, two-year-old hens, etc.).

"Mercantile agencies say more retail failures are due to lack of capital than to any other cause, and one failure in every five is credited to incompetence, but incompetence is due almost entirely to lack of INFORMATION, not lack of ability."

So when we get down to hard tacks, it is lack of facts and figures, a want of an efficient system. If you don't believe me, read that second last paragraph again, and then think over what he says. WALTER M. WRIGHT.

B. C.

Re Tax on Agriculture.

Editor "The Farmer's Advocate":

I was very pleased to see your editorial in this week's issue entitled, "Should Plant Food be Taxed?" You have selected two very conspicuous cases of the inconsistency in urging farmers to greater production, and at the same time adding to the difficulties in the way of securing this increased production. But why select only these items? The cost of agricultural production is affected just as much by the cost of agricultural implements and fencing as by the cost of fertilizers and cottonseed meal. Exactly the same argument which you have used so justly to show the folly of handicapping the farmer in his purchase of fertilizers and cottonseed meal is equally applicable to the purchase of tools, implements, clothing, household conveniences and utensils, harness, fencing and so forth. Prices have been already advanced in many of these lines, and consequently the cost of agricultural production has increased. The effects of this increased cost are not difficult to foresee.

Mr. McMillan's excellent letter deals with the situation both fairly and forcibly. A few months ago I was disposed to hope that all classes in Canada were now alive to the seriousness of our present financial condition. I was disillusioned, however, by the budget announced on Feb. 11 last. Since that date I have been too disgusted and discouraged to say very much. In my annual address as Master of the Dominion Grange I attempted to discuss the whole question of Canada's financial condition as fully and fairly as I could; but apart from this I have found it difficult to find printable language that would do justice to the occasion. Mr. McMillan is not far wrong when he uses the term "diabolical enactments." And he is right in maintaining that, since Feb. 11, the "Patriotism and Production" campaign is "simply adding insult to injury." Other things being equal I am ready to join heartily in a campaign for better farming and increased production; but when our Government adds to the burden upon an industry which any political novice can see is already staggering under the load of taxation, and this not for the prime purpose of increasing our revenue, and in no sense whatever for the prosecution of the war, but evidently for the purpose of protecting the dominating influences of our cities from the consequences of their own greed and folly, then the whole campaign for increased agricultural production, so far as it emanates from our Federal Government, is nothing but a hypocritical farce.

Prior to the budget announcement the organized farmers of the three Western Provinces

made an appeal to the Federal Government to substitute a direct tax upon land values for the indirect tariff tax; but Mr. White did not even condescend to refer to their appeal in his speech. Such being the case it seemed to me that words would be wasted in making any further appeals. After reading Mr. McMillan's letter, however, I have come to the conclusion that silence is not golden under present conditions. The true patriot will speak out—must indeed speak out if he is not a coward and a traitor to his country's best interests. Our future is bound up with the success and development of agriculture, and it should be proclaimed from the house-tops that agriculture is doomed, and our nation doomed to bankruptcy unless there is a radical change in our whole system of taxation.

Brant County, Ont.

W. C. GOOD.

Be Your Own Boss.

Editor "The Farmer's Advocate":

Ever since I was a bairn I hae heard people talkin' about "the independent farmer" an' sayin' what a fine thing it was tae be yer air boss, so ye could wark when ye felt like it an' quit when ye got ready, an' nobody tae tell ye tae dae yer wark different tae the way ye thoct was richt. Sometimes it was aboot election times ye heard this sort o' talk, an' again it wad be frae some city millionaire who had made his money by handlin' farm produce in a way that didna' cause him ony loss o' sweat or mak' ony blisters on his hands. This sort o' preachin' frae men o' this class is likely tae mak' mair unbelievers than converts, for ilka body that hears them gie them credit for haein' some axe tae grind an' wantin' the farmer tae turn the stane. An' mair often than not it's the case. But I saw something a day or twa back that set me thinkin' an' wonderin' if there wisna' a consederable amount o' truth in this talk aboot "the independent farmer" aifter a'. I happen tae be livin' not mair than half a mile or so frae the railroad track, an' once in a while we hae some excitement in the shape o' a wreck which the section men blame on the train hands, an' the train hands blame on the section men. Onyway we had a guid smash aboot a week back, wi' five or six freight cars piled in the ditch in ilka shape ye can imagine. Well, it wisna' lang before there was another train on the spot wi' a crew o' men that made the place look unco' like a nest o' ants that ye'll sometimes happen tae step on in the slimmer time.

Mysel' an' some ither auld farmers who were o' an' inquirin' turn o' mind went over tae see the wreck an' pass oor opeinions on the carelessness o' railroad men in general an' engineers in particular. But the thing we saw that made mair o' an impression on us that freight cars turned into kindlin' wood was the style in which some men undertake to mak' ither men dae the wark. It was one rinnin' fire o' orders frae first tae last, an' naebody stoppin' tae be polite aboot it either. The five-dollar-a-day mon was bossin' the three-dollar-a-day mon, an' the three-dollar mon was bossin' the dollar-and-a-half mon till ye'd wonder hoo they could stand for it. An' gin ony mon wad undertake tae dae onything on his ain account, wi'oot orders frae the boss he'd aye get a callin' doon that wad keep him frae tryin' tae use his brains ony mair that day.

"Weel," says I tae mysel, "here's a lesson for the mon that has a job o' his ain wi' nobody tae gie him orders, an' him no contented wi' it. There's somethin' in what they say aboot 'the independent farmer' aifter a'. Before I'd tak' orders like you frae a mon na' better than mysel' an' dae it week after week I'd start growin' potatoes in Greenland." For it's as sure as onything can be that gin ye hae a boss tae dae a' yer thinkin' an' plannin', yer ain, thinkin'-machine is gaein' tae get rusty an' one o' these days ye'll find ye canna' get it tae dae ony wark for ye or it's ain account, just for lack o' practice. The best life ony mon can live, tae my mind, is one where it a' depends on his ain brain an' musele whether he will live or dee. Responsibility is what backbone is made oot o', an' the mair ye hae o' it the better an' a' round mon yer are likely tae be.

Of course, I'm dootin' that so lang as the wharf is rin on the present plan there will be some men talin' their orders frae ither, but there's something wrang wi' a body gin he has to dae it a' his life. I'd got a job o' ma ain gin I had tae pit in overtime at it tae pay ma board. It's a' richt tae mak' a start in what ye intend tae be yer life-wark, under a boss, but the shorter ye mak' yer apprenticeship aifter yer trade is learned the better. It's unco' like rinnin' a gasoline engine. Ye may read aboot them, an' look at the pictures o' them an' study the directions, but ye'll never ken much aboot them until ye get one an' start it up yersel'.

Sae I'm glad I'm an independent farmer, wi' no chance o' gettin' mair than I earn by the exercise o' ma brain an' the labor o' ma hands, but at the same time bein' pretty sure o' that, I hae naebody tae find fault wi' me an' say this

is no' richt an' ye shouldna' hae done that, but a' ma mistakes are brought tae ma notice in the natural coorse of events an' I hae the chance o' correctin' them wi'oot losin' ma self-respect by bein' called doon by some mon wha hae na mair richt tae a place on this airth than mase'.

They tell us that a' men are born free an' equal. I dinna' believe it. But what I dae believe is that there's a middlin' good chance for almaist ony mon in this country tae die free an' independent, gin he gaes aboot it in the richt way. An' that way is tae dae yer ain thinkin' an' tae mak' a habit o' takin' orders frae naebody but yersel'. The Lord made us men, an' we dinna' want tae forget it, nor let ony ither mon forget it either.

Glengarry Co., Ont. SANDY FRASER.

A Letter Appreciated.

Editor "Farmer's Advocate":

It did one good to read Thos. McMillan's letter in last week's issue. His statements are not one whit too strong. Farmers should have suspected that the "Patriotism and Production" and the "Made in Canada" cries with which our newspapers were filled some time ago were put out for other purposes than on sight appeared. We have been fooled often before and should have been wary. We have been fooled again. The manufacturing interests have won. Using the plea of ultra loyalty in the present distressful need they have secured an increase of duty on most commodities. Seven and a half per cent. extra on the price of their products should be a comfortable addition to profits which have already made millionaires. Canadians can truly boast that their manufacturers are cool, calculating, unscrupulous greed cannot be surpassed anywhere. Their action in contriving to scheme special advantages because of war conditions and war feeling is in essence comparable to that of the ghouls who used to haunt the fields after a battle that they might plunder the dying and the dead.

In order that the tariff increases may swell government income and help pay war expenses we shall have to buy goods made in other countries. If we purchase articles made here the bulk of the enhanced price will find its way into other pockets. Loyalty to our country in her financial need demands that we "Buy goods NOT made in Canada."

Middlesex Co., Ont. THOS. BATY.

Speaking of Roads.

What is your "beat" or municipality going to do for the local highways this season?

For the year 1915 something more than the old "as usual" program of local road work is wanted.

The automobile man having taken possession of the highways, it is his "right, fit and bounden duty" to maintain them.

One way to lessen the cost of producing cheese and butter is to improve the roads leading to factories and creameries.

It would worry a miracle-worker to preserve in good condition for traffic a road-bed forty feet wide and as flat as a pan-cake.

In the old statute labor days a good many of us thought we were gouging the King or the Pathmaster when we were only gouging ourselves.

In the making of a good road the first thing to be done is to remove the water and the second is to keep it away. First drainage; then a proper crown.

The man who hauls whole milk to town every day in the week has a big interest in the state of the roads. If the highways are bad his expenses are higher every day he travels.

Bear in mind that a road will not maintain itself. What folly to spend thousands of dollars in making a stone-surfaced road and then permit it to fall into ruin for lack of a few timely repairs to the ruts!

At this season of the year the man with the split-log drag or plank road-grader is a public benefactor while he is smoothing his own way over this earthy road. A few well-timed trips with one of these implements drawn by a solid team will work wonders in eliminating moisture, letting off pools of water, filling ruts and making a crown that will save a lot of subsequent trouble.

Nowhere else do we find worse examples of municipal road mismanagement than on the hills approaching rivers and streams. Very frequently there are no drains, or open ditches to carry off the water which rushes in torrents down the road-way washing the gravel back to its original bed. It is the nearest approach we know of to perpetual motion, and the gravel man is the only beneficiary. Everybody else suffers. This sort of folly has been perpetrated in cases not a few, on a long-suffering public for a quarter of a century at a stretch. In fact as a heritage of

waste and discomfort it has descended from father to son, even to the third generation. Stop it now!

Experiments With Farm Crops in 1915.

The members of the Ontario Agricultural and Experimental Union are pleased to state that for 1915 they are prepared to distribute into every township of Ontario material of high quality for experiments with grain, fodder crops, roots, grasses, clovers and alfalfa, as follows:

| No. | Experiments. | Plots. |
|-----|---|--------|
| 1 | Testing two varieties of oats | 2 |
| 2a | Testing O.A.C. No. 21 barley and emmer | 2 |
| 2b | Testing two varieties of two-rowed barley | 2 |
| 3 | Testing two varieties of hulless barley | 2 |
| 4 | Testing two varieties of spring wheat | 2 |
| 5 | Testing two varieties of buckwheat | 2 |
| 6 | Testing two varieties of field peas | 2 |
| 7 | Testing two varieties of spring rye | 2 |
| 8 | Testing two varieties of soy, soja, or Japanese beans | 2 |
| 9 | Testing three varieties of husking corn | 3 |
| 10 | Testing three varieties of mangels | 3 |
| 11 | Testing two varieties of sugar beets for feeding purposes | 2 |
| 12 | Testing three varieties of Swedish turnips | 3 |
| 13 | Testing two varieties of fall turnips | 2 |
| 14 | Testing two varieties of carrots | 2 |
| 15 | Testing three varieties of fodder and silage corn | 3 |
| 16 | Testing three varieties of millet | 3 |
| 17 | Testing two varieties of sorghum | 2 |
| 18 | Testing grass peas and two varieties of vetches | 3 |
| 19 | Testing rape, kale and field cabbage | 3 |
| 20 | Testing three varieties of clover | 3 |
| 21 | Testing two varieties of alfalfa | 2 |
| 22 | Testing four varieties of grasses | 4 |
| 23 | Testing three varieties of field beans | 3 |
| 24 | Testing two varieties of sweet corn | 2 |
| 25 | Testing three grain mixtures for grain production | 3 |
| 26 | Testing three grain mixtures for fodder production | 3 |

Any person in Ontario may choose any one of the experiments for 1915 and apply for the same. The material will be furnished in the order in which the applications are received, while the supply lasts. Each applicant should make a second choice, as the material for the experiment selected as first choice might be exhausted before his application is received. All material will be furnished free of charge to each applicant, and the produce will, of course, become the property of the person who conducts the experiment. Each person applying for an experiment should write his name and address very carefully, and should give the name of the county in which he lives.

Ontario Agricultural College, C. A. ZAVITZ, Guelph, Director.

Preparing the Land and Sowing the Crop.

Editor "The Farmer's Advocate":

In commencing operations for the production of all our spring grain crops we have one object in view, viz., the production of as much as possible of the crop for which preparation is being made, from the acreage at our disposal for such crop. Preparation for the accomplishing of this object is not begun with the opening of spring. It has its place in the factors which influence that production through the place the spring crop bears in the rotation. Generally speaking, in our crop rotation we try to make each crop not only an object in itself but a preparation for the crop which follows. To a smaller degree can this be said of the farm crops—wheat, oats and barley, than of any other, and our object is to place these where the preceding crop will serve as much as possible in soil preparation for the grain crop that follows. So we precede our fall wheat with clover sod, and spring grain with corn which has been planted on a hay sod or pasture sod well manured. As far as labor will allow we cultivate the corn field to remove all growth but corn, but have seldom succeeded in getting a corn field so clean that we do not fall plow. Our soil is a variable one, from light sand loam to friable clay loam, with some oak upland clay. On the lighter soils we are troubled with persistent growth of grasses, particularly red top, which we seldom completely eradicate, and if any trace of this is left we always plow our corn ground, even though otherwise clean, that we may enable the spring crop to get sufficient start to check any growth of grass that may be present. Then on the heavier portions we think we get better drainage, and a more easily prepared seed bed by fall plowing the corn ground. On some of the oak upland knolls which are almost white when plowed out of the virgin soil, being very deficient in humus, we have secured good results from an application of air-slaked lime which pulverized them consid-

erably and allowed the incorporation of manure to a degree otherwise impossible. On one piece sown to fall wheat in 1911 we applied a dressing of coal ashes, and the results were very satisfactory in the succeeding crop in growth of straw and weight and sample of grain. The field will be broken next fall for corn in 1916, and we will be able to tell if any results still show in a changed physical condition of the soil. We seldom apply any manure directly to land intended for spring crop, having applied it in preparation for the hoed crops preceding. Of course, a few loads may sometimes be necessary on high and light knolls to insure a better stand of clover, but this is an exception to general practice. We seldom sow spring grain on any soil otherwise prepared unless occasionally through unforeseen and unfavorable conditions wheat or clover may be killed out, or when, as in 1912, wet weather may hinder the sowing of wheat ground prepared and not sown.

As to soil preparation for spring grains we have tried most tillage implements. In even, friable soils the spring-tooth cultivator, followed crosswise by the lance-tooth harrow, then lengthwise by the finishing harrow preceding the drill, may reduce the seed-bed to a fit condition of tilth for the crop. Where the soil is variable, and particularly where the preceding crop is corn, we have found the disk harrow most satisfactory. A double disking, and on any parts that do not yield to that, then a double disking crosswise followed by a straight-toothed iron harrow has given us good results. Of course, we do not stop when we have gone over the ground a given number of times, but when the soil is reduced to a proper tilth. Nor do we recommend some of the disks on the market whose chief virtue is in their ability to go almost straight to the bottom of the plowing, and sometimes deeper, and bring up soil that should not be touched, but one that will give a good surface mulch, not too deep, properly reduced to a seed-bed fine enough to receive grass seeds; a disk too that will leave horses fit to continue their farm work.

Soil conditions for seeding, to produce best results, are not conditions easily described, but are those with which experience acquaints us and which represent a thoroughness that is satisfying as seeding proceeds.

Previous to two years ago we used a hoe drill almost always following it with the finishing harrow. Lately we have used a disk drill, and by getting a fine seed-bed have made drilling the last operation in seeding. There may be conditions in spring plowing which may necessitate after harrowing, but these have not yet appeared in fall-plowed soil. Clover and grass seeds have been mixed and sown in what proportions and quantities desired, with the seeder on the drill.

In preparation of grain for seeding we have used a fanning mill selection, putting on all the wind and a screen in the bottom of the shoe that will remove all small grain; we have found a good sample of seed to result from the second cleaning. In fact with the mill thus set very little grain is removed in the second operation.

For large, plump seed of this kind we have found it necessary to sow more heavily per acre, 2½ bushels of oats of such varieties as Banner, Ligowa, etc., per acre by measure gave none too heavy a stand, and in parts of the fields 3 bushels would not be too much, although this quantity might be trying on the young grass and clover plants when ripening began. Of oats of the O. A. C. No. 3 and Daubeney varieties 1½ to 2 bushels per acre gave as heavy a cropping as the larger seeding of the other varieties. In barley 1½ to 1¾ bushels per acre of smaller-grained varieties as the Mandscheuri and O. A. C. No. 21 have proven a good seeding on soils adapted to barley growing. As to varieties in spring grains we have found few oats to excel the Banner oat in this locality. The Siberian has given good results, and though much smaller in the grain is thinner in the hull. O. A. C. No. 72 has yet to prove itself superior to these in this locality. Though a better yielder, as yet it is almost too long in the straw for most of the soil in this locality, and is about a week later than these other varieties, though it may be come earlier by continued growing here.

We are inclined to think if ordinary care were given to the selection of a strain of oats of the Banner type and variety, an oat better adapted to this part of the Province than O. A. C. No. 72 might be produced. We are hoping the latter variety may be popular in other parts of the Province may adapt itself here. Of barley O. A. C. No. 21 and its parent Mandscheuri seem to be the only varieties in use, and the use proves the value.

For mixed crops we had sown Mandscheuri barley with Banner or Siberian oats, but the period of ripening was too uneven to avoid some waste in cutting, though a large amount of good feed has been grown by the mixture of these varieties. This spring we have sufficient O. A. C. No. 3 oats to give a trial to a mixture of these with O. A. C. No. 21 barley, from which we expect good results.

We almost invariably seed our spring crops to

grass and sown 9 t unfavorable a thin ce lbs. per clover, 2 lbs. alfalfa Turkesta by itself that was it proved cutting s alsike va to keep stalks to of hay c by the s was also valuable 8 lbs. r timothy grain dr hand see loved by Middle

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grass and clover. Up to 1913 we had usually sown 9 to 10 pounds per acre. Sometimes in unfavorable seasons we found this to give rather unfavorable results. In 1913 we sowed from 12 to 14 a thin catch. In 1913 we sowed from 12 to 14 lbs. per acre in the proportion of 6 lbs. red clover, 2 lbs. alsike, and 3 lbs. of timothy and 3 lbs. alfalfa. The last was some seed of the Turkestan strain, 62 per cent. germinable. Sown by itself it gave a short, one-stalked growth that was very unsatisfactory, but in the mixture it proved a valuable addition. It came to the cutting stage very little earlier than the red and alsike varieties. The thickness of seeding seemed to keep back the blossoming, lengthened the stalks to correspond with others, and a fine crop of hay of good quality which is eaten greedily by the stock was produced. A second cutting was also had which yielded a goodly quantity of valuable feed. Our ordinary seeding mixture is 8 lbs. red clover with 4 to 5 lbs. alsike and timothy per acre, sown with the seeder on the grain drill in spring grain and with the wheel and seed on the fall wheat, and generally followed by the harrow.

CHAS. M. MACFIE.

Middlesex Co., Ont.

Experiments in Weed Eradication.

During the past three years (1912-13-14) the Ontario Agricultural and Experimental Union carried on co-operative experiments in the eradication of weeds. Some forty-five farmers co-operated in this work. The weeds experimented with were Perennial Sow Thistle, Twitch Grass, Bladder Champion, Wild Mustard and Ox-eye Daisy. Some very interesting and valuable results were obtained. Those who took part in these experiments profited by the experience. In nearly every instance they cleaned the field experimented with, and demonstrated to their own satisfaction the effectiveness of the method tried, and at the same time their results furnished practical information to others.

These co-operative weed experiments will be continued this year (1915). The weeds to be experimented with are Perennial Sow Thistle, Twitch Grass, Bladder Champion or Cow Bell, Wild Mustard and Ox-eye Daisy. If you have any of these weeds on your farm you are invited to fill in an application form which may be had by applying to Prof. J. E. Howitt, O. A. C., Guelph, Ont. The instructions for the experiment and a blank form on which to report the result of the work will be sent to each experimenter on receipt of application blank properly filled out.

The experiments are: 1. The use of rape in the destruction of Perennial Sow Thistle.

2. A system of intensive cropping and cultivation, using winter rye followed by turnips, rape or buckwheat, for eradicating Perennial Sow Thistle.

3. The use of rape in the destruction of Twitch Grass.

4. Method for the eradication of Bladder Champion or Cow Bell.

5. Spraying with Iron Sulphate to destroy Mustard in cereal crops.

6. A method of cultivation for the destruction of Ox-eye Daisy.

The following information has been gained from these experiments already: 1. That good cultivation, followed by rape sown in drills, provides a means of eradicating both Perennial Sow Thistle and Twitch Grass.

2. That rape is a more satisfactory crop to use in the destruction of Twitch Grass than buckwheat.

3. That rape gives much better results in the eradication of Twitch Grass and Perennial Sow Thistle when sown in drills and cultivated than it does when sown broadcast.

4. That thorough deep cultivation in fall and spring followed by a well-cared-for hood crop will destroy Bladder Champion.

5. That Mustard may be prevented from seeding in oats, wheat and barley by spraying with a twenty per cent. solution of iron sulphate without any serious injury to the standing crop or to the fresh seedings of clover.

The object of these experiments is to gather data from which definite statements may be made regarding the best methods of controlling the various bad weeds. It is hoped to include more weeds each year until exact information has been obtained about the eradication of most of the bad weeds of Ontario. In the instructions sent out to experimenters the methods outlined for the control of the various weeds are those which have been tested by practical men and found effective. It is hoped that those who co-operate may by the experiment clean the field of the particular weed with which they are experimenting.

Address all applications for Experiments in Weed Eradication to J. E. Howitt, Botanical Department, Ontario Agricultural College, Guelph, Ontario.

The Time for Thinking and Tinkering.

Editor "The Farmer's Advocate":

Between now and the day you can get on the land you have at your disposal hours and days that can be made the most profitable period of the year. It is your best time for thinking and tinkering. The dividends paid on your investment during this period will not, it is true, be paid directly, but will accrue in harvest time through the medium of more systematic summer work and less valuable time lost by accident and delay.

When you come down to figures, you know that every day's delay in seeding after the ground is fit means a loss to you in crop of between \$5 and \$25, depending on the stage of the season and the size and kind of crop in question. One authority has found that a crop of oats loses 56 pounds per acre for every day's lateness in seeding after the land is ready to work. Other crops are affected more or less than oats by untimely seeding.

It is assumed, perhaps unwarrantedly, that every farmer already has his seeding plans outlined, his seed selected, and his implements "looked over," which is supposed to mean something different from overlooked. Perhaps, for present purposes, I am sufficiently accurate when I say that few farmers have given much thought to their approaching season, beyond such general provision as suggested above. Herein lies as good a distinction as any between good and profitable farming, and the reverse, bad and unprofitable farming. The man who plans to earn big wages for his winter work, preparing for the growing season, is never disappointed. Last January I saw an enterprising Perth farmer drawing out his manure over the snow. Does that pay? Yes, doubly! The work is done when labor is cheap, instead of when labor is dear, and the land gets the advantage of the manure at its best.

My purpose is not to tabulate the kinds of traditional summer work that can be done in winter. I wish these few lines to be suggestive, rather than comprehensive. Thinking ahead should not only have in view the conventional summer (for there is really no such thing), but should allow as far as possible for the exceptional season. For example, suppose the seeding season breaks on us abruptly, before your plows, harrows, roller and drill are dragged out of winter quarters and the bird-lime, rust and dust removed! You lose from an hour to a day cleaning and greasing them (to say nothing of the coat of paint, the new parts, repairs, etc., they need). Benjamin Franklin, as a boy, after tramping from New York to Philadelphia, with constantly growing rents in his clothes, gave birth to the proverb, "A stitch in time saves nine." You know how soon a disjointed, rickety piece of machinery goes to pieces. Now is the time to do the thinking and tinkering.

Every summer there's a smash somewhere in your harness system. Have you on hand what will serve for an anvil, a box of copper staple-rivets, and patch pieces of leather for temporary harness repairs? Of course, you will put your harness in condition before the start-off, but accidents never occur till the time of stress. Have you an extra bolt, an extra nut for these weak places on the binder or mower? One little bolt may mean a trip to town when delay is dollars.

Granted that you have had your soil analyzed and have arranged for your fertilizer, if necessary, suppose there comes far too much rain in April, and those low spots sour. Have you a sprinkling of slacked lime on hand to correct the acidity before seeding? The lime kilns are late in opening. A few bushels of air-slacked lime is an excellent commodity to have on hand. It need never go to waste.

Suppose the hay fork and track are O. K., the gangway bump-boards in place, the gap-poles perfect, and the yard drains set free! Are they? Have you got ready your grafting wax and tools and arranged for your scions? The house garden in June will need stakes for the peavines, grape-trellis repairs, and racks for tomato vines. A few hours at these preparations can be spared now. If let go, the jobs will probably not be done at all. Do you remember last summer, in the time of sweat and swelter, you promised yourself a score of times that you would take a saw some fine day and cut down those encroaching elderberry bushes that were interfering with the plow? "Do it now!" should be your motto, before spring opens. And while you're about it, why not decide on some plan of keeping the honey when thorn stabs don't bother you to any extent. Trim your currant and gooseberry bushes; tent. Trim your currant and gooseberry bushes; tent. Trim your currant and gooseberry bushes; tent. Cut away all the old wood where the snow will let you. These perennials stand trimming in any season. Later on, when the ground softens you can set out new slips.

Your wife is probably tired complaining about the soot-stained spots below the chimney or under the leak in the roof, and about the door-catch and worn threshold tread. This is your best time for calcimining and repairing. Keep the women folks out of worry and they will keep

hunger and discontent out of you. Have the supply of summer wood not only plentiful but piled in sizes, from kindling to blocks. The women's pleasure will be seen in your pies.

If, after you have everything done that the above outline suggests, look to the plan for detecting good layers among your poultry, and don't feed the shirkers a day longer. Patriotism nowadays, not only to the Empire but to ourselves, demands that non-producing consumers be handled without gloves. If your valuable wheat is not being turned into valuable eggs, you can easily turn it into dollars or pork.

Think and tinker before the big rush comes!
Perth Co., Ont. JAS. A. BYRNE.

Farm Problems for City Men.

Editor "The Farmer's Advocate":

Apropos of the many stories going the rounds in the city papers giving the experience of city men who became farmers comes the warning of the Department of Agriculture to city people, who having read glowing accounts of the wealth to be made on the farm, are ready to pit their inexperience against the presumed ignorance and lack of ability of the men who have spent their lives on the farm.

To the many letters the Department has received from such people, its specialists reply about as follows:

As a matter of fact, it is not an easy matter to make money on the farm. Only the most practical and experienced farmers are making any considerable profit out of their business. Most of the money that has been made on the farm in recent years has been made, not by farming, but by the rise in price of farm lands. In the nature of things, this rise cannot continue indefinitely, and someone will own this land when the prices become practically stationary, or perhaps start to decline.

While it is true that occasionally a city-bred family makes good on the farm, this is the exception and not the rule. It is always a risk to invest in a business without first making a thorough study of that business. Many city people who have saved up a few hundred dollars and who have had little or no farm experience, but who are imbued with a rosy vision of the joys and profits in farming, buy poor land at high prices, and thereby lose the savings they have been years in accumulating. One city family paid \$10,000 cash and assumed a \$6,000 mortgage on a farm worth only about \$11,000. Another paid \$2,000 cash and signed a mortgage for \$6,000 on a farm that was later appraised at \$3,000. A city family that had saved \$2,000 used this money to make a first payment on cheap farm land, and, when their eyes were opened, found they still owed considerably more than the farm was worth. For several years they have worked almost day and night to meet the interest without being able to reduce the principal. These instances could be multiplied almost indefinitely.

In purchasing a farm, great care should be taken to get a good farm at a fair price. To pay, or agree to pay, more than the farm is worth, is to invite failure from a business viewpoint. No farm that does not pay interest on the total investment, depreciation on equipment, and wages for all labor performed on that farm is successful.

Even when great care is taken in making the investment, only in exceptional cases should the city-bred family attempt farming generally. The best advice that can be given to the city-bred man who desires to become a farmer is that before purchasing a farm he work as a farm hand for two or three years. This will give him an opportunity to learn at first hand many things about the business as well as the practical side of farming. In no other way, as a rule, can experience be gained at less trouble and expense or without danger from financial disaster.

Peel Co., Ont. ERNEST F. DAVIDSON.

The Land Makes a Difference.

Editor "The Farmer's Advocate":

Re your article published March 4 about maple syrup being of different color and quality, when trees grow on different soil. From my experience of cane sugar growing and the manufacture of cane sugar down South I should say it would make a decided difference. We have taken the same tops (plants) from one plantation to another to try and get the same grade, and color, sugar, but have found that the black soil will not produce the same kind of sugar as the clay, and visa versa. Even the rum which is made from the refuse of sugar and molasses, etc., etc., cannot be produced in every parish the same, for instance, sugar plantations in certain parishes will make what we call the German flavor rum, which is sold off the Island at the highest price, viz., at 8s. (eight shillings) per gallon, and not 20 miles away other plantations can only get about 3s. 6d. (three shillings and sixpence) per gallon for theirs, and I have known instances where the same distiller has been

brought from a German flavor plantation and tried for two years to produce the same quality rum, but to no purpose, a perfect failure. So it was decided that the soil had everything to do with it. I must say that I have had no experience with maple syrup manufacturing, but have spent a number of years on sugar-cane plantations and know for a fact that what I have stated is quite correct; and I should certainly think that the different soils would produce different quality maple syrup.

Durham Co., Ont.

SOUTHERNER.

Likes the Gang Plow.

Editor "The Farmer's Advocate":

To try to produce more than ever before is the duty of every Canadian farmer in 1915, and as farmers have been advised to sow as many acres as possible this year there is a great danger of a large percentage of this spring's crop being sown without proper cultivation. I think it is the duty of every farmer to himself and the Empire to cultivate properly and sow every acre that he can in soil suitable for the special crop he sows, but it will be better for him to leave more of his sod ground for hay or pasture than to break it up and not be able to cultivate it properly and get it sown in proper time. I believe Ontario has the largest acreage of fall ploughing done for this spring crop that has ever been done, which is a good start. If this fall-ploughed ground is free from thistles and other foul weeds or grasses I would go on it as soon as it gets dry enough to work, and fill the dead furrows with the disk harrow. Then take a spring-tooth cultivator and go over it often enough to stir all the surface about three inches deep. Twice over will usually do it with a good cultivator, then go over it once with the wide iron harrows, but if manure has been applied or if it is a clean clover or timothy sod turned down and there are some bunches of manure or sod that is not thoroughly divided I would go over it again with the harrow. After this roll with a good heavy roller and drill the seed and harrow once after the drill. I have tried rolling after the drill instead of before, but much prefer rolling before the drill. When rolling after sowing, especially if the ground is a little damp, the roller makes it too solid for the young plants. It is also better to roll before the drill to help keep the drill from putting the seed too deep. I find that the plants come up quicker and stronger when the seed has been sown shallow than they do when sown deep, and the crop will also stand a drouth better when the seed has not been put in too deep.

When ground that has been fall ploughed for a spring crop is very dirty with thistles or other weeds and grass go up the dead furrows with the disk harrow, then go over the ground once crosswise with the wide iron harrows and then hitch on the gang plow. I prefer one with three wheels and that turns at least three furrows at a time, the three-wheeled ones are not as liable to shove away from tough or hard ground as the two-wheeled ploughs, and by having one which turns several furrows you can get over the ground faster by putting on more horses. I have tried a great many implements, but have not found anything yet to equal the gang plough on dirty ground that has been fall ploughed. I plough as shallow as the plough will work well and cut a thin slice off all the ground. Be sure to keep the shares of the plough sharp, so they will cut everything. This will help to kill some of the thistles or other weeds, and those that it does not kill will be set back, giving the grain crop a chance to get a start and keep them smothered. After the ground is gang ploughed I go over it with the wide iron harrows until the soil is fine and level, and the weeds that have been cut loose have been brought to the surface. I then roll with a heavy roller, and sow with the drill and harrow crosswise of the drills. I want the team to walk up fast when they are on the harrows, as I find that a quick stroke of the harrow does more good than a slow stroke. If the weather is too hot for the team to stand going fast all the time, I want them to make short stops and often rather than long rests. If after seed has been sown on heavy clay soil there should come a heavy rain before the plants get above the ground I go over the fields, if the weather turns dry, once with a sharp-tooth harrow to break the crust which will form. Some farmers I know think my method with the gang plough too slow. If any of them have a faster method and one equally good I wish they would let me know through the columns of "The Farmer's Advocate."

Elgin Co., Ont.

J. A. JACKSON.

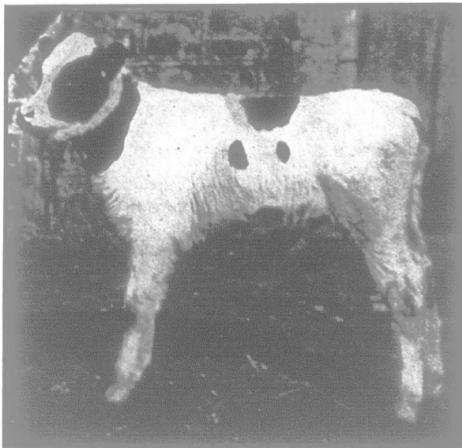
Those farm implements that wintered in the large, airy shed that nature provides free of charge, should be brought from the open fields up near the barn and treated to a liberal application of oil. Their vital parts will have become somewhat rusty through disuse. Perhaps something about them was broken and now is the time to look after the repair work. An easy-running implement will spare a lot of flesh put on the team during the season of leisure.

THE DAIRY.

Is the Present Price of Cheese Too High?

Editor "The Farmer's Advocate":

Whenever the price of any farm product reaches a point that there is a reasonable profit in the production of that article, at once, in most cases, begins a campaign to "hammer down the price." Cheese is no exception to the general rule, hence we see that the "hammering" process has already begun.

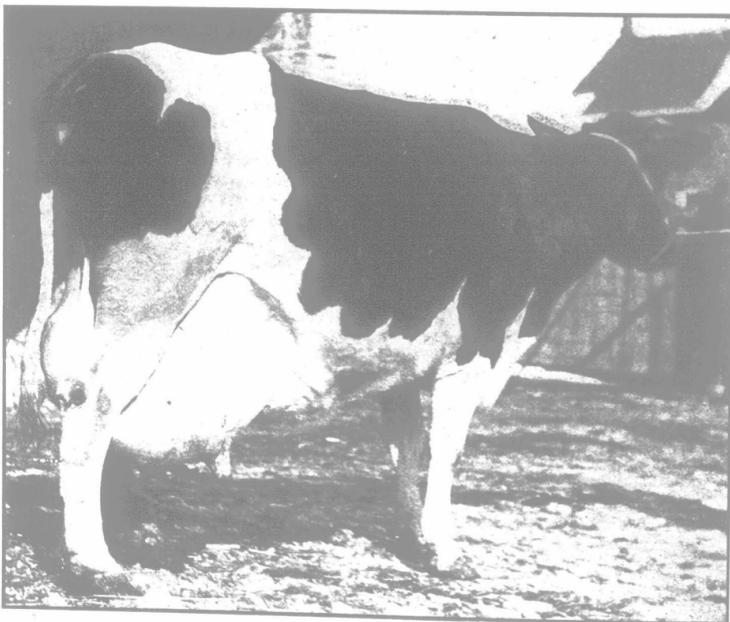


Progeny of Producers.

Both dam and sire's dam of this bull calf have given over 100 lbs. of milk a day (the average of the two being 109 lbs.), and over 30½ lbs. butter in a week. Owned by D. C. Flatt & Son, R. R. 2, Hamilton, Ont.

In a recent issue of a trade paper published in Canada are a couple of letters published in the London, Eng., "Grocer's Gazette," from which we extract the following:

"Are not the New Zealanders or shippers of cheese getting too much for their cheese, which is largely being used for the defenders of the United Kingdom, of which New Zealand is part?" (By the way I noticed that Peter McArthur was singing a similar song to the farmers of Canada, recently in "The Advocate." If Peter is a real farmer, he knows that the farmer never has received anything like what his goods



Ladysmith Calamity.

This cow and her full sister average 195 lbs. milk a day. Owned by D. C. Flatt & Son, R. R. 2, Hamilton, Ont.

are worth, during an average of years. The farmer, may at times, get what looks like big prices for a short time, but this does not make up for the long periods of low prices and unprofitable returns.)

"As cheese at about 90s. per cwt. is about 25s. higher than in normal times, while best Colonial butter at about 134s. per cwt. is very little above the normal price with large supplies, and more than is wanted for present consumption, it

might be advisable to give our troops in training some butter, and less cheese than they are now getting. If the Government demand for cheese were to stop for a short period the price would probably fall 20s. per cwt. It is well known that it takes double the quantity of milk to make one cwt. of butter than is required to make the same quantity (weight) of cheese. Therefore, if butter is 134 s., cheese should be about 67s. per cwt."

We should like to offer the following comments on the foregoing:

1. The farmers of Canada should uphold in every way possible the New Zealand farmers in their present good fortune, on account of receiving fair prices for their cheese. Farmers' interests are world-wide. We in Canada can no longer afford to cavil at, or be jealous of, the prosperity of farmers on the other side of the globe. The world of farmers is now so small, brought about by rapid transportation, that the New Zealander is our next-door neighbor on the markets of Great Britain. The writer has never been in New Zealand, but we are safe in saying that even under present prices of cheese the dairy farmer of New Zealand is not making a fortune. The fairy tales of fortunes in farming need revising, and a few facts from the experience of farmers in general should receive the same publicity that is given a few isolated cases in various parts of the world.

2. The writer of the foregoing letters, one of which was addressed to the "Secretary of State for War" in Great Britain, forgets the large number of times that cheese sells for—not 90 shillings per cwt., but 70, 65, 60, 50, 45, and even down to 40 shillings per cwt., which latter price netted the Colonial farmer about six cents per pound of cheese for the milk required to make the cheese. Where then was the profit? The cheese industry of Canada was on the verge of extinction before the recent rise in price. The dealers in and consumers of Canadian cheese may as well understand at once that if cheese sags back to its former level of prices, the milk producers for Canadian cheese factories will surely quit the business, and the poor and rich people will have cut off one of the cheapest sources of food energy at present available.

3. The value of cheese as a food has not been understood by the consuming classes. They willingly pay 18 to 25 cents per pound for beef and 25 to 30 cents a pound for bacon, but consider cheese at 20 cents per pound too expensive. The author of Bulletin 221, Ontario Department of Agriculture, says: "Cheese is one of our most concentrated foods. More than one-fourth of its weight is protein, about one-third fats, one-third water. It is not only valuable for the amount of protein, or muscle-forming material, and fat it contains, but, also because of the ease with which it can be kept and prepared for the table

and for the variety of ways in which it can be served."

"As a further indication of the high nutritive value of cheese, it may be pointed out that one pound of cheese contains nearly all the protein and fat in one gallon of milk. Or, if we compare it with other protein foods, we find that one pound of cheese has nearly the same value as two pounds of fresh beef, or any other fresh meat food, and it is also equal to two pounds of eggs or three pounds of fish."

According to this estimate of relative food values, when fresh meats are purchased at 18 to 25 cents per pound, cheese is worth 36 to 50 cents per pound.

4. The author of the "letters" is slightly in error when he says that it takes double the quantity or weight of milk to make a pound of butter than it does to make a pound of cheese. With average milk, the weight required to make a pound of butter will make about 2½ to 2⅓ lbs. cheese. The figures quoted indicate that the price of butter is altogether too low in comparison with the prices for other foodstuffs. If it were not for the valuable by-products, skim-milk and buttermilk, in the manufacture of butter, it could not be profitably produced at pre-

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falling prices, particularly in summer. What we need is not a lowering of the price of cheese to correspond with that of butter, but rather an elevation in the price of butter to correspond with the food values in other lines. Quoting with the food values in other lines. Quoting again from Bulletin 221, butter at 30 cents per pound produces 12,000 calories (heat units), whereas sirloin beef at 24 cents per lb. produces but 4,132 calories; eggs at 25 cents per dozen give 3,853 calories. We thus see that butter is relatively too cheap at present prices.

I know of no more important line of work at the present time than that of placing correct information before the consuming classes, of the relative values of foods purchased for the home. A great deal of money is wasted on the purchase of food material that does not sustain the human body economically. Making all due allowance for variation in tastes, and the dietetic value of flavoring material, etc., it is undoubtedly true that the high cost of living could be materially reduced without causing any deficiency in body requirements, by knowing something more than is commonly known by purchasers of food, regarding the needs of the human body and how to purchase these needs with best results. In this respect dairy products of all kinds take a high place. Instead of a lowering of prices for dairy goods, there is a need for increasing the price so that dairy farmers would be encouraged to keep things clean and sanitary in their stables and in connection with the handling of milk. To keep cows and milk clean, requires labor; labor costs money, and the rewards in the past have not been commensurate with the increasing cost of production in dairying, or, for that matter, in any other line of farm manufacture.

Instead of a lowering of prices for farm produce there is great need of an increase in order to encourage farmers. One of the good results of the present campaign of Patriotism and Production, is that it will call attention to the value of farms and farming, from a national viewpoint in such a way as has never been done before. The men at the head of affairs in Canada realize that we must begin to pay for the spending era which has characterized us up to the present. The wealth to pay back what we have borrowed must come out of our mines, forests, fisheries and soil—but chiefly out of the soil, hence farming will occupy a relatively more important place in the eyes of Canadians than ever before, but farmers need encouragement—to “hammer” down prices is a poor way to accomplish what all who know anything about Canadian finance, realize is a necessity at the present time.

O. A. C.

H. H. DEAN.

The Dairy and Cold Storage Branch of the Dominion Department of Agriculture informs us that Abraham Schneur, a butter dealer in Montreal, appeared in court on Monday last to answer a charge of selling one pound blocks of butter which were under weight, and was fined \$50.00 or two months in jail. The information was laid by Inspector Bouchard, of the Dairy and Cold Storage Commissioner's Staff. This is the first conviction for this offence under the Dairy Industry Act, 1914.

POULTRY.

A Satisfactory Henhouse.

During the summer of 1914 it became necessary to construct a henhouse on “Weldwood Farm” in order to accommodate the increase in the flock. In designing a house that would be suitable for the purpose, comfortable, healthful, and convenient, a modification of the open-front house, recommended by Prof. W. R. Graham, of the Ontario Agricultural College, was selected. The original plan of the open-front house, as constructed throughout the province, has dimensions as follows: The house is 20 by 20 feet on the ground, 4 feet 6 inches high at the back, and 3 feet high in the front. The ridge is 7 feet high, with a door in the east end and a window 5 feet 4 inches by 4 feet 2 inches in the west end. The entire front or south side is open to the atmosphere, being covered only with chicken wire. The roosts are placed at the back of the pen, which is four and one-half feet high, but the roosts themselves are placed so the birds will avoid the stratum of cold air near the floor and yet not be too close to the roof.

The henhouse at “Weldwood” differs from this plan only in two regards. However, they are additions rather than alterations. One change is in the roof. Instead of having the two sides of the roof meet, as is customary, the south side, which on account of the low front is the long side, was left as in the original plan, but the north roof was raised at the ridge a sufficient distance to allow for a sash containing 24 panes of 10 by 12-inch glass. This construction and extra lighting brightens the whole pen, making every part almost as light as the front, where there is nothing but wire. The extra lighting, in reality,

increases the area of the pen by lighting all parts, making it as light to scratch in the center of the pen as it is in front. The additional glass also admits more sunlight, making the pen warmer during the day. The extra glass space would tend to cool the house at night, but during the winter now passing it was not found necessary to provide a covering for this narrow window to retain heat.

Another change was made in the length of the building. An addition of four feet was added to the east end as a “handy room.” In this part the feed may be kept, would-be sitters broken up and hens set. The henhouse proper is still 20 by 20 feet, and a substantial wall separates it from the handy room. One dozen nests are installed in the east wall. Each nest is 15½ inches long and 8½ inches deep, inside measurements, and made in the shape of a box without a cover. A rectangular hole, near the floor, was left in the wall to accommodate each nest. When the hens are fed in the morning, the nests are pulled through into the henhouse proper, and when they are fed again at night, the nests are pushed back into the handy room. The nests themselves slide on a small cleat, and whichever way they may be pulled the end of the nest completes the wall, so there is no open space. When a hen decides to sit, she is simply pulled, nest and all, into the narrow room and given the eggs without disturbing her in any way. Under this system the fowl never roost on the nests, and they are easily kept sanitary and clean. Between the handy room and henhouse proper a convenient door, made chiefly of wire, is hung so it will swing both ways and close automatically. The roosts were arranged at the back of the pen and made in the form of a frame, which is hinged to the uprights in the wall so it will lift up and fasten to the roof. This facilitates the cleaning of the pen and adds to the area, as they may be hooked up at any time. The roosts are 14 inches apart and 12 inches from the floor. Those farthest from the wall could well afford to be higher, but it would then be inconvenient to lift the frame and fasten it to the roof.

The house happens to be so situated that when the wind is in a certain direction it swerves around other buildings and blows rather strongly into the front of the house, sometimes carrying with it too much snow. This undesirable feature was overcome by a screen of cheesecloth attached to the front while the direction of the wind and nature of the weather were unfavorable. Throughout the winter of 1914 and 1915 one hundred hens were housed in this building. All came through in excellent condition without frost bites and all appeared healthy and vigorous. During February the house was divided with a partition of chicken wire into two breeding pens. This division will exist, of course, until the breeding season is over, when the hens will be allowed the run of the building again.

Following is a list of the material utilized in building the house:

42 pieces, 2x4x12; 4 pieces, 2x4x16; 10 pieces, 2x4x14; 6 pieces, 2x6x12; 2 pieces, 6x6x14; 4 pieces, 6x6x12; 2 pieces, 6x6x10; 2 pieces, 2x4x14; 4 pieces, 2x4x12; 3 pieces, 2x4x10; 515 feet, 1x12x12; 25 feet, 1x12x16; 4 pieces, 1x6x14; 8 pieces, 1x6x12; 2 pieces, 1x6x16; 3 pieces, 1x10x14; 7 pieces, 1x10x12; 10 pieces, 1x2x12; 22 pieces, 1x2x14; 600 feet, sheathing; 70 feet, 2-inch matched lumber; 50 feet, 7-in. V. matched lumber.

All the material was planed, as the intentions are to paint the building, but the dressed lumber is unnecessary where not desired. Second-hand lumber would be just as good, as far as protection and warmth are concerned. The roof was covered with a special roofing, and in this case particularly a cheaper sheathing would do upon which to cover. Lumber which usually ex-

ists around the farm could be requisitioned for this purpose, and thus reduce the expense very materially. The previous list is given to convey some idea of how much would be required. No suggestions are necessary as to the quality; that is a matter of taste. However, substantial material should be used at all time.

A Long House.

Editor “The Farmer's Advocate”:

In the last issue of “The Farmer's Advocate” I saw an enquiry for a plan for building a henhouse; by G. M. S. I built one two years ago on the same plan. The north side and two ends I built of cement. The south of matched lumber with an abundance of glass. The house is 36 feet by 12 feet; the north is 8 feet high with a three foot hall. The south side is 5½ feet high. I have trap doors for gathering the eggs in hall, and the house is divided into three apartments, three feet of board, rest wire.

It has proved very successful. I have pure-bred Barred Rocks and they have laid all winter. On south side I have a large yard enclosed with chicken wire divided into three parts, so as to let them out and still keep them separate.

Middlesex Co., Ont. CONSTANT READER.

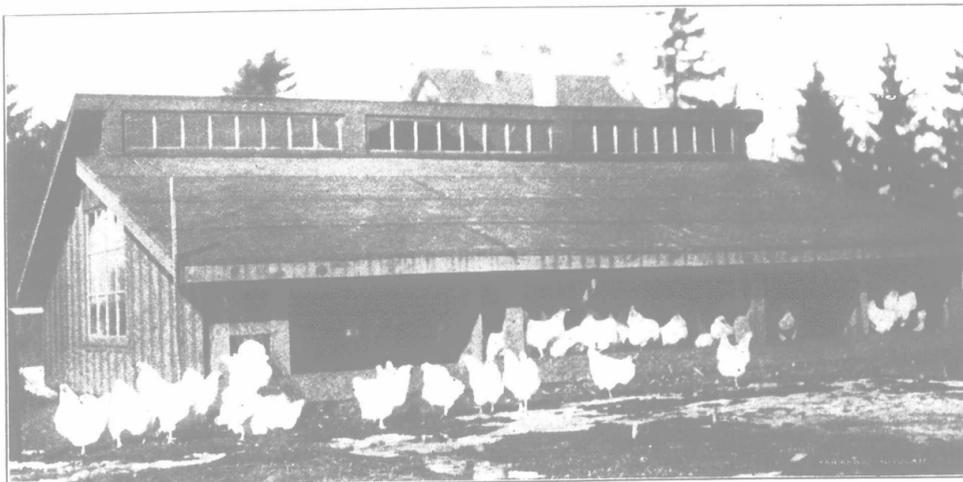
HORTICULTURE.

Growing Nicotine for Spraying Purposes.

Nicotine has long since proved its poisonous properties and its usefulness in destroying insect life. In some districts fruit growers have experimented with the tobacco plant in search of a cheaper source of nicotine than through the ordinary channels of commerce, but the growth of tobacco exclusively to produce the drug has not yet become common. The agricultural Experiment Station of Virginia conducted considerable investigatory work, and their results were published in a bulletin which is the authority for many of the figures contained in this short article. As an effective means of battling with aphids and other plant lice nicotine has been found very useful in this country, but its price does not compare favorably with that of other spray materials. For fruit growers and stockmen as well the product would be useful if the plant could be grown and the drug extracted without too much trouble. One difficulty arises in that the percentage of nicotine in the plant varies considerably, and the extracted product should be analyzed before it is applied; yet with our numerous colleges and governmental institutions that obstacle should be easily overcome.

The nicotine content of tobacco leaves varies from one to over five per cent., depending upon the variety of plant and nature of the soil. When a crop is grown on land fairly rich in nitrogen the nicotine content usually runs high. The percentage is highest at maturity, and decreases from that time whether the crop is allowed to remain in the field or is harvested and cured. By soaking the leaves and stems of the plant in water for 24 hours with frequent agitation, about three-quarters of the nicotine will be extracted. This should be done in a closed container to prevent too much volatilization of the product.

It has been found that a solution containing .05 per cent. nicotine will kill plant lice, and if 50 lbs. of dried plants be soaked in 100 gallons of water and 1 part of water added to each part of solution obtained the resulting mixture will test in the vicinity of .05 per cent. However, it would be an easy matter to have the ex-



The Open-front Henhouse at Weldwood.

tract analyzed so the dilutions could be made exactly. The Burley would be a suitable variety to grow, as it tests fairly high in nicotine.

Dilution of Lime-sulphur Made Easy.

Where concentrated lime-sulphur wash is used it should always be tested with an hydrometer, but many fruitmen do not understand the interpretation of the instrument. To facilitate this work a table, taken from the bulletin compiled by L. Caesar, of the Ontario Agricultural College, on Lime-Sulphur Wash, is printed herewith. According to the tests of the solution one gallon of lime-sulphur is used with a certain number of gallons of water. The table is quite complete in regard to this information:

TABLE FOR DILUTION OF CONCENTRATED LIME-SULPHUR.

| Reading on Hydrometer. | First Application. | Second Application. | Third Application. |
|-------------------------|-------------------------------|-------------------------------|-------------------------------|
| Specific Gravity Scale. | Lime-sulphur. Water. Gallons. | Lime-Sulphur. Water. Gallons. | Lime-Sulphur. Water. Gallons. |
| 1.320-35 1/2 | 1 with 9** or 9 1/2 | 1 with 34 1/2 | 1 with 39. |
| 1.310-34 1/2 | 1 with 8 1/2 or 9 | 1 with 33 1/2 | 1 with 38. |
| 1.300-33 1/2 | 1 with 8 1/4 or 9 | 1 with 32 1/2 | 1 with 36 1/2. |
| 1.290-32 1/2 | 1 with 8 or 8 1/4 | 1 with 31 1/2 | 1 with 35. |
| 1.280-31 1/2 | 1 with 7 3/4 or 8 1/4 | 1 with 30 1/2 | 1 with 34. |
| 1.270-31 | 1 with 7 1/2 or 8 | 1 with 29 1/2 | 1 with 33. |
| 1.260-30 1/2 | 1 with 7 or 7 1/2 | 1 with 28 1/2 | 1 with 31 1/2. |
| 1.250-29 1/2 | 1 with 6 3/4 or 7 1/2 | 1 with 27 1/2 | 1 with 31. |
| 1.240-28 1/2 | 1 with 6 1/2 or 7 | 1 with 25 1/2 | 1 with 29. |
| 1.230-27 1/2 | 1 with 6 or 6 1/2 | 1 with 24 1/2 | 1 with 28. |
| 1.220-26 1/2 | 1 with 5 3/4 or 6 1/2 | 1 with 23 1/2 | 1 with 26 1/2. |
| 1.210-25 1/2 | 1 with 5 1/2 or 6 | 1 with 22 1/2 | 1 with 25. |
| 1.200-24 1/2 | 1 with 5 1/4 or 5 1/2 | 1 with 21 1/2 | 1 with 24. |
| 1.190-23 1/2 | 1 with 5 or 5 1/4 | 1 with 20 1/2 | 1 with 23. |
| 1.180-22 1/2 | 1 with 4 3/4 or 5 | 1 with 19 1/2 | 1 with 21 1/2. |
| 1.170-21 1/2 | 1 with 4 1/2 or 4 3/4 | 1 with 18 1/2 | 1 with 20. |
| 1.160-20 1/2 | 1 with 4 or 4 1/2 | 1 with 17 1/2 | 1 with 19. |
| 1.150-19 1/2 | 1 with 3 3/4 or 4 | 1 with 15 1/2 | 1 with 18. |
| 1.140-18 1/2 | 1 with 3 1/2 or 3 3/4 | 1 with 14 1/2 | 1 with 16 1/2. |
| 1.130-16 1/2 | 1 with 3 or 3 1/2 | 1 with 13 1/2 | 1 with 15. |
| 1.120-15 1/2 | 1 with 2 3/4 or 3 | 1 with 12 1/2 | 1 with 14. |

*The fraction need not be taken into account unless the user wishes to do so.

**The smaller number is for use against San Jose Scale, the larger for use where there is no scale.

Varieties of Vegetables to Grow in the Farm Garden.

The garden should be a trump card on the farm, and other crops to a large extent should be secondary to it. From a real practical viewpoint it may be correct to leave the garden plot untouched till the seeding and planting are all done, and then haul out some green manure perhaps to a plot which requires the most available of fertilizers, and set about to have a garden. In farm practice this may be correct, but we cannot see it that way, and in theory it is positively wrong. During early summer the chickens are just growing, the lambs are developing, and the winter stores of vegetables and fruits are getting low and out of season. Whence then is the table to be spread? The garden should be attended to early in the season in order to tide over that period of the year when provisions are scarce and expensive. This article may be construed as a plea for better gardens, but in it we wish to recommend some varieties that will be useful. It would be difficult in so short a space to enumerate all the various kinds of vegetables, and discuss them as to variety and cultivation. However, there are a few which stand out pre-eminently, and without which no garden would be well balanced or serve its best purpose. There should be a small patch on every farm that might be devoted to crops that are permanent in nature or stand year after year. Asparagus is that kind of a plant, and for delicacy it is superior. The roots are planted eight or nine inches below the surface and it is allowed to build itself up, so to speak, for a couple of years, then cuttings may be made from it for table use. When once established the bed is permanent, and no one will care to see it broken up. The popular varieties of this plant are Palmetto, Argenteuil and Conover's Colossal. Another small block of land should be devoted to strawberries. These are only semi-permanent, for the plot should be changed every few years. Everybody knows the taste of a strawberry, and few there are who will refuse a nice dish of strawberries and cream. It is a luxury the poor can enjoy as much as the rich, and usually a little more because their appetite is better. The Dunlop as an individual berry is the farmer's garden has few superiors, but the Gandy might be sparingly used to produce an early supply. Urban people pay out good money for rhubarb, but the farm garden will produce it

in abundance. Every member of the family perhaps will not relish it, but some will and they should have it. Victoria and Raspberry are two of the best varieties.

The foregoing garden crops are more or less perennial in nature, and should occupy a position of the garden that must not be tramped over during cultivation. We now come to the annuals which mature during the season, and first of all to those that require early attention in order to bring them into use when they will be relished most, or to bring them to a satisfactory maturity. Celery seed should be sown in a hot bed or on an early patch of land, and the plants should be transferred to the garden when it is being prepared. The celery will probably require some extra care in order to blanch it properly, but the crisp stalks of the plant will be good remuneration. White Plume or Golden Self Blanching

for it cannot last too long. Golden Bantam is the best garden corn known, and it is early. Country Gentleman and Stowell's Evergreen are also good, but they are later.

Citrons make excellent preserves, and the young plants would be better grown under some protection and transplanted later into hills. However, they will thrive and usually mature when sown early in the garden. One variety will suffice, it is the Colorado Preserving.

Cucumbers are used for slicing and pickling. For the former use Davis Perfect, and Cumberland are best, and for pickling, Westerfield and Chicago Pickling have been recommended.

Onions have peculiarities of their own, but they are a necessity in the culinary practice. The Yellow Globe Danvers, Prizetaker, Red Westerfield, Southport Yellow Globe and Southport Red Globe are the varieties grown with preference given to the first.

Carrots are another staple. Chautenay is good, but Danvers and the Rubicon follow very closely. An early sowing should be made, and again about the first of June for later use.

Parsnips may be mentioned with two varieties, Hollow Crown and Guernsey.

Pumpkins. The pie season would be a failure without pumpkins, and to make it a success plant Sugar and Jumbo.

Squash also figure in the garden. For an early squash, Crookneck and White Best Scallop are serviceable varieties, but Hubbard is a good late variety.

Melons make a very nice desert. Rocky Ford or Emerald Gem Hackensack and Montreal Market are good kinds of musk melons, while Hungarian Honey and Cole's Early are the most likely to ripen of the water melon type.

Turnips.—Early: Extra Early, Purple-top Milan, Golden Ball. Late: Swedes.

Spinach.—Victoria, Virofly, Bloomfield.

Egg Plant.—Black Beauty, and New York Improved.

Kohl-rabi.—Early White or Purple Vienna. Vegetable Marrow.—Long White Bush, and English Vegetable Marrow.

Spraying as Usual.

On every fruit farm at this season of the year there should be some arrangement for preparing lime-sulphur wash, where the fruit grower does not purchase the same in a commercial form. The commercial product is all right, and those advertising this material are reliable, but some prefer to prepare their own mixture, and under such circumstances the apparatus should be busy these days. Many who have already prepared the concentrated lime-sulphur, and many who have never prepared it, may be wondering just at this time how the operation is carried on.

The formula which has been found most effective is 50 pounds fresh stone lime, grading high in calcium; 100 pounds of sulphur, either flowers or a fine grade of flour of sulphur; 40 to 50 gallons of water, either hard or soft. These proportions should be followed under all circumstances, but the total amount may be very much reduced to suit the size of the heating apparatus. The material used in this preparation is of much importance, especially the lime. It should not be air-slaked at all and should test high in calcium. There is a vast difference in limes in this regard, and those which are of poor quality will result in a large percentage of sediment or mud.

There are many systems of making the solution. One way which can be recommended is to place about ten gallons of water in the boiler, and in this mix the sulphur into a rather thin paste, with all lumps broken up. If 10 gallons of water is not sufficient, a little more could be added. The fire is then made under the boiler and the remainder of the 40 or 50 gallons of water put into the kettle. When it is nearly ready to boil, the lime should be added and the whole thing stirred moderately for twenty or twenty-five minutes. This is one important feature of the operation, for the lime and sulphur must be kept in suspension to hasten the chemical combination. If the boiler is not large enough to allow of this way of slaking the lime, it may be put on the sulphur before the total amount of water has been added. After the total quantities have been placed in the kettle and thoroughly stirred, the mixture should be boiled from 50 minutes to an hour. It is important to have the full amount of water as called for in the proportions. A smaller quantity of water than 40 gallons will give a higher percentage of sediment, and, where the container will permit, it is better to have 50 gallons rather than 40. This will result in less sediment, and under most circumstances give a higher testing liquid.

Under all circumstances where concentrated lime-sulphur wash is being used—the hydrometer should be used to ascertain the strength of the solution, and it should be diluted according to the test.

will be good early varieties; Paris Golden Yellow is a medium kind, and Giant Pascal or Evan's Triumph will do for late.

Lettuce should not be forgotten. In order to get it early the hot-bed should be used, but lacking such a necessary and easily-provided arrangement, lettuce should be sown as soon as the garden is prepared. Frequent sowings should take place at intervals of a week. After it is cut it will grow again, but fresh rows will also augment the supply. There are many varieties of this plant, but Grand Rapids, Black Seeded Simpson, Hanson, Big Boston and Paris White Cos are the popular ones.

Tomatoes should also be given some assistance by artificial forcing. A small box in the house window will start a goodly number of plants, and after transplanting them once or twice they are ready to take a firm grip on the garden soil and produce a splendid article. The Earliana is a good early kind, but it is not usually as smooth as the Chalk's Jewel, which is slightly later. Stone and Success are two varieties that will mature later in the season, but they are not superior to Chalk's Jewel for the domestic garden.

Peas will stand considerable cold weather, and one should not tarry about planting them early in the spring. For early try, Extra Early, Alaska or Notts Excelsior; for medium use Gradus and for late, Advancer or Stratagem.

The name of peas suggests beans, but they are a crop to be planted later, as will be the most of those which now follow. The varieties of beans which are likely to give best results are: Keeney's Rustless Golden Wax, Detroit White Wax, German Stringless, Stringless Green Pod, Valentine and Wardwell's Kidney Wax.

Radishes should be planted early and late, they are always acceptable. Rosy Gem, Scarlet Turnip, White Tip and French Breakfast is a good selection to choose from.

Beets are a wholesome vegetable, and they make good greens. They should be planted early for summer use, and about the first of June for winter stores. Egyptian Turnip is an extra early kind. For moderately early try Early Model, Eclipse and Black Red Ball. For late use and for winter storing Detroit Red and Long Smooth Blood give good satisfaction.

Cabbage and cauliflower plants should be reared first of all in a bed and then transplanted to their summer quarters. Jersey Wakefield is a good early variety of cabbage, while for late use Danish Round Head, All Seasons, and Flat Dutch commend themselves; Mammoth Rock is a good red variety. Extra Early Erfurt and Early Snowball are two good varieties of cauliflower.

Corn should not be forgotten. The season

MARCH

PLANTS

Scab or blight, leaf spot, moth and insects, blight

Scab or blight, leaf spot, insects, blight

PLUM Black-knot, leaf blight, fungus, and apple fruit-lice

Leaf-curl, spot, peach, San Jose hole

Black rot, anthracnose, leaf hole

CURRANT Mildew, worm, spider Scale.

RASBERRY BLIGHT

Anthracnose, brown

STRAWBERRY Leaf-spot

BEAN-bacter

CABBAGE Flea-bee, root

Tip burn, late blight

TOMATO black

Rust, blight

Note.

SPRAY CALENDAR.

REVISED UP TO DATE FOR "THE FARMER'S ADVOCATE" BY L. CAESAR, O.A.C., GUELPH.

| PLANTS AND PEST. | 1st APPLICATION. | 2nd APPLICATION. | 3rd APPLICATION. | REMARKS. |
|--|---|--|---|--|
| APPLE. Scab or black spot, canker, leaf spot, codling moth and other biting insects, scale insects, blister mite and aphids. | Shortly before the buds burst. Use A1 or B. For San Jose Scale prune severely, scrape off loose bark, and drench the whole tree, paying special attention to outer twigs. | Just before the blossoms open. Use A2 or D, with 2 or 3 lbs. arsenate of lead to each 40 gals. of the liquid. | Immediately after the blossoms have all or nearly all, fallen, and before the calyxes close. Use A3 or D, with 2 lbs. arsenate of lead to each 40 gals. This is the application for codling moth. | For scab, if the first half of June is wet or foggy and cool, give a 4th application with the same mixture as the 3rd, about ten days later than it; also if the latter half of August is wet, spray at once with A3 or D to prevent late attacks of scab and sooty fungus. If aphids are annually troublesome, delay 1st application till buds begin to burst, then add Black Leaf 40 to A1 or B and cover every bud. For Cankers cut out diseased bark, disinfect and cover with white lead paint or gas tar. For Blight on young trees keep suckers rubbed off trunk and main branches and cut out promptly any diseased branches or twigs well below the diseased bark. Always disinfect both cuts and tools with corrosive sublimate. |
| PEAR. Scab or cracking, blight, codling moth, other biting insects, scale insects, blister mite, psylla and slug. | Shortly before the buds burst. Use A1 or B. For San Jose Scale see above under apple. | Just before the blossoms open. Use A2 or D, with 2 or 3 lbs. arsenate of lead to 40 gals. of the liquid. | Just after blossoms have fallen. Use A3 or D, with 2 lbs. arsenate of lead to 40 gals. | Pears subject to Scab should always receive a 4th application 10 days later than 3rd with same mixture. For Blight cut out carefully in winter all blighted branches and twigs, cutting a foot or more below the diseased part. Also remove and burn trees too severely blighted to save. Throughout growing season watch for and remove promptly in the same way all blighted twigs or branches. Disinfect at once tools and all cuts with corrosive sublimate (1 to 1,000). For Psylla delay 1st spraying with A1 or B until leaf buds have burst and add Black Leaf 40 to Codling Moth spray if necessary. Arsenate of lead will kill Slugs (3 lbs. to 40 gals). |
| PLUM AND CHERRY. Black-knot, brown rot, leaf blight or shot-hole fungus, curculio, slug and aphids, and cherry fruit-flies. | Just before the buds burst. Use A1 or B. For San Jose Scale see above under apple. | Just after fruit is set. Use A2 or D, with 3 lbs. arsenate of lead to 40 gals. | About two weeks later. Use A3 or D, with 3 lbs. arsenate of lead to 40 gals. | For Cherry Fruit-flies (the cause of the little white headless maggots in cherries) use 3 lbs. arsenate of lead, 1 gal. molasses and 39 gals. water. Apply to all cherry trees just as Early Richmonds are getting a reddish blush, and again to only Montmorency and late varieties about 10 to 12 days later. For leaf-spot give a 4th application with same mixture as 3rd just after cherries are picked. Cut out and burn all Black Knots in winter and whenever seen in summer. For Slugs see under Pear above. Examine sweet cherries for aphids after blossoms fall, and, if present, add Black Leaf 40 to 2nd application. Good pruning with resulting increase of sunlight and air circulation help against Brown Rot. |
| PEACH. Leaf-curl, scab or black spot, yellows, little peach, curculio, borer, San Jose scale, shot-hole borer. | Before the buds begin to swell. (All must be done before any sign of bursting of buds.) Use A1 or B. This is usually the only spraying peach trees receive. | Soon after fruit is set. Use 2 or 3 lbs. arsenate of lead, and 1 or 2 lbs. freshly slaked lime to 40 gals. of water for curculio. Omit if curculio is not troublesome. | About one month after fruit is set. Use C, if troubled by brown rot. Good pruning and thinning the fruit help to control this disease. | If brown rot is likely to be troublesome use C again about one month before fruit ripens. Destroy mummied fruit in autumn. Remove at once and burn any tree attacked by yellows or little peach and also all suspected trees. Dig out borers at base of tree with knife in May and again in October. For shot-hole borer cut down and burn before April all dead or dying trees or branches, and leave no brush heaps near orchard. |
| GRAPES. Black rot, powdery mildew, downy mildew, anthracnose, flea-beetle, leaf hopper. | When 3rd leaf is appearing. Use D. | Just before the blossoms open. Use D. | Just after fruit sets. Use D. | Spray again whenever wet weather threatens. It should always be done before, not after rain. At first sign of powdery mildew dust with sulphur or spray with C. For flea-beetles use poison whenever they appear. For leaf-hoppers or "thrips" use Black Leaf 40 or whale oil soap in July to destroy nymphs. Clean cultivation is very important and destruction of all old mummied grapes and prunings. |
| CURRENT, GOOSEBERRY. Mildew, leaf-spot, currant worm and aphids, red spider and San Jose Scale. | Shortly before buds burst. Use A1 or B. For San Jose Scale prune and spray heavily. | Just before blossoms appear. Use A2, with 2 lbs. arsenate of lead to 40 gals. | Just after fruit is formed. Use A2, with 2 lbs. arsenate of lead to each 40 gals. | For worms when fruit is ripening, use hellebore. Look for aphids just as buds burst; if present spray with Black Leaf 40 or kerosene emulsion or whale-oil soap, or postpone 1st application till then and add Black Leaf 40 to A1 or B. |
| RASPBERRY AND BLACKBERRY. Anthracnose, red rust crown gall. | Before growth begins. Use D. Omit if not troubled by anthracnose. | When shoots are 6 or 8 inches high. Use D. Omit if no anthracnose. | If caterpillars are attacking the leaves use 2 lbs. arsenate of lead to 40 gals. water if no danger of poisoning the fruit; otherwise use 1 oz. hellebore to 1 gal. water. | If anthracnose is very severe, set out new plantation of healthy shoots. If disease begins, cut out old canes as soon as fruit is picked, also badly-attacked new ones, and burn. For red rust, remove and burn plants at once. No other remedy. For crown gall set out plants in fresh soil, rejecting any plant with a gall on root or crown. |
| STRAWBERRY. Leaf-spot and white grub | For leaf-spot set out only healthy plants with no sign of disease. First season spray with D before blossoms open and keep plants covered with mixture throughout the season. Second year spray before blossoming with D and again soon after picking; or mow and burn over after picking. Do not take more than two crops off. Plow down at once after second crop. For white grubs dig out as soon as injury is noticed. Do not plant on land broken up from old meadow or pasture for at least three years after breaking. Mowing, burning over and plowing down just after the second crop is a great aid against pests. | | | |
| BEAN. —Anthracnose and bacteriosis. | Get seeds from pods showing no signs of disease. Do not work among the plants if they are wet with rain or dew. Spraying scarcely pays as a rule. | | | |
| CABBAGE AND TURNIP. Flea-beetles, caterpillars, root maggots, aphids. | For flea-beetle on turnip sow after June 21st, or dust plants as soon as they appear above ground with Paris green, or spray with Bordeaux and a poison and a sticker. Repeat in two days. For caterpillars dust with Paris green until heads begin to form on cabbage and cauliflower, then spray with fresh pyrethrum, 1 ounce to 1 gallon water. For root maggots use medium thick tarred felt-paper discs, putting on as soon as plants are set out, or set out plants after July 1st. For aphids use kerosene emulsion as soon as they appear, or 1 lb. common laundry soap dissolved in 4 gallons water. Hit them hard. | | | |
| POTATO. Tip burn, early blight, late blight, scab, Colorado beetle, flea-beetle. | Keep foliage covered with D from time plants are about 5 inches high. Take special precautions to see this is well done if weather is at all damp after about 15th July, as late blight begins about this time. Add a poison to each application when necessary. For scab, soak tubers before cutting 2 hours in 1 pint of formalin to 30 gallons of water. Spread out on grass to dry. Wash all boxes, bags or other vessels to be used in same liquid. Plant none but perfectly healthy tubers. | | | |
| TOMATO. —Leaf blight, black rot, flea-beetle. | Spray plants in seed-bed with D. Keep foliage in field covered with D until danger of straining fruit. Add a poison if necessary for flea-beetles. | | | |
| ASPARAGUS. Rust, beetles. | For rust, let no plants, not even wild ones, mature during cutting season. Late in fall when growth is about over, cut and burn old plants. For beetles, let poultry run in the plantation. After cutting season is over spray with arsenate of lead; repeat in two weeks. May add sticker and a little lime. | | | |

Note.—A1—Concentrated lime-sulphur, strength 1:030 specific gravity (1:035 for San Jose Scale) (1:030=1 gal. commercial to 9 gals. water and 1:035=1 gal. commercial to 7 gals. water.)
 A2—Concentrated lime-sulphur, strength 1:010 or 1:009 specific gravity=commercial 1 gal. to from 30 to 35 gals. water.
 A3—Concentrated lime-sulphur, strength 1:009 or 1:008 specific gravity=commercial 1 gal. to from 33 to 40 gals. water.
 B—The old home-boiled lime-sulphur, 20.15.40 formula. C—Self-boiled lime-sulphur. D—Bordeaux mixture, 4.4.40 formula.

Formulae for Insecticides.

I.—POISONS (for biting insects only).

1.—ARSENATE OF LEAD (paste)—2 or 3 lbs. to 40 gallons liquid spray; 3½ lbs. for potato beetles. Dry arsenate of lead requires only half these strengths.

2.—PARIS GREEN—(a) ¼ to ½ lb. to 40 gals.; 1 lb. for potato beetles. If used with water alone, add 1 or 2 lbs. fresh lime. (b) 1 lb. mixed with 50 lbs. land plaster, air-slaked lime or some similar substance, for dusting on plants.

N.B.—With Bordeaux, 1 or 2. may be used; with lime-sulphur only 1; the other causes burning.

3.—POISON BRAN MIXTURE FOR GRASSHOPPERS

Bran 20 lbs.
Paris Green 1 lb.
Molasses ½ gallon.
Water about 2 gallons.
Lemons 2 or 3 fruits.

Mix thoroughly the bran and Paris green in any large receptacle the night before using. In morning squeeze the juice of the lemons into the water, run pulp and rind through a meat chopper, add this and also molasses to the water, stir well, then pour the liquid upon the poisoned bran, and mix so thoroughly that every part is moist and will fall like sawdust through the fingers. Apply in the morning between 5 and 7 o'clock by scattering so thickly over the infested field, fence corners and roadsides, that the above amount will cover 4 or 5 acres. Sometimes a second application about 3 days later is necessary. Use as soon as the pest is abundant. Do not look for results for 2 or 3 days.

This mixture applied in evening will also kill Cutworms and Army-worms.

4.—WHITE HELLEBORE.—One oz. to 1 gal. water, or dust undiluted over the plants. Hellebore left exposed to air is useless.

II.—CONTACT POISONS (chiefly for sucking insects).

1. KEROSENE EMULSION—

Kerosene (Coal Oil) 2 gals.
Rain water 1 gal.
Soap ½ lb.

Dissolve the soap in water by slicing and boiling; take from fire, and while hot pour in kerosene and churn vigorously for five minutes. For use dilute with 9 parts of water, so that the above 3 gals. of stock emulsion will make 30 gals. of spray mixture.

2.—WHALE OIL SOAP.—For brown or black aphids, 1 lb. in 4 gals. For green aphids, thrip and leaf-hopper, 1 lb. in 6 gals.

3.—TOBACCO WATER.—Steep 1 lb. refuse tobacco in 1 gal. of water for 1 hour, make up for water that evaporates, or soap, 1 lb. in 1 gal. water for 24 hours with occasional stirring.

4.—Black leaf 40 sold by Tobacco Product Co., Kentucky. Directions on the cans. A little soap with it helps, but soap cannot be added if used with lime-sulphur.

5.—PYRETHRUM (or insect powder).
Pyrethrum Powder 1 oz.
Water 1 to 2 gals.

Dry mixture. Mix thoroughly 1 part by weight of pyrethrum with 4 of cheap flour, and keep in air-tight vessel for 24 hours before dusting over plants.

Note: Pyrethrum is useless if left exposed to the air.

6. LIME SULPHUR WASH.

(See under fungicides.)

Formulae For Fungicides.

I.—BORDEAUX MIXTURE:

Copper Sulphate (Bluestone) 4 lbs.
Unslaked Lime 4 lbs.
Water 40 gals.

Dissolve the copper sulphate in a wooden or brass vessel with hot water, pour into a barrel and add cold water to make 20 gals.; slake the lime, preferably with hot water; add cold water to make 20 gals. Stir both barrels well, and pour lime into the copper sulphate barrel. (Never mix concentrated milk of lime and copper sulphate solutions.)

A stock solution of each may be made and kept indefinitely if not mixed. Dissolve 40 lbs. copper sulphate in 40 gals. of water by suspending just below the surface of the water in a coarse sack. Each gallon of the liquid will now contain 1 lb. copper sulphate. Slake any desired quantity of lime and put into a box or barrel in shaded place, or sunk in the ground. Keep covered with small amount of water to exclude the air. Calculate how much is required for 4 lbs. lime if well stirred.

To test Bordeaux mixture, let a drop of ferrocyanide of potassium solution fall into a little of the mixture in a saucer. If this

causes it to turn reddish brown, add more lime until no change takes place.

II.—LIME SULPHUR WASH.

1.—HOME BOILED (for use on dormant wood only).

Fresh stone lime 20 lbs.
Sulphur (flour or flowers) 15 lbs.
Water 40 gals.

Slake 20 lbs. of lime in about 15 gals. boiling water in a kettle or other boiling outfit. While slaking add the 15 lbs. sulphur made into paste by the addition of a little water. Boil vigorously, with stirring, for 1 hour. Dilute to 40 gals. with cold or hot water. Strain and apply at once.

2.—HOME MADE CONCENTRATED LIME-SULPHUR—This may be used as a substitute for commercial lime-sulphur, but is only about two-thirds as strong as a rule.

Sulphur (a fine grade) 100 lbs.
Fresh stone lime, high in percentage of calcium 50 lbs.
Water 40 or 50 gals.

Put about 10 gals. water in the boiling outfit, start fire, add sulphur, stir to make paste and break lumps, then add remaining water, and when near boiling put in lime. Stir frequently while slaking until all the sulphur and lime are dissolved. Add water from time to time to keep up to 40 or 50-gal. mark. Boil 1 hour, then strain through a screen of 20 meshes to inch into storage barrels. Make enough at once for a season's work. Cover well to keep out air, or pour oil of any kind over surface to depth of 1 inch for same purpose.

To determine how much to dilute for different applications use an hydrometer with specific gravity readings, and apply the following rule:

Put the hydrometer in the clear liquid when it is cold and the sediment has all been settled for a day or two. Note the number to which it sinks. Suppose this is 1:240. The strength for use before the buds burst should be about 1:300 or stronger. To determine how much to dilute a strength of 1:240 to get 1:300, divide the three figures to the right in 1:240 by 30, that is 240 divided by 30=8. This means that each gallon of such a wash must be diluted to 8 gals. with water to give us a strength of 1:300, the proper spring strength. For the second application 1:600 is about the right strength. To get it divide the 240 by 9 which gives 26 2/3 or roughly speaking 27. This means that each gallon of wash of the strength of 1:240 must be diluted to 26 2/3 or 27 gals. to make the right strength for the second application. For the third application and any later ones 1:900 is about the right strength and to get this we proceed in the same way and divide 240 by 8=30, so that each gallon must be diluted to 30 with water for this application. If the strength of the concentrated were 1:212 or any other number, you would in the same way divide the three figures to the right by 30, 9 and 8 respectively to get the proper dilutions for each spraying.

TABLE FOR CHANGING BEAUME READINGS INTO THEIR EQUIVALENT SPECIFIC GRAVITY READINGS.

| Beaume. | Specific Gravity. | Beaume. | Specific Gravity. |
|---------|-------------------|---------|-------------------|
| 18 | 1.111 | 27 | 1.230 |
| 19 | 1.150 | 28 | 1.240 |
| 20 | 1.159 | 29 | 1.250 |
| 21 | 1.168 | 30 | 1.260 |
| 22 | 1.178 | 31 | 1.271 |
| 23 | 1.188 | 32 | 1.282 |
| 24 | 1.198 | 33 | 1.293 |
| 25 | 1.208 | 34 | 1.305 |
| 26 | 1.219 | 35 | 1.317 |

Note.—Commercial lime-sulphur should be tested with the hydrometer and diluted according to the same rules as the home-made concentrated form.

3.—SELF BOILED (chiefly for use on peach foliage).

Fresh stone lime 8 lbs.
Sulphur (flour or flowers) 8 lbs.
Water 40 gals.

Best prepared in quantities of 24 lbs. at a time to get sufficient heat. Place 24 lbs. lime in a half barrel, add enough cold water to start it slaking well and to keep the sulphur off the bottom. Put the 24 lbs. sulphur over the lime, having first worked the sulphur through a screen to break lumps, then add whatever further amount of water is necessary to complete the slaking. Stir well with a hoe to prevent the lime caking on the bottom. As soon as the slaking is over, add enough

cold water to cool the whole mass and prevent further combination. Strain into spray tank. Keep well agitated while spraying.

III.—DISINFECTANTS (for pruning tools and for wounds on trees):—

1.—Corrosive sublimate, 1 part to 1,000 by weight=1 tablet to 1 pint of water. Apply with a swab on end of a stick.

CAUTION.—Corrosive sublimate is a deadly poison to man or beast if taken internally. It will also corrode iron or metal, so use in a glass or wooden vessel and be sure to wash these out very thoroughly when through using them.

2.—Lime-sulphur about twice spring strength, or bluestone, 1 lb. dissolved in about 14 gals. water, may be used to disinfect wounds or cankers, but is not satisfactory in case of Pear Blight.

STICKER

Resin 2 lbs.
Sal Soda (crystals) 1 lb.
Water 1 gal.

Boil together till a clear brown color which takes from 1 to 1½ hours. Cook in an iron kettle in an open place. Add the above to 40 gallons Bordeaux; for use on smooth foliage like onions, cabbage or asparagus. If used with arsenate of lead, or Paris Green, add 1 or 2 lbs. of fresh lime to every 40 gallons of spray.

The Farmer's Calendar.

The season for spraying is here again and we trust the Spray Calendar compiled by L. Caesar, of the Ontario Agricultural College, will be looked for as it has been in years past. In revising the Calendar, Mr. Caesar has made alterations and additions. The "Remarks" regarding apples, pears, plums and cherries have been largely re-written and certain things have been added regarding San Jose Scale. A few things of minor importance have been omitted and new treatments have been added, such as preparations to use against grasshoppers, army worms and cut worms. The Spray Calendar should be kept in a convenient place, always accessible, for the recommendations apply to the garden and fields as well as to the orchard. It is the most concise piece of information that a farmer, fruit-grower or gardener can have before him.

Association Vs. Member Re Selling Apples Outside the Society.

Unity and harmony in a co-operative association are very necessary attributes on the part of its members singly and collectively. The constitutions and by-laws are never severe when we compare them with the regulations of other corporations, and it is incumbent upon every member of an association to do his part in order that the managing body may more effectively execute its duties. Considerable interest was aroused some time ago when the Oakville Fruit Growers' Association took action against one of its members to recover a 50-cent-per-barrel charge for all apples sold outside of the association. This restriction is embodied in the constitution of every association, but in only a few cases have they been sure as to the validity of the clause. In the case of the Oakville Fruit Growers' Association vs. one of its members, Justice Middleton decided in favor of the Association, and the member in question was obliged to pay the charge of 50 cents per barrel, as stipulated in the clause of the constitution, plus the cost. This is practically a test case in this regard.

The association is incorporated under the Ontario Companies' Act, and the clause of the constitution, over which the trouble arose, is worded as follows: "All good barreling apples grown by members of the Association (excepting for their own use) are to be handled by the Executive committee, and any member disposing of his or her own apples shall pay to the Association the sum of 50 cents per barrel."

A Cobalt correspondent writes that he would like to see more advertisements of potatoes, turnips, beets, carrots and other vegetables for sale in "The Farmer's Advocate." He wants to get in touch with people having these goods for sale. He says he can pay more than the Toronto market quotations for them. Our correspondent should also advertise.

The crowning achievement of the farm and garden year is to make real the ideals of the seed catalogue. The attainment is worth the effort in satisfying healthy appetites at the table and ones love of the beautiful.

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FARM BULLETIN.

"War"

Oh clouded age, when nation would
Engage, with sensuous lust of blood,
The stalwart sons of womanhood in battle.
Mid cannon's roar, the fire-swept plain
Of trenches, wet with crimson rain,
Heaped with the brave, unslaying slain like cattle.

Shall Christian nations, martyr won,
Be thus, by arrogance undone,
The war dogs, rabid everyone releasing?
Shall bud and flower of manhood feed
The lust and hate of nations' greed
While hearts of wives and mothers bleed unceas-
ing?

The orphan's cry will reach above
Man's inhumanity to prove.
Can there be carnage and yet love? Hypocrisy!
Rise; favored nations, rise, pursue
Your calling high, your faith renew
In brotherhood of man and true democracy!

Hail glorious dawn, with promise blest,
When warring men and nations rest,
The common weal, their highest, best endeavor;
The desert will be blooming then
The "spear be pruning hook" again
The "Prince of Peace" rule over men, forever.
Elgin Co., Ont. "JUDSON LAW"

Do Migratory Birds Return to Their Former Homes?

Editor "The Farmer's Advocate":

Ever since I remember having my first freckles I can also remember hearing men discuss the subject of migratory birds returning to former homes. At the present moment there is a pair of blue birds sitting around the same nesting house that they evidently occupied last season. The pair of robins that are now roosting in the spruce tree near the house are the same old acquaintances. And as I look out the window a nice flock of wild geese are dropping in the little park within one hundred feet of where I am now sitting, yet, all of this is circumstantial evidence only. But now for the positive proof I will refer you to a wild duck. Polly mallard will now take the stand.

Mr. Supreme Being of this beautiful earth—you whom God in Heaven gave dominion over all—will you please listen to a brief history of my life:

My mother was a wild black mallard duck, my father was a grey greenhead mallard. Jack Miner, of Kingsville, Ont., stole mother's eggs, and a domestic fowl became my stepmother. I had three sisters; our names were Polly, Delilah, Susan and Helen. We were hatched in May, 1912, and as soon as we had our growth we were each presented with an aluminum name plate, bearing the postoffice address of our stepfather, and in December we four girls migrated, and Dr. R., of Chatham, shot Helen at Mitchell's Bay, Lake St. Clair, the day after we left.

On March 10, 1913, I arrived home, and on the eighteenth Delilah came, and although badly wounded in the wing Susan came squacking down out of the heavens on the 30th.

where I can rise up from the bosom of the fresh-water pond and flap my wings in safety. Three days later, March 16, Delilah came accompanied by a beautiful greenhead sweetheart.
Essex Co., Ont. JACK MINER.

Fertilizer and Cottonseed Exempt From Tariff Charges.

Readers of "The Farmer's Advocate" are pleased to note that the Budget brought down by the Hon. W. T. White, Minister of Finance, some time ago was altered in some respects before finally passing the House. The farm press stood united in questioning the advisability of placing a tax on plant food and cottonseed meal, and a copy of the editorial, "Should plant food be taxed," which appeared in our issue of March 11 was sent to ten prominent members on each side of the House, Hon. Mr. White included, with a request that this subject be given their best consideration. Farmers generally are gratified to know that raw fertilizers, and manufactured fertilizers as well, have been exempted from the tariff increase, as have also cottonseed meal and cottonseed cake. These are the specific articles which our Editorial discussed, and letters from farmers as soon as the article was printed showed that they were heartily in accord with the stand of their farm paper. The Finance Minister, and all Parliament, are to be commended on taking this stand which is only reasonable and fair. Raw plant food and cottonseed meal will continue on the free list, and manufactured fertilizer will not be subject to the increase. Other articles exempted from the increase as first introduced are: Wild edible berries; manuscripts; bananas; silk in the gum or spun silk to be used in the manufacture of woven labels; coffee; milk for infants' foods; platinum. The tax on patent medicines is decreased from one cent on each ten cents of value, sold retail to one cent on each twenty-five cents retail value.

The increased tariff will apply to imported wines and spirits, on their value minus the excise duty assessed against them in the country of their manufacture. On non-sparkling wines it is provided that the tax shall be 3 cents on a pint instead of 5 cents as at first, and champagne is taxed 13 cents on a half pint instead of 25 cents on a pint.

Some changes are also announced in stamp taxes. Fire insurance companies operating on a purely mutual basis are exempted from the 1 per cent tax on net premiums. Press despatches are exempted from the tax of 1 per cent on telegrams. The \$3 tax on ocean tickets formerly placed on a value of \$30, is changed to \$3 on tickets at a value of \$40, and the tax of \$5 on tickets costing \$60 is made \$5 on tickets costing \$65. Promissory notes discounted or collected through banks must pay the 2 cent tax the same as checks. Promissory notes between private individuals, where these notes do not pass through a bank, are not taxed.

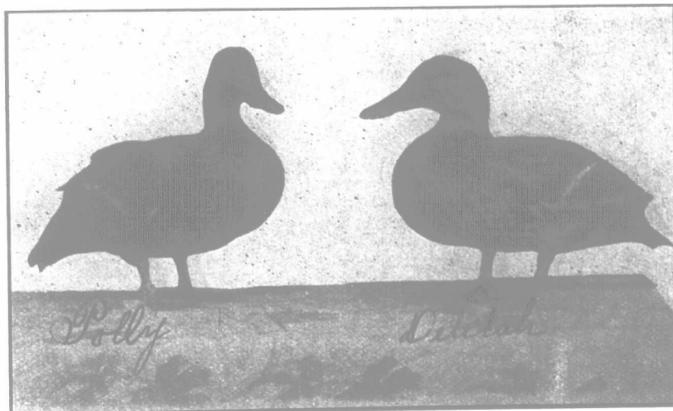
Farming Capitalized.

The amount of capital represented by the farming property of Canada in 1910, as given in volume 4 of the census was \$4,231,840,636, nearly double the amount quoted in the notes published in "The Farmer's Advocate" for Feb. 25, from the address given by Peter White, of Pembroke, Ont., before the London Canadian Club. The increase in ten years was \$2,333,738,006, which affords some idea of the growing importance of the industry nationally.

Average Acre Values of Ontario Field Crops.

The figures in the following table are obtained or deduced from the Census and Statistics Monthly for December 1914 and January, 1915. Profits per acre for 1914 will vary with the cost of production, yield and market price:

| Crops. | Ave. yield per acre. | Ave. price per bus. | Ave. value per acre. | Profits per acre, 1913. |
|-------------------------|----------------------|---------------------|----------------------|-------------------------|
| Fall Wheat | 21.51 | \$ 1.03 | \$23.23 | \$ 7.71 |
| Spring Wheat | 18.80 | 1.07 | 20.12 | 5.75 |
| Oats | 35.00 | .49 | 17.15 | 4.27 |
| Barley | 30.34 | .64 | 19.42 | 3.79 |
| Corn (Husking) | 56.11 | .69 | 38.71 | 10.84 |
| Flax | 15.76 | 1.70 | 26.79 | 4.12 |
| Rye | 17.19 | .85 | 14.61 | |
| Peas | 16.00 | 1.32 | 21.12 | |
| Beans | 18.00 | 2.24 | 40.32 | |
| Buckwheat | 25.40 | .70 | 16.38 | |
| Mixed Grains | 36.66 | .63 | 23.09 | |
| Potatoes | 167.35 | .47 | 78.65 | |
| Turnips and other roots | 430.31 | .21 | 90.36 | |
| | tons per ton | | | |
| Hay and Clover | 1.14 | 14.91 | 17.00 | |
| Fodder Corn | 10.95 | 4.72 | 51.68 | |
| Sugar Beets | 9.00 | 6.00 | 54.00 | |
| Alfalfa | 2.26 | 15.01 | 33.92 | |



On December 10th we again migrated, and Noah Smith, of Paris, Kentucky, shot poor Susan on February 27, 1914, on March 14 I arrived home, and on the twenty-first Delilah joined me. Last fall our stepfather put us both in an old twine sack and took us out to town. We stood on a small table, and as we quieted down our photograph was taken. Our feathers are badly ruffled up from being in the old sack. You will notice we have a black duck's breast and a grey mallard's wing. Last winter, while away from home, I had a narrow escape as part of my beak was shot off, and I was wounded also in the foot. On Christmas Eve we again migrated, this being the third winter away from home for us two. Now at the present day you are giving your heroes medals for winning with arms; but we have won with God-given intelligence. Will you please remember that God created and blessed us before he did you; and now with bowed head and disfigured mouth I humbly plead with you to cultivate a warmer love for us, so that your heart will at least limit your hand in our behalf, and that the rising and unborn generations may be able to see what God said was good.

On March 13, 1915, I again got back to the home of my birth, where food is plentiful, and

These figures are interesting in considering increased production for 1915. The cost of production includes the cost of preparation, seed, seeding, cultivation of crop, harvesting, threshing, wear and tear of implements, and rental value of land. Preparation includes the cost of applying manure (if any). The value of the manure is counted as offset by the by-products, straw, fibre, stales.

Figures are not available for the profits per acre of the heavier-yielding crops, as potatoes, roots, etc., but their high values should not lead the farmer to overlook their increased cost of production. SEED BRANCH, OTTAWA.

New Dairy and Co-operative Laws in Quebec.

At the last Session of the Quebec Legislature, a very important amendment was made to the law on dairying. The Province will be divided into districts, not more than fifty in number. However, this number may be changed by other by-laws adopted by the Dairymen's Association and approved by the Lieutenant Governor in Council. The latter may appoint inspectors-general, assistant inspectors general and an inspector for each district above mentioned. Such officers must be experts who hold certificates of competency from the board of examiners appointed by the Quebec Dairymen's Association. Their principal duties shall be to superintend the production and supply of milk, as well as the manufacture of butter and cheese in the different factories of the Province.

These inspectors will supersede the syndicate inspectors. They will be paid by the government, whilst before one-half of their salary was paid by the syndicates formed by the se and butter makers. They will be governed by by-laws adopted by the Dairymen's Association and approved of by the Lieutenant Governor in Council.

Every person, company or society carrying on a butter factory shall be bound to engage a head buttermaker who, besides the diploma he must have from the board of examiners, holds a diploma or certificate as milk or cream tester, or both, issued by the board of examiners. Such buttermaker so qualified shall grade the cream brought or sent to the factory by the patrons and shall divide the same into two classes numbered respec-

tively one and two. Class No. 1 shall consist of cream suitable for making first-quality butter, and class No. 2 shall consist of all other cream accepted by the buttermaker for making butter. The cream in each class shall be converted into butter separately.

Each class of butter must be sold separately, and the proceeds of such sale shall be divided among the patrons according to quality, and in the proportion of the quantity of cream in each class supplied by each patron. The cream of each patron must be brought or sent to the factory in separate receptacles. The classification, manufacture and sale above mentioned shall be so made separately in conformity with the by-laws drawn up by the inspector general of butter factories,

who is authorized to make such regulations for butter factories, or for one or some of them, as the case may be, provided they are approved by the board of examiners of the Dairymen's Association. In default of such regulations for a factory, the classification, manufacture and sale separately shall not be obligatory; they shall be obligatory, however, if a factory receives milk from a certain number of patrons and cream from others.

Every co-operative agricultural society or other society or company which is the owner of a butter factory or cheese factory, or a butter and cheese factory, may pass by-laws with regard to the classification of milk and cream, the manufacture and sale of butter or cheese, but such by-laws, before coming into force, must be approved by the inspector-general.

Such by-laws, among other things, may regulate:

(a) The classification of the cream brought or sent to the factory into two classes;

(b) The manufacture into butter of the cream of both classes separately, and the separate sale of the butter so obtained;

(c) The separate division of the proceeds of the sale of each class of butter among the persons entitled thereto;

(d) The classification, into two separate classes, of first-quality milk and cream and second-quality milk and cream, the manufacture of such milk and cream into butter, the sale of the butter and the division of the proceeds of such sale in compliance with the provisions of paragraphs b and c.

If the board of directors of a society or company above mentioned do not adopt by-laws for the purposes above mentioned, the inspector general of butter factories may himself make such by-laws, but in that case the by-laws made by the inspector general must before coming into force be approved by the board of examiners of the Dairymen's Association.

Every co-operative agricultural society or other society or company which is the owner of a butter factory or cheese factory, or a butter and cheese factory, may:

(a) Take suit in the name of the Society, for all damages suffered by it, against any person bringing to the factory unwholesome or sour milk, or milk that has been skimmed, or in any way adulterated, without notifying thereof the manager or owner of the factory, whether such person is a member of the society or not;

(b) Sue any person or association, for damages caused by such person or association to the society in its trade and commerce in dairy products.

The damages which the society may recover shall be apportioned between its members, in proportion to the quantity of milk and cream supplied by each during the time fixed by the board of directors, and in the manner determined by such board.

For the purposes of this article, all damages caused by any person to the patrons who are members of a society, by supplying milk that is unwholesome, or sour or skimmed, or in any way adulterated, shall be deemed to have suffered by and shall be payable to the society, which may sue therefor, and shall distribute the amount recovered among its members in the proportion above mentioned.

When the society's butter or cheesemaker, or the inspector of the society or the Government inspector, reports that a patron, on account of the quality of the milk or cream brought by him, causes damage to the society, the board of directors shall sue such patron for the damages incurred, unless such patron pays the damages so caused. The owner or manager of every butter factory, cheese factory or butter and cheese factory shall be obliged to sterilize the skimmed milk and the buttermilk and whey produced from the milk or cream brought to and worked in his factory. He must also keep the skimmed milk and the buttermilk and whey in receptacles or vats of metal, not of wood, until sold or distributed. However, the inspector-general of butter and cheese factories may, on account of special circumstances in which one or several factories may be situated, exempt such factory or factories from the obligation to sterilize.

The inspector-general may, at any time, put an end to such exemption by means of a notice in writing, served by registered letter or otherwise. All basins, utensils, cans or receptacles whatsoever, intended to hold the by-products of the milk, must be made of metal.

The inspector or an officer of the Department of Agriculture, when the proceeds of milk or cream are divided between the patrons of a butter or cheese factory, or a butter and cheese factory, is authorized to examine the books of division and the accounts of the factory. No such examination, however, is authorized when the owner of the factory himself buys the milk or cream for his own benefit. The owner and the manager of a butter or cheese factory, or of a butter and cheese factory, must on or before January 15, make a report to the Minister of Agriculture, showing:—1, The number of pounds of milk or cream received at the factory during the preceding year; 2, the number of pounds of butter or cheese manufactured in the establishment during the same year; 3, the number of his patrons; 4, the amount received as the price of cheese made in his factory; 5, the amount received as the price of butter made in his factory.

To assist in defraying the expenses of the inspectors-general, their assistants, and the inspectors or persons appointed to replace them, a sum of \$15.00 per annum shall be paid to the Minister of Agriculture by each butter or cheese factory or butter and cheese factory, or condensed milk or milk powder factory which is in operation at least 30 days in the year.

Any person infringing any of the provisions of this section shall be liable, for each offense, to a fine of not more than \$25.00.

CO-OPERATION.

Other amendments were made to the law respecting co-operative agricultural associations. We may mention the following:—

1. If the election of the directors or of the auditor has not been held in the month of January, the Minister may order another election.

2. The "one man one vote" principle has been adopted. Before the adoption of that amendment, each shareholder was entitled to a vote for each share.

The number of co-operative associations is increasing very rapidly in the Province.

The Quebec Cheesemakers' Co-operative Association is more prosperous than ever, and contributes largely to the improvement of our dairy products. At the last butter competition at the Toronto Exhibition, out of 24 prizes, 20 were obtained by members of that Association. In the same competition, at the Ottawa Exhibition, 8 prizes out of 10 were taken by members of the same society. Nearly 300 butter and cheese factories sell through the Cheesemakers' Association. Its sales amounted to more than \$1,700,000 last year. It has increased this year its reserve fund by more than \$10,000. For the last two years it has paid an annual dividend of 6 per cent. The price it has obtained for its No. 1 cheese is higher than the price obtained by Ontario cheese on most of its markets. We may add that the price obtained for the Ontario cheese is superior to the price obtained for the cheese sold by the factories which are not members of the Co-operative Association.

It demonstrates that the grading and selling by the officers of the Association has a most beneficial influence upon the quality of the products. Every week, the grader makes a report to the maker upon the defects of his products, and the ways to remedy them. A remarkable improvement has been the result of such methods.

The association has contributed also largely to the increase of the production of pasteurized butter, which has obtained a higher price than the ordinary butter.

The farmers begin to understand the advantages secured by the dealings of that Association, and, in many circumstances, have compelled their maker to become a member of the society and to sell through its officers.

We have succeeded lately in organizing another important co-operative association; the "Quebec Seed Growers' Co-operative Association," having its chief place of business at Ste. Rosalie. It has already a subscribed capital of \$14,000, and the manager hopes to increase it to \$30,000 and even to a higher figure. It has bought already a large quantity of registered seeds, which will be resold to its members. The fields of the members who intend selling to the Association will be visited and examined during the summer by experts in order to ascertain whether the crop is pure and free from weeds. The purchasers of the Association will be governed chiefly by the reports of such experts. Such a supervision will have a most beneficial effect on the production of high-class seed, and the farmers will know where they can obtain it. The growers of such seeds will be sure to obtain remunerative prices for their products. The Association has a well-built grain elevator at Ste-Rosalie, and the most improved machinery for the selection and cleaning of seed. It will have also mill stones in order to grind the grain unfit for seedling purposes. This is a most promising association, and will stimulate farmers to improve their methods of farming and to increase agricultural production.

A law has also been adopted to enable the municipalities to borrow money and to buy seeds, which can be resold to farmers of their respective localities.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts at the Union Stock-yards, West Toronto, on Monday, March 22, 1915, numbered 98 carloads, comprising 1,844 cattle, 1,112 hogs, 118 sheep, and 114 calves. Cattle trade was slow, at about steady prices. Choice steers and heifers by the load, \$7.25 to \$7.50, and three choice, extra fat heifers for Jewish trade, \$8.50; five steers, 1,300 lbs., at \$7.25; medium, \$6.60 to \$6.85; common, \$6.25 to \$6.50; cows, \$3.75 to \$6.50; bulls, \$5.50 to \$6.75; feeders, \$6 to \$6.50; stockers, \$5 to \$5.75; milkers, \$4.5 to \$8; calves, \$5 to \$11.25. Sheep, \$6 to \$7.50; lambs, yearlings, \$8.50 to \$10.40; spring lambs, \$8 to \$10 each. Hogs, \$8.60 weighed off cars; \$8.35 fed and watered, and \$8 l. o. b. cars.

REVIEW OF LAST WEEK'S MARKETS.

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

| | City. | Union. | Total. |
|--------|-------|--------|--------|
| Cars | 44 | 324 | 368 |
| Cattle | 367 | 4,983 | 5,350 |
| Hogs | 950 | 7,229 | 8,179 |
| Sheep | 289 | 345 | 634 |
| Calves | 79 | 586 | 665 |
| Horses | 201 | 65 | 266 |

The total receipts of live stock at the two markets for the corresponding week of 1914 were:

| | City. | Union. | Total. |
|--------|-------|--------|--------|
| Cars | 4 | 238 | 242 |
| Cattle | 68 | 3,127 | 3,195 |
| Hogs | 15 | 6,046 | 6,061 |
| Sheep | 48 | 357 | 405 |
| Calves | — | 475 | 475 |
| Horses | — | 160 | 160 |

The combined receipts of live stock at the two markets for the past week show an increase of 126 carloads, 2,155 cattle, 2,118 hogs, 229 sheep and lambs, 190 calves, and 106 horses, compared with the corresponding week of 1914.

Receipts of live stock at Toronto for the past week, while moderate, were larger than for the corresponding week one year ago.

Trade in cattle was very quiet all week, with a downward tendency in values. A few, not a full load, reached the \$8 mark, but none went over. The highest price quoted for a straight load of choice steers was \$7.75, and that for one load only. Few loads sold over \$7.25 and up to \$7.50. The bulk of the steers and heifers sold from \$6.50 to \$7.25. The best selling fat cattle were bandy steers and heifers that would dress from 550 to 650 lbs., the demand for these being greater than the supply. There was an active demand for stockers and feeders, which commenced on Tuesday and continued for the remainder of the week, prices advancing about 20 cents per cwt.

This demand for feeders caused the medium and even the good steers and heifers to be a little firmer, as the buy-

ers of feeders invaded these classes of butchers to get their supplies.

Milkers and springers sold at about steady values.

Choice veal calves were in demand at firm values, but the common eastern calves were about 25c. to 50c. per cwt. cheaper.

Sheep and lambs, especially the latter, were scarce, and prices very firm.

Hogs.—Values for hogs have been climbing all week, and look as though they would go still higher.

Butchers' Cattle.—Choice heavy steers, \$7.50 to \$7.75; good butchers, \$7.00 to \$7.25; medium, \$6.60 to \$6.75; cows, \$3.50 to \$6.50; bulls, \$5.25 to \$6.75.

Feeders and Stockers.—Feeders, 800 to 1,000 lbs., \$6.50 to \$6.75, and one choice load of deboned steers, 900 lbs. each, sold at \$7.00 for short-keep purposes; steers, 700 to 800 lbs., sold at \$6.25 to \$6.50; steers, 600 to 700 lbs., at \$6.00 to \$6.25; stockers at \$5.50 to \$5.75.

Milkers and Springers.—There has been a strong demand for choice cows, at \$70 to \$85, and odd ones at \$90, and even a \$100 was paid. Common and medium cows were slow sale at \$45 to \$60 each.

Veal Calves.—Choice calves sold at \$10 to \$11.50; good, \$8.50 to \$9.50; medium at \$7.00 to \$8.00; common, \$6.00 to \$7.00; light eastern calves, \$4.00 to \$5.50.

Sheep and Lambs.—Light ewes are scarce at \$6.00 to \$8.00 per cwt.; heavy ewes and rams sold at \$5.00 to \$5.50;

lambs sold all the way from \$7.50 to \$11.50 during the week.

Hogs.—Selects weighed off cars sold at \$8.70, and \$8.35 fed and watered, and \$8.00 f.o.b. cars.

BREADSTUFFS.

Wheat.—Ontario, No. 2, \$1.45 to \$1.48, outside; Manitoba, at bay ports, No. 1 northern, \$1.634; No. 2, \$1.624; No. 3 northern, \$1.594, new crop.

Oats.—Ontario, No. 2 new, white, 60c. to 62c.; outside: Canadian Western oats, No. 2, new, 71c.; No. 3 new, 69c. track, bay ports.

Rye.—\$1.18 to \$1.20, outside. Buckwheat.—85c. to 88c., outside. Peas.—No. 2, \$2.00 to \$2.05, car lots, outside.

Rolled Oats.—Per bag of 90 lbs., \$3.40 to \$3.55. Barley.—Ontario, No. 2, 83c. to 85c., outside. American Corn.—No. 3 yellow, 82c. Toronto.

Flour.—Ontario winter wheat, 90 per cent., \$5.95 to \$6.20, seaboard, Montreal or Toronto freights. Manitoba flour—Prices at Toronto were: First patents \$7.70 in jute, and \$7.20 in jute for second patents; strong bakers', \$7.00 in jute; in cotton, 10c. more.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$17.50 to \$18.00; No. 2, \$16.00 to \$16.50.

Straw.—Baled, car lots, \$8 to \$8.50. Bran.—Manitoba, \$26 to \$27 in bags.

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Butter.—H steady, 37c 35c. to 37c 35c.

Cheese.—N to 19c. fo

Honey.—E lb.; comb, \$3.00.

Eggs.—Ne ful, and ar per dozen l of soon rea

Beans.—P hand-pick

Potatoes.— track, Tor 52c. to 53

Poultry.— 18c. to 20c 15c. per geese, 13c.

City hide cured, 15c cured, 15c

lb., 19c; skins, \$2.0 lb., 38c; \$3.50 to \$4

17c; woo washed, co 28c; lam \$1.75; ta 7c.

FRU Apples.— Russets, \$ 2.75; Gr barrel, 10 bunch; g grape-fruit, lemons, M California, Florida, \$ els, \$2.35 \$1.00 per 35c. to 40c bag; cabl \$1 per ba

celery, Cr case; oni per case; 100-lb. sa turnips, 30 tuc, 20 c Ontario, 1 65c.; seed bag

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189

Montreal.

Live Stock.—The tone of the cattle market was somewhat on the easy side during the past week. This was in part due to the situation in Ontario whence advices of slightly lower prices were received. So far as Montreal was concerned, however, practically no change in quotations took place. Offerings of choice steers were hardly sufficient to make a quotation, but quite a few fine steers sold at 7 1/2c. to 7 1/4c. per lb., while good stock sold at 6 1/2c. to 7c., and medium at 5 1/2c. to 6 1/4c. Butchers' cows and bulls showed very little change, and the range was from 4 1/2c. to 6 1/4c. to cover all qualities, save canning animals. Receipts of calves showed an increase, and within the next few weeks will grow to large volume. Prices held about the same, being from \$3 to \$5 for the commoner grades, and up to \$13 each for the best. Supplies of sheep and lambs were generally limited, but prices held about steady, at 8 1/2c. to 8 1/4c. for Quebec lambs, and 5 1/2c. to 6c. per lb. for ewe sheep. Spring lambs are now coming into the market, but very few have as yet been offered, and the high price of \$8 to \$10 each was being paid. Hogs showed practically no change. Selected lots sold at 8 1/2c. to 8 1/4c. per lb., weighed off cars.

Horses.—Demand was fair, and prices about steady. Heavy draft horses weighing from 1,500 to 1,700 lbs., were quoted from \$275 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., at \$150 to \$200 each. Broken-down, old animals, were quoted at \$75 to \$100 each, and fancy saddle and carriage animals sold at \$300 to \$400 each.

Dressed Hogs and Provisions.—Demand for dressed hogs was steady, and prices unchanged. Bacon and hams declined about 1c. per lb. Abattoir-dressed, fresh-killed hogs brought 11 1/2c. to 11 1/4c. per lb., while country-dressed was to be had as low as 8 1/2c. to 9c. per lb. for heavy weights, while light weights brought 10c. to 10 1/4c. per lb. Smoked meats were in very good demand, but stocks were large, and while prices showed practically no change, the tone of the market was rather easy. Breakfast bacon was 16c. to 18c., and Windsor, 21c.; Windsor boneless was 22c. to 23c. Hams were steady, at 16c. to 16 1/2c. per lb. for medium weights. Pure leaf lard was 12c. to 12 1/2c., and compound, 9 1/2c. to 10c.

Poultry.—The market was steady, at 17c. to 20c. per lb. for turkeys, wholesale; 12c. to 15c. for chickens and ducks, and 10c. to 12c. per lb. for geese and fowl, according to quality.

Potatoes.—Never was there a more disappointing season for holders of potatoes. Green Mountains have recently been purchased as low as 47 1/2c. to 50c. per 90 lbs., carloads, on track, being cheaper than months ago.

Honey and Syrup.—With the new crop of syrup almost due, the market for old was on the easy side. Prices were 75c. in small tins, and up to \$1.15 in 13-lb. tins, while sugar was 10c. per lb. Honey, white-clover comb, was 16c. to 17c. per lb.; extracted, 11c. to 12c.; dark comb, 13c. to 14c., and strained, 6c. to 7c. per lb.

Eggs.—The market for fresh-laid eggs has experienced quite a slump, production being now quite large. Dealers were paying 23c. to 24c. per dozen here. Other quality of eggs was neglected.

Butter.—September creamery still gets the call, although a little new-milk butter was being offered. The market held firm, September being quoted at 34 1/2c. to 35c., fine being 34c., and seconds 32c. to 33c. Dairy butter was unchanged, at 30c. for Ontarios, and 29c. to 30c. for Manitobas, per lb.

Cheese.—Ontario cheese was still quoted at 17 1/2c. to 17 1/4c. per lb. for either colored or white, while Eastern were about 1/2c. less than Ontarios. Undergrades were selling at 16 1/2c. to 16 1/4c.

Grain.—The wheat market was generally higher last week. Oats, No. 2 white, 64 1/2c.; No. 3, 65 1/2c.; No. 4, 64 1/2c., per 60 lbs., ex store. Canadian Western bushel, ex store. Canadian Western were 69 1/2c. for No. 3, and extra No. 1 were 69 1/2c. No. 1 feed was 68 1/2c., and No. 2 feed 67 1/2c. Manitoba feed barley was steady, at 81c.; No. 3 American yellow corn was 81c. to 85c. per bushel.

Flour.—Ontario patents were \$7.50 per barrel in wood, and \$7.40 to \$7.50 for straight rollers, bags being \$3.55. Ma-

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Markets.

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track, Toronto: shorts, \$28 to \$29; middlings, \$33 to \$34.

COUNTRY PRODUCE.

Butter.—Receipts have remained about steady, prices firmer. Creamery squares, 35c. to 37c.; creamery solids, 33c. to 35c.

Cheese.—New, 18 1/2c. for large, and 19 1/2 to 19 1/4c. for twins.

Honey.—Extracted, 11c. to 12c. per lb.; combs, per dozen sections, \$2.50 to \$3.00.

Eggs.—New-laid eggs are very plentiful, and are now selling at 20c. to 21c. per dozen by the case, with the prospect of soon reaching the 15c. mark.

Beans.—Primes, \$3.30 per bushel; hand-picked, \$3.60 per bushel.

Potatoes.—Ontarios, ear lots, per bag, track, Toronto, 50c.; New Brunswicks, 52c. to 55c. per bag, track, Toronto.

Poultry.—Live-weight prices: Turkeys, 18c. to 20c.; ducks, 15c.; hens, 13c. to 15c. per lb.; chickens, 13c. to 15c.; geese, 13c.

HIDES AND SKINS.

City hides, flat, 18c.; country hides, cured, 15 1/2c. to 18 1/2c.; country hides, part cured, 15 1/2c. to 18 1/2c.; calf skins, per lb., 19c.; kip skins, per lb., 17c.; sheep skins, \$2.00 to \$2.50; horse hair, per lb., 38c. to 40c.; horse hides, No. 1, \$3.50 to \$4.50; wool, unwashed, coarse, 17 1/2c.; wool, unwashed, fine, 20c.; wool, washed, coarse, 26c.; wool, washed, fine, 28c.; lamb skins and pelts, \$1.25 to \$1.75; tallow, No. 1, per lb., 5 1/2c. to 7c.

FRUITS AND VEGETABLES.

Apples.—Spies, \$1 to \$1.50 per bbl.; Russets, \$3.50 to \$4.50; Ben Davis, \$2.75; Greenings, \$3.25 to \$3.50 per barrel. Bananas, \$1.40 to \$2.25 per bunch; cranberries, \$3.50 per bbl.; grape-fruit, \$2.65 to \$2.75 per case; lemons, Messina, \$2.75 to \$3 per case; California, \$3.50 per case; oranges, Florida, \$3.00 per case; California navels, \$2.35 to \$2.75 per case; rhubarb, \$1.00 per doz. bunches; strawberries, 35c. to 40c. per box; beets, 50c. per bag; cabbages, 25c. to 40c. per dozen, \$1 per barrel; carrots, 50c. per bag; celery, California, \$5.50 to \$6.00 per case; onions, Spanish, \$1.25 to \$4.50 per case; American, \$1.50 to \$1.85 per 100-lb. sack; parsnips, 50c. per bag; turnips, 30c. to 35c. per bag; leaf lettuce, 20 to 25c. per dozen. Potatoes, Ontarios, 60c.; New Brunswick Delawares, 65c.; seed potatoes (tubers), 90c. per bag.

toba first patents were \$7.80; seconds, \$7.30; strong bakers', \$7.10 in jute.

Millfeed.—Bran was steady, at \$26 per ton in bags; shorts being \$28. Middlings were steady, at \$33 to \$34 per ton, and mouille sold at \$37 to \$38 per ton for pure, and \$35 to \$36 for mixed, bags included.

Hay.—The hay market was dull and steady. No. 1 pressed hay, Montreal, ex track, was \$19.50 to \$20 per ton; No. 2 extra was \$18.50 to \$19, and No. 2, \$17.50 to \$18.

Hides.—Beef hides were steady, at 19c., 20c. and 21c. for Nos. 3, 2 and 1, respectively. Calf skins are likely to decline, but were 16c. and 18c. for Nos. 2 and 1, respectively, and sheep skins were \$2 each. Horse hides were \$1.50 for No. 2, to \$2.50 each for No. 1. Tallow was 6c. per lb. for refined, and 2c. to 2 1/2c. for crude.

Seeds.—Dealers were quite busy, and prices were steady, at \$7 to \$8.50 for timothy per 100 lbs., and \$7.50 to \$9.50 per bushel of 60 lbs. for red clover, and \$7 to \$8.50 for alsike, at shipping points.

Buffalo.

Cattle.—There were around fifty loads of shipping steers, and they were pretty well cleaned up. In the neighborhood of thirty loads of Canadian cattle, mostly butchering kinds, and the trade on butchering cattle generally was a full half-dollar lower, local killers, under the liberal run of 215 loads, declining to do business, except on a lower basis, with the Chicago market again open to the East last Monday. Canner stuff sold from steady to a quarter lower, and good kinds of bulls were off 25c. to 50c., commoner kinds about a quarter. Best steers offered—out of Ohio, and prime—sold from \$8.40 to \$8.60, the extreme top load averaging better than 1,700 lbs. In the handy butchering-steer line, \$7.75 about stopped anything offered, little common steers down to \$6.25. Best fat cows ranged around \$6 to \$6.50, with most desirable heavy steers running from \$7.25 to \$7.50. Receipts the past week were 5,225 head, as against 3,810 the previous week, and 4,350 for the corresponding week last year. Quotations: Choice to prime native shipping steers, 1,250 to 1,500 lbs., \$8 to \$8.60; fair to good native shipping steers, \$7.60 to \$7.75; plain and coarse, \$7 to \$7.25; Canadian steers, 1,300 to 1,450 lbs., \$7.50 to \$8; Canadian steers, 1,100 to 1,450 lbs., \$7.25 to \$7.50, choice to prime handy steers, native, \$7.25 to \$7.50; fair to good, \$6.75 to \$7; light common, \$6.25 to \$6.50; yearlings, \$7.50 to \$8; prime, fat, heavy heifers, \$7

to \$7.25; good butchering heifers, \$6.25 to \$6.75; light butchering heifers, \$5.50 to \$6; best heavy, fat cows, \$6.25 to \$6.50; good butchering cows, \$5.25 to \$5.75; canners, \$3 to \$4; best bulls, \$6.25 to \$6.50; good killing bulls, \$5.50 to \$6; light bulls, \$4.50 to \$5.

Hogs.—Good supply last week, grand total being approximately 23,800 head, as against 18,369 head for the previous week, and 24,160 head for the corresponding week a year ago. Market was pretty uniform all week, heavies the first four days selling from \$7.25 to \$7.40, while bulk of Yorkers and desirable mixed grades sold at \$7.50. Friday, under a moderate supply, values were strong to a dime higher, heavies bringing from \$7.35 to \$7.50; mixed grades, \$7.50 to \$7.60, and the latter figure took most of the Yorkers. Thursday, buyers got pigs down to \$7.25, and Friday, bulk of these weights moved at \$7.50. Roughts, \$6.35 to \$6.50, and stags, \$5.50 down.

Sheep and Lambs.—New record prices were made for lambs again the past week, and sheep sold as high as any time in the history of the yards. Monday and Tuesday top lambs reached up to \$11.10, the next two days the bulk moved at \$11, and Friday's range was from \$10.75 to \$10.90. Cull lambs, with wool, sold up to \$10, and best yearling wethers brought \$9.75. Some clipped lambs made \$9.50; wool wethers reached up to \$9, and unshorn ewes went from \$8 down. Receipts the past week figured around 15,400 head, being against 13,988 head the week before, and 25,200 head for the same week a year ago.

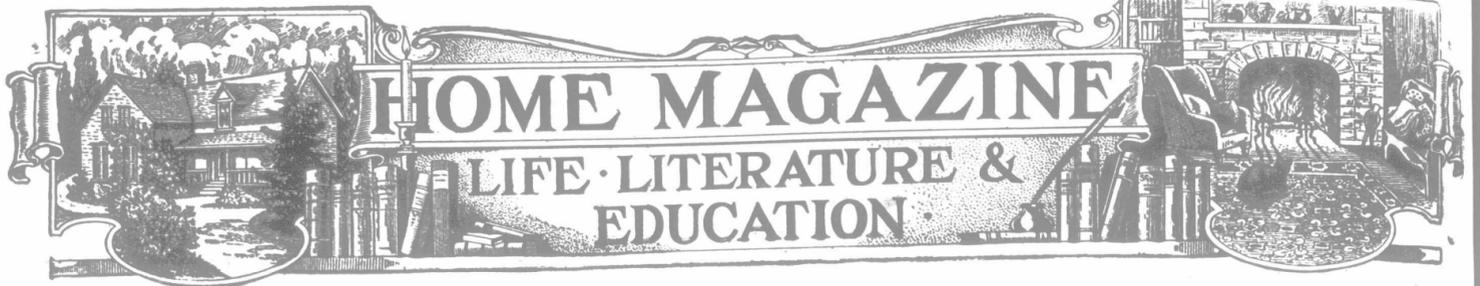
Calves.—Receipts the past week reached around 2,300 head, as compared with 1,563 head for the previous week, and 1,850 head a year ago. Prices showed improvement as the week advanced. Monday's and Tuesday's sales on tops were made at \$11; Wednesday some brought \$11.25; Thursday's top was \$12, and Friday's range on tops was from \$12 to \$12.50. Culls the fore part of the week went from \$8.50 down, and Friday some of these brought up to \$9.50. Fed calves showed former prices, general spread on these being from \$5 to \$6.

Chicago.

Cattle.—Beeves, \$5.80 to \$6.65; cows and heifers, \$3.25 to \$7.75; calves, \$7 to \$10.50.

Hogs.—Light, \$6.60 to \$6.85; mixed, \$6.35 to \$6.85; rough, \$6.35 to \$6.50; pigs, \$5.50 to \$6.70; bulk of sales, \$6.75 to \$6.85.

Sheep and Lambs.—Sheep, native, \$7.10 to \$8.15; yearlings, \$7.85 to \$9.15; lambs, native, \$7.60 to \$10.



"Sunny Jim": New Thought".

By The Spartan.

[We trust it will be understood that, in publishing the following, we are not seeking to advance an especial cult. Of late years many have become interested in the New Thought movement, and there is much in it, as in most cults, that is commendable.—That is all.]

Do you belong to the class of people who, in walking down the street in these days of spring thaw, take the sunny side of the street? If you do we have a chummy word for you. If you do not, look out for our corporal's guard. Being a long suffering reader ourselves we would not, on the faith of a gentleman, inflict another 'ism' at your devoted head were it not impossible to shut up about it.

You have, we suppose, read bits here and there anent the much-mooted "New Thought" that has taken so great a hold upon serious thinkers in the United States for some few years past, and recently also in Canada.

"New Thought" at first inspection suggests difficult psychological considerations, and theories occult, abstract, and (generally) distressing. Do not reject the idea in any such misimpression. The subject really implies nothing of the kind. On one side of your life's street there is sunshine, on the other probably slush and mud. "New Thought" simply strives to gather to itself the sun-walkers and then to drag the mud-splatters out of their slough to "a place in the sun." It is—this mysterious "New Thought"—nothing but a very useful, extremely applicable Art of Selection.

I cannot see why so few of the doctrinaires of the earth have as yet emphasized the power of conscious and subconscious thought to shape all human existences when prompted by, first instinctive, and then trained Art of Selection. That all ends big and small are reached by way of selection is unquestionable. Material well-being comes just as we succeed in applying this art—to acquiring things. Circumstances interfere with the application, but only in degree. This effects our balance of dollars. Spiritual well-being is affected by but one single circumstance, if we understand the art of selection. This affects our balance of happiness. Let us repeat that while wealth is relative to a thousand influences, happiness is relative to one only, the nature and coloring of our thought selection. "New Thoughters" say that this can be controlled by the will. They are right.

To consider—travelling always on the sunny side of the street—the question of dollars, since this precludes so much else in this artless age, it stands altogether to reason that the money-getters are the money-thinkers. If your soul is only a lump of hickory and the chug of an auto means more than the chant of celestials, well and good. The world needs accumulations of money, and perhaps you are an agent of accumulation. "New Thought"—it really is old thought thousands of years old, and might better be called resuscitated thought—preaches that your logical course is to surround yourself, immerse your whole existence, and very faculty, in the atmosphere of the thing you want. It is the insinuating, pernicious little black cat of thought doubt and thought failure crossing your trail that befores the ever-illuminated sign and causes it to redden.

Money-getters are single in purpose, or rather they are all embracing in purpose in their peculiar field, selecting everything savouring of the material and respecting everything merely æsthetic and of the spiritual. Thus far the idea is an

age-old "chestnut." But "New Thought" prescribes more. It says with a great deal of truth that the mental attitude that is necessary to the acquisition of things can be so infinitely cultivated by affirmations such as "I am capable," "I shall acquire money," "I am succeeding," etc., that the bare repetition of the idea brings about first the necessary self-confidence, next the suggestion of method, and further actual contact with the proposition yielding money.

It would be grotesque and silly to assume that the repeating of "I shall have dollars" a thousand times, while excluding all else, would actually yield that week or that month an equal number of dollars. "New Thoughters" are not supernatural magicians. What they mean is that the trained mental condition, to the pitch of self-assertion and spurred-up confidence, is absolutely indispensable to a start.

Indeed, the reasoning, will-controlled human being is so plastic, so adaptable that his conscious direction and absorbing of particular selections of thought makes it quite possible for any normally-gifted person to become what he will simply according to the age-old law, "as a man thinketh, so is he." I know no successful money-getter whose outstanding mental characteristic is not thought always, and always, of money. Money-making schemes of many kinds, undreamed of to the average individual, must come to him, for this is his existence, his whole, available world. He wants money, thinks money, feels money, and keeping ever in touch with money, has a hundred chances of getting it to one that comes to him who considers his money affairs only on the day he draws his salary cheque. "New Thoughters" call this the law of harmony—simply an intimate contact with everything relative to the object desired.

But the Law of Harmony and the Art of Selection do not stop with the hellowing, two-legged cash register who roars his life out on a stock exchange, albeit it is true that the law in such cases is logical and practicable.

Higher types of manhood desire other things. No human soul but wants happiness. The true definition of happiness should have been written into the Ten Commandments, and perhaps is, but we know, at least, that according to this Law of Harmony it selects content, goodwill, love, generosity, polished manners, and things æsthetic to the inner and higher heart, and rejects rancor, animosity, hate, meanness, crudity, and the vulgar attractions appealing only to the animal.

Remembering, then, that, while acquisition of wealth has its thousands of outward determining influences, happiness is determined for us altogether by the quality of our "thought harmony," why not select step by step an harmonious thought-world?

No one thing material or theoretical can enforce unhappiness. When we say a thing is discouraging it is but another way of reflecting upon ourselves as not being possessed of sufficient strength to disregard the circumstance. "It is not the things that happen to you in life that matter, but the way in which you meet them," said David Lloyd George in praising the heroic choice of the Belgians. Perhaps no people have suffered more intensely, but perhaps, too, Belgium's soul could never have soared again without this supremacy of selection. The little nation is suffering in misery outwardly, nevertheless the maintaining of the everlasting harmony of truth is an exaltation which can be none other than a bubble of happiness in the ultimate.

With personal happiness it is the same. The ray is from within. If you feel no ray there still it is certain that cold

reason never refuses to select for you if you invoke it. And like attracting like, the sun above you may kindle the ray within if stupidity does not stop your right-reason in selecting the sunny side. Again the positive affirmations are needed. You cannot think again and again, "I am growing better," "I am becoming more and more capable," without starting the law of attraction and harmony that put you in touch with the things from which you take higher morals and brighter ideas. There is no gaining the principle. You are king of your thoughts, and there are fully as many things of joy and art and beauty as there are of pain and materialism and ugliness.

The very selection of a word teaches the lesson emphatically, indeed. If you repeat the word "frightful" or "brutal" say five times, and then compare its effect to that of the word "lovely" or "glorious," repeated an equal number of times, you cannot fail to note the mental "smudge" in the one case and the mental serenity in the other.

The principle is very far-reaching. I believe every distressing event can be discounted by the thought of a past or future pleasing one. Thoughts are not cast-iron moulds. They are currents. You generate some, but are merely a transformer for thousands more. Keep them all well bathed in your personal harmony of the positive agreeable, rather than the negative disagreeable.

By building a mental and spiritual attitude of this kind your powers of alleviating pain, sharing distress, sympathizing with the struggling are not rendered callous, nor can you become selfish, because the very personality of a sunny thinker radiates help and inspiration by its presence.

There are no depths in which this Law of Harmony and Art of Selection cannot work. They may obliterate the word pessimism altogether in years to come, and inasmuch as our lives are neither of the past nor of the future, but everlastingly of the present tense—one side of the street being always sunnier than the other—the time to select your most winsome Sunny-Jim smile is now.

Stamp out a dismal thought with a pleasing affirmation. Before you have finished affirming a second thought will join the first, and a group of like thoughts are ready waiting. The process, if persisted in, will in turn prove a surprisingly helpful method of recasting—perhaps infinitely—your entire plane of life. And remember the power to choose—one's own mysterious will—is ever at your beck and call. That spark of divine endowing you never can lose entirely, and it is the golden key to the selection of a Harmony of Happiness.

THE SPARTAN.

The Dardanelles.

By far the most spectacular, and in some respects most important event of the war so far, has been the forcing up the Dardanelles and occupying of the Gallipoli Peninsula by the Allies.

The Dardanelles Straits—the ancient Hellespont—are in all 42 miles long, and range in width from 1½ miles at the narrowest point, to 4 miles at the widest. They connect the Aegean Sea with the Sea of Marmora, and upon their possession rests the possibility of reaching, unhindered, the great city of Constantinople, the Byzantium of the ancients, situated on the farther side of the Sea of Marmora, at the point where the narrow channel of the Bosphorus leads through to the Black Sea.

The name, Dardanelles, has clung to the straits in commemoration of the ancient city of Dardanus, so-called from the mythical Greek, son of Zeus and



M. Turpin, Inventor of the Most Deadly Explosive Known.

M. Turpin, the well-known French inventor of Turpinit, the most deadly of all explosives, is shown here with one of the shells containing this frightful product. Tests of this shell have proven it to be the most ghastly of exterminators on the battlefield. This new explosive, which has aroused the greatest discussion throughout the military world, has an effect of petrifying all life within a radius of 400 yards of the spot of the explosion of a shell. These new harbingers of death have as yet not been thoroughly tested for use on the battlefield, but French inventors are working in co-operation with the inventor of the explosive in the hope that they will shortly have it ready for the use of the Allies against the Germans.—Photo, Underwood & Underwood.

A Prayer in Time of War.

By Alfred Noyes.

(The war will change many things in art and life, and among them, it is to be hoped, many of our own ideas as to what is, and what is not, "intellectual.")

Thou, whose deep ways are in the sea,
Whose footsteps are not known,
To-night a world that turned from Thee
Is waiting—at Thy Throne.

The towering Babels that we raised
Where scolding sophists brawl,
The little Antichrists we praised—
The night is on them all.

The fool hath said . . . The fool hath said
And we, who deemed him wise,
We who believed that Thou wast dead,
How should we seek Thine eyes?

How should we seek to Thee for power
Who scorned Thee yesterday?
How should we kneel, in this dread hour?
Lord, teach us how to pray!

Grant us the single heart, once more,
That mocks no sacred thing,
The sword of Truth our fathers wore
When Thou wast Lord and King.

Let darkness unto darkness tell
Our deep unspoken prayer,
For, while our souls in darkness dwell,
We know that Thou art there,
—Daily Mail.

Electra, who was supposed to be the founder of the city, and of the royal house of Troy.

Since his day history has wretched itself about the Hellespont. There Xerxes built his famous bridge of boats upon which his army crossed on its way to Thermopylae; there Alexander led his terrible Greeks to the conquest of the East. There Leander, the lover, swam across to keep his tryst with Hero, and there Lord Byron, many centuries later, with a less persuasive object in view, repeated the feat. There, too, in 1453, the ambitious young Mohammed II, surnamed The Great, at the age of twenty-three, formed his plan for the guarding of the Dardanelles, and, impatient to bottle up Byzantium, set 2,000 masons at work to build the great fortresses, the Castle of Europe and the Castle of Asia, with walls 30 feet thick.

The work of fortifying went on until the famous straits became lined with many forts, some of late days obsolete, others strongly strengthened during the past decade, and under supervision of the Germans, with heavy Krupp guns.

For centuries the straits were closed to all foreign shipping, then, oddly enough, a vessel flying the American colors, having slipped through in the night, suddenly appeared past the inner forts. The Sultan had never heard of the United States of America, but was easily persuaded that, as shown by the stars on the flag, it was a Mohammedan country. The facts of the matter were that the "George Washington," Captain Bainbridge, had been commandeered by the Bey of Algiers to take through an Algerian embassy to Constantinople, an insult to American shipping which was soon avenged by the arrival off Algiers of an American fleet, which put a stop to such piracy in the Mediterranean.

The first foreign fleet to go through was one sent by the British in 1807, under Admiral Duckworth, who did not, however, go all the way to Constantinople. During the Nineteenth Century, Great Britain backed up Turkey in keeping the Dardanelles closed to warships.

Then came 1915, and a new era. Early in March a fleet of 40 British and French vessels, among them the enormous British super-Dreadnought the Queen Elizabeth, under command of Vice-Admiral Carden, appeared off the Gallipoli peninsula, and in a few hours battered to ruins the first two forts, built by Mohammed IV, in 1659. Following up the advantage, on March 5th the three forts at the narrowest part of the straits were also bombarded by shells thrown over the Gallipoli hills, with a range directed by aeroplanes. The Queen Elizabeth that day fired 29 rounds, with disastrous effect. Simultaneously French vessels bombarded the forts across the peninsula, and an allied army, under a French officer, General d'Amade, landed in Gallipoli. During the first ten days of the onslaught, eleven forts in all were destroyed.

The whole attempt has been unique, not only because of the stupendousness of the venture, but also because this is the first time in history upon which warships have undertaken the reduction of forts.

At time of going to press the height of the action still goes on in the Narrows, where the heaviest fortifications stand, and it is believed that the Allied fleet is making steady headway, although, as is to be expected, it has met with some loss, the British battleships Irresistible and Ocean, and the French battleship Bouvet having been sunk by drifting mines. Damage was also sustained by the British cruiser Inflexible, and the French ship Gaulois. The loss of life is not yet known, but is stated to be comparatively light considering the scale of the operations. Ships have been sent from England to make up the deficiency. It is also stated that Vice-Admiral Carden, on account of illness, has been succeeded in command by Rear-Admiral Robeck.

Give me for my friend one who will unite heart and hand with me, who will throw himself into my cause and interest, who will take part when I am attacked, who will be sure beforehand that I am in the right, and if he is critical as he may have cause to be, towards a being of sin and imperfection, will be so from very love and compassion, and a wish that others would love me as heartily as he.—Cardinal Newman.

What Contributors Are Saying.

G. S., Black Hawk, Ont., in sending a link for the "Dollar Chain," says: "I feel grateful to you for opening up a way by means of which we have an opportunity to do what little we can to relieve the distressed."

"A Reader," Kettleby, Ont., writes: "I hope I shall be able to help as long as the war lasts. Find enclosed \$1.00 for the brave soldiers."

S. W. St. James, La Tortue, Que.: "Enclosed find \$1.00 for your Dollar Chain, which we send very heartily, and hope that we may be able to renew once in a while. Wishing you every success in raising the \$30,000."

Chas. L. Simpson, Douglas, Ont.: "Another link for your Dollar Chain. Hope it may help to relieve an aching void in some poor Belgian's stomach."

Richard Thomas, Alton, Ont.: "Kindly accept my contribution of \$3.00 for the Dollar Chain, and my sympathy with your effort in a splendid cause."

Mrs. A. Winters, Brantford, Ont.: "I am thankful to have the privilege of helping in the noble work. May our chain keep on extending its length until it reaches the hearts of those who seem to be unable to put themselves in the other fellow's place."

"Elginite," Shedden, Ont.; E. W. Gowan, Jarvis, Ont.

Miscellaneous Amounts:—W. A. Beebe, Port Hope, Ont., 50 cents.

Previously acknowledged, from Jan. 30th to March 12th.....\$902.63

Total up to March 19th.....\$986.63

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

Hope's Quiet Hour.

Triumphant Over Pain.

He went away again the second time, and prayed, saying, O my Father, if this cup may not pass away from me, except I drink it, Thy will be done.—St. Matt. XXVI, 42.

The cup which my Father hath given me, shall I not drink it?—St. John XXIII, 11.

Good Friday is again drawing near—how strange it is that we should speak of that day as "good"! Keble describes it as "the darkest day that ever dawned on sinful earth," and yet he points out that it has a mysterious power to comfort troubled hearts. We judge of a medicine by the cures it works, and Christ's victorious endurance of pain has

my brave friend had patiently drunk her cup of woe, triumphant over pain, and had "climbed the steep ascent of heaven through peril, toil, and pain."

Where did she find strength to endure so much and glorify her Lord so splendidly? How was it that the little room, where she lay helpless on her couch, was such an attractive place? She was always bright and glad, interested in all the world, apparently forgetful of nothing but her own pain. How was this miracle worked?

She endured, as seeing Him Who is invisible. The Master she loved—and loves—was always with her, and in His strength she endured her pain not only patiently but victoriously. He filled her heart with joy as well as with courage. He gave her hope as well as peace. Looking forward to the joy set before her, she endured the cross as a brave soldier of JESUS Christ. The same miracle has been worked innumerable times by the Living Lord, Who is dwelling invisibly among us to-day.

In our text we see how our Lord, on that first Good Friday, sought and found the strength needed to make Him a Victor. He did not spend the night in sleep to strengthen His body, but in prayer which strengthened His soul. This is an age when men and women are intent on winning great physical efficiency. We are right in seeking bodily health, but health of soul is even more valuable. St. Peter slept under the olive-trees of Gethsemane—and sleeping out-of-doors could not fail to recruit his bodily strength—but spiritual strength was what he needed even more, and took no pains to secure. He was dangerously sure of himself, sure that his love and courage could stand any strain. When we feel sure of ourselves let us humbly watch and pray, for we are far weaker than we imagine, and need the grace of God to carry us safely through temptation.

A priest in a French hospital was preaching to the patients, and he told them that brave endurance of suffering pleased God, who would reward such victorious endurance. A sick man in the ward broke down and sobbed. The priest asked him if anyone had injured him. "Oh no, sir," he answered, "no one has done me any harm. It is I who have harmed myself. What great things I have lost during all the years I have suffered! What joy I might have found if I had accepted this sickness with patience. I, who thought myself so much to be pitied, if I had understood my state rightly should have been one of the happiest men on earth."

He felt that he had wasted his opportunity of enduring pain victoriously. How often we feel like that when a heavy cross is lifted from our shoulders. How ashamed we are of the impatience we have felt, of our lack of courage, and of the self-pity we have indulged.

Our Lord went apart—a little distance from even His three chosen friends—when He fought out His great battle. Let us try to follow His example in this and tell our troubles to God when our hearts cry out for helpful sympathy, resolutely refusing to burden our friends with our woes more than is absolutely necessary.

Our Lord prayed until He had won the victory over His natural shrinking from pain, until He was able to say calmly: "The cup which my Father hath given me, shall I not drink it?"

This was another secret of His courage—He knew that the cup of sorrow was not forced upon Him by cruel fate. He took it trustfully from the Father's hand. The pure in heart can see God. They may not understand His way of dealing with them and His apparent indifference to their prayers—even Christ pleaded in broken-hearted amazement, "My God, my God, why hast Thou forsaken me?"—but their hope and courage spring from their consciousness of His mighty Presence. The world may seem to be forsaken by God and drifting helplessly to destruction, but those who are clinging to His hand in the darkness know that He is LOVE and that all power is in His hands. Even in their most earnest prayers they ask for the fulfilment of His Will rather than their own. As they pray, "Thy Will be done!" they find strength to endure.

One of God's soldiers, who thought himself a failure because all his efforts for the good of the world seemed to be



WHERE THE ALLIES ARE DRIVING TOWARD CONSTANTINOPLE.

A contributor who sends neither name of himself or his post office:

"Enclosed find \$25.00 for the Dollar Chain. Only wish it were twenty-five thousand. . . ."

"Out of their pockets came kerchiefs, Out of their eyes sprang tears, Out of old, faded wallets, Treasures hoarded for years."

DOLLAR CHAIN LIST FROM MARCH 12TH TO MARCH 19TH.

- Contributions of over \$1.00 each:— Josephine McCally, St. Thomas, Ont., \$2.00; Richard Thomas, Alton, Ont., \$3.00; Mrs. A. Winters, Brantford, Ont., \$5.00; Wm. McGillivray, Nashville, Ont., \$2.00; Two Friends, Oxford Co., Ont., \$5.00; Mrs. G. H. Moynan, Waterloo, Que., \$5.00; Mrs. J. H. Stewart (from two children), \$2.50; Jas. O'Leary, Port Hope, Ont., \$2.00; Mr. and Mrs. J. Lambton, Ont., \$2.00; "A Subscriber," Dungannon, Ont., \$1.50; "A Friend," name not given, Toronto postmark on envelope, \$25.00; Jas. Elliott, Corinth, Ont., \$4.00; A. E. Rymal, Ancaster, Ont., \$1.50; Mrs. N. N., Paris, Ont., \$5.00; O. M., Owen Sound, Ont., \$2.00.

- Contributions of \$1.00 each:— Wm. H. Thomas, Alton, Ont.; J. D. Russell, Maryland, Que.; Chas. L. Simpson, Douglas, Ont.; E. McIntyre, Middle- march, Ont.; J. C. Galt, Ont.; J. W. H. Caledonia, Ont.; M. Bennett, Gleanworth, Ont.; W. H. H. Huntington, Que.; Alice B. Page, Thornhill, Ont.; D. S. Tull, Christina, Ont.; Valentine Berlet, Lisco- wel, Ont.; H. K. Saunders, Jarvis, Ont.;

inspired millions of His followers to endure tribulation victoriously. Even that word "tribulation" helps a sufferer, for it reminds us that the heavy blows are not intended to crush God's grain but to remove the chaff which clings to it.

A woman in a hospital was suffering terribly after an operation, longing for a moment's relief from pain, when she heard music and singing. This seemed almost more than she could bear, but at last she found herself listening to the words which some nurses were singing at their evening service:

"Who best can drink his cup of woe, Triumphant over pain: Who patient bears his cross below, He follows in His train."

It was like the touch of the Master's hand, and she remembered how He endured awful agony, not only uncomplainingly but with tender consideration for others. She was filled with shame at her weak self-pity, for she claimed to be a soldier of the cross, pledged to accept without question any cup of pain God might see fit to offer her. After that she says: "All through the trying hours I was helped in a manner beyond the power of words to describe."

Last Sunday, a neighbor of mine, who has for about seven years endured almost constant pain—endured it without word of complaint or self-pity—was called to her reward. Without a sigh the victorious spirit slipped out of the frail, crippled body when the angel of death whispered the welcome message, so long eagerly expected, "The Master is come, and calleth for thee." Little wonder that the peaceful face spoke of joy, for

select for you if like attracting like, may kindle the rays not stop your from the sunny side, formations are need- again and again, "I am become- capable," without attraction and har- touch with the take higher mor- There is no gain- You are king of there are fully as and art and beauty and materialism and

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in which this Law of Selection cannot litterate the word in years to come. Lives are neither e future, but ever- nt tense—one side always sunnier than s select your most nile is now. al thought with Before you have econd thought will a group of like- waiting. The pro- ill in turn prove a method of recasting our entire plane of the power to choose us will—is ever at That spark of di- ver can lose entire- den key to the se- OF HAPPINESS.

THE SPARTAN.

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Straits—the ancient 42 miles long, and n 1 1/2 miles, at the 4 miles at the ct the Aegean Sea Marmora, and upon s the possibility of e the great city of Byzantium of the e farther side at the point where of the Bosphorus Black Sea. les, has clung to emoration of the nus, so-called from son of Zeus and

unsuccessful, describes how he gazed with sorrow at the failure of his hopes, but lamented that failure for a moment only:

"For a moment! Then our manhood
Puts the sorrows by,
Crushes down again the heart throb,
Quells the rising sigh.
And once more we set our faces
Sternly toward the front,
Brace again our nerves and sinews
For the battle's brunt.
Onward! With success or failure
We have nought to do.
Ours to do our duty nobly
All life's journey through."

Those who are accepting their troubles—be they large or small—with cheerful courage are helping the world far more than they know. One of the greatest treasures in the world is Joy. If you can pour out gladness in a steady stream, in dark days as well as in days of sunshine, you are a public benefactor. Even in this time of war the sun is still shining behind the clouds, and some day the clouds will vanish. Let us look forward, instead of giving way to inglorious despair. Think of the soldiers who say, "Are we downhearted? No!"

A hero in a besieged city, who was facing probable starvation, said, "I have still my boots left, and as long as I have that most excellent meal left I will not surrender." He did not surrender.

Spurgeon has said: "Prayer girds human weakness with Divine strength." We are weak, but our Divine Ally is All-Mighty. We can be victors every day, if we draw daily supplies of strength from Him.—

"All may have,
If they dare try,
A glorious life or grave."

—Dora Farncomb.

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.]

Three Jewels.

There was once a woman who sat listlessly, day by day, looking out of the window of a cabin. The rain rained, and the sun shone, and the wind blew, but it was naught to her, for she was not alive; she was dreaming in a land of unrealities, and the Present was ever passing. If ever she awoke it was but to shudder and say, "I hate this bare and comfortless cabin! I hate this croft with its tangle of tall weeds and smothering vines. Oh, if I were only what I am not!"

One day there passed a gay cavalcade, and in the midst of it a lady fair with flash of jewels on hair and throat. The woman at the window followed with her eyes, and forgot that it was but the flash of sunshine on the jewels that caused them to shine. The cavalcade passed and was lost in a cloud of dust. "This cabin is more bare than before," said the woman, "and the weeds grow taller, and I feel that among them serpents twine."

And the sky grew dark, and the wind moaned, and the gnarled limbs of the trees creaked without the walls of the cabin, and the woman leaned her head on her hands and wept.

Came One to her in the midst of the darkness who said, so quietly that it seemed only the murmuring of a south wind through the casement: "Why reprove you for the flash of jewels that have passed you and gone behind a cloud of dust into the great world? For behold you have three jewels, better than which has no one, but you must take away the glass from before your eyes that you may see."

"There is no glass," said the woman. "But yes," said the voice of the One, "you have been living upon your emotions and moods; turn the searchlight of your intellect upon yourself and you will find the glass."

Then the woman did as she had been bidden, and discovered that for years she

had been looking out upon the world through a glass that was all blue. She thrust it from her, and saw that upon it was stamped its name, Morbidity.

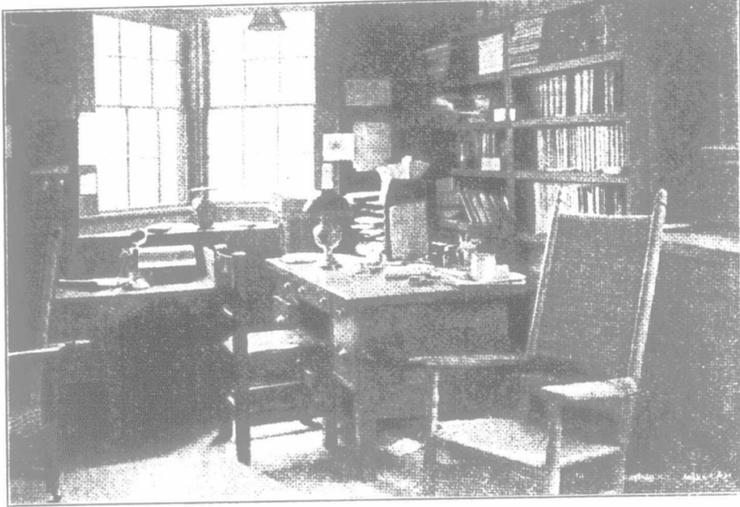
She turned to the cabin and looked out of the window.

"The cabin is less bare," she said, "and the sky is less gray; but the gnarled tree still moans, and I see no jewels."

"Thrust away from you still another glass," said the Voice as of the south wind, "so mayest thou see the jewels."

So the woman turned the searchlight of her intellect once more upon herself, and found yet a glass all smoked and dim, through which never filtered a

glimpse of sunshine, nor bright faces of children and flowers, nor songs of birds, but only the glint of hard gold and flinty glimmer of diamonds, and high seats of the world, far-away things among which walked shadowy, far-off figures.



A Corner of a Den.

She thrust this glass also away from her, and then saw that its name was False Estimates.

It was as though a burden had rolled off her shoulders. "The sun shines," said she, "and the branches of the tree wave in the wind; the leaves turn their under sides to the heavens, and they are all silver. The tall weeds in the garden, too, are nodding to me, and I know

the Voice as the murmuring of the south wind through the casement. "Hast thou found thy three jewels?" it asked. "But no," said the woman, and smiled, "and now I am old. I have seen no jewels."

"Yet for all these years thou hast had them," said the Voice. "Thou hast had the three jewels. Thou hast used them well."

The soft murmuring died away, and the woman closed her eyes, still smiling. "Thou hast 'used' the jewels," the Voice had said, and she pondered. Then her consciousness saw, and there passed before her three Impressions, gleaming softly bright, as jewels of more than



An Attractive Library.

there are no serpents among them, for through them a little child with smiling face makes way for me. But where are the jewels?"

"Think well," said the Voice of the One who had come as the south wind, "and perhaps thou mayest see. Now, for thine own good, must I leave thee, but remember that One hath spoken to thee whose name is Inspiration. Hold fast to thee that which I have given thee, and trust thine own self. 'To thine own self be true.'"

The woman arose from her place by

earthly lustre; and the name of the first was Time, and the name of the second was Place, and the name of the third was Opportunity.

"Time?" yes, I have had all the time there was," said the woman to herself, "and for these many years I have not wasted it. . . . Place? I have had this little cabin, and my garden beyond there where the bees hum and the birds sing, and children come in to play. . . . Opportunity? Yes, there has been opportunity to do for others. I have been as one who 'lived in a house by the side of the road, to be a friend to man.' All so little, and yet so much." And she

thought of the thirsty traveller to whom she had given a drink of water, of the old wayfarer whom she had fed, of the distressed and desolate whom she had taken into her home and comforted, sending them away with a few blossoms of heartsease on their bosoms. "Yes," she said, "I have had three jewels." And quietly she fell asleep.

JUNIA.

Women As Workers.

So a census is to be taken in England to ascertain how many women can do men's work, thus to release just so many more of the "fighters of the species" to go to the front, if necessary!

It's a horrible contingency that makes such a step necessary, and yet, upon this the morning of its issuing (March 18th), the announcement seems to have brought one thought uppermost in the mind of nearly everyone who has commented upon it: "I wonder if they will give them the vote now?" has been the very general query. Will "They" give them the Vote?—that vast, indefinite, yet very real Quantity called "They," which so often, without rhyme or reason, and because of mere prejudice, or carelessness, or stupidity, sways, according to its whim, the destinies of those over whom it can exercise control.

"The vote," however, does not seem to be the keystone of the thought. Rather this: It is portentous of things much deeper than even the franchise, that women are to be called out among the ranks of the workers in England. For England has been very conservative in the matter of permitting women to come forth and do useful work and earn their own honest living. Nor has she been the only country which has cherished an unwritten law that women lose caste socially just as soon as they essay to part company with the parasites and take a stand, positively useful, among the workers of the world.

Henceforth, it may be, the labor that brings daily bread and keeps the wheels of the world moving will be less despised, will take a more honored place in the social fabric. Whether of hands or of head, whether accomplished by men or by women, it will be more likely to be awarded its rightful place. . . . And so Medievalism with its false standards will be left behind, and the Sanity of a new age, a truly Golden Age, will take its place.

One would not for a moment suggest that woman anywhere should shirk or avoid her place in life as a woman. Nor, whatever cynics may say, is there much danger of that, at least among the broadminded women of the world. True womanhood, wherever found, is big enough in spirit to live up to its obligations. Only the pampered, parasitical members of the sex seek to escape them.

The point is this: That every woman of spirit rebels at being forced to be a parasite. She demands her right, as a human being, to work at that for which she is fitted and which she loves to do. She demands the right to hold fast her ideals as to the man whom she will marry, and to refuse to marry simply for a home. She demands the right to earn her living independently, if her ideal of married life does not present itself. And she dares to hold her head high and expect that her work shall be respected.

This census movement will consolidate her position. Incidentally, it is rather sure to bring to her the possibility of stepping out from the ranks of "idiots and children" and raising her voice as a human being in regard to the laws under which she must live.

In passing, is it not a matter for satisfaction that at this terrible time of crisis there are women and women who are neither butterflies nor jelly-fish, nor yet mere wisps of dodder or bindweed—women who are splendidly capable, splendidly willing to meet whatever emergency may occur? When the war is over, the female sex, already vastly in the majority before it started, will be preponderant beyond precedent. Upon the shoulders of the women will rest a burden also beyond precedent. And long years will pass before the male children of the nation will be old enough to undertake their share of it.

In the meantime, Heaven grant to the women the strength, and the daring, and the will!

JUNIA.

The House and Its Furnishings.

(Continued).

THE DEN AND LIBRARY.

Have you ever heard this definition of a den?

What is a den?

- A den is when
- The broken chairs
- The rugs with tears,
- The pictures cracked,
- The table hacked,
- A tickless clock,
- Desk that won't lock
- Are gathered in a heap by ma
- And put into a room for pa.

—Houston Post.

Very well put, isn't it?—And little wonder—since the description is true—that dens have fallen somewhat into disrepute; men have rebelled against being stowed away with a lot of "other junk."

Nevertheless, when room can be afforded for it, and when it is properly furnished, the den has a place of its own. There is no man who does not like to have one little spot which is all his own, a spot in which he can keep his desk and papers, which he can leave upset if he chooses, and where he can always find his pipes and smoke to heart's content—and let his men friends smoke—without being reminded afterwards that the curtains smell of stale tobacco.

In general, the den should be furnished like the living-room, with good comfortable, serviceable furniture—leather-covered is best—a rug that is easily swept, and wall paper in tobacco brown, dull buff, or one of the quiet greens. A fireplace is a great adjunct, and there should certainly be a broad, stoutly upholstered couch.

Don't undertake to furnish the den with pictures; let the good man do that for himself. If you essay it you are about as likely to suit him as when you choose his neckties. The chances are that you may put up poster hunting scenes when he would much rather have Gibson girls, or "The Hanging of the Crane," when he'd greatly prefer one of that groggy-looking Chantecler leaning up against a doorway as he sagely observes, "What's the use, anyway? An egg yesterday and a feather duster tomorrow!"

If you own a library of classics, with leaves uncut and pages free from the unmistakable signs of usage, you are revealed. If you own one made up of

bacco-brown tints, is best, with curtains of scrim stencilled along the border or inset with coarse lace. The rug should be a few shades darker than the walls. Comfortable chairs, and a heavy table supplied with drawers in which paper, pins, etc., may be kept, will complete the equipment.

Passing the mere furnishing, we come to the real soul and spirit of the library, the books:

Do you know this, that nothing in the world can so reveal YOU as the books in your library? You have heard of the adventure in this line of Madame du

ing. There must be enough warmth and dryness to prevent dampness, which causes mould. On the other hand, excessive heat must be avoided, as it causes the covers to warp and the backs to unfasten.

As a rule, the shelves should not be too wide—eight inches is enough for most books—and when the shelf chances to be wider than the books, the books should be drawn forward to the front; they look better that way than when shoved back, with a gaping vacancy of bare wood in front. Also, the cases should be very simple and plain. An

be reserved for them, all the better; if not, an upholstered window-seat, with a box as foundation, will be found of use. There seems nothing more to be said about the equipment of a library. Perhaps one may close by quoting the words of a writer in T. P.'s Weekly, in whose mind, evidently, the "book" question looms large as a most important feature in any dwelling: "You need never fear the scrutiny of a man of taste and culture if your household surroundings are plain and simple, and if your books are well chosen according to personal taste."

REMOVING LETTERS.

S. C. M., of Nova Scotia, inquires how to remove letters from bran or flour sacks. I have had good success with the following fluid: 5c. of salts of tartar, 1 tin of Gillett's lye, 1 ounce of liquid of ammonia. Dissolve the Gillett's lye in six quarts of rain water; when cooled, add salts of tartar and ammonia, bottle and it is ready for use. Take one cup of fluid and a half cake of soap cut in pieces to a half boiler of cold rain water. Put the sacks in the water while it is cold and let them boil half an hour. You will find this good for washing all white goods. Wash, rinse and blue them in the regular way after boiling. Keep the fluid out of children's way, as it is poison.

AN INTERESTED READER.

CLEANING PANAMA AND STRAW HATS—SPONGE CAKE.

Dear Junia,—Would like if you could tell me how to clean a white Panama hat. In return I will send you a recipe for sponge cake which we have found very good; it is a recipe which never fails. We have often used it.

Sponge Cake.—3 eggs, beat one minute; 1 1/2 cups white sugar, beat 5 minutes; add 1 cup flour, beat one minute more, then add 1/2 cup water, another cup of flour, 2 teaspoons baking powder. Flavor with lemon or vanilla. Bake in a moderate oven 25 or 30 minutes.

Thanking you in advance.

York Co., Ont. "ROSEBUD."

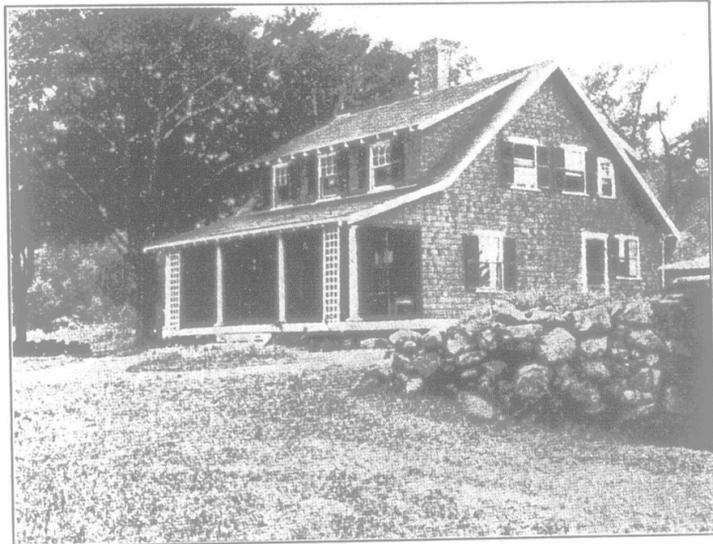
I find the following method for cleaning a Panama hat among my notes: Have made at the druggist's the following solutions: (1) Sodium hyposulphite 10 parts, glycerine 5 parts, alcohol 10 parts, water 90 parts. (2) Citron acid 2 parts, alcohol 10 parts, water 90 parts. First, sponge the hat over with the first solution, and leave in a cellar or damp atmosphere for 24 hours. Then apply the second preparation similarly. If you want it stiffer, stiffen with parchment size—which consists of gutta percha dissolved in ether—applying it over the surface of the hat with a soft brush, allowing it to dry while in perfect shape.

Scientific American gives also the following method, which is easier: Scrub the hat well with Castile or ivory soap, and warm water, using a nail brush to take off the dirt. Place in the hot sun to dry, and leave for two or three hours. A little glycerine added to the water will quite prevent the stiffness acquired by some hats in drying, while a little ammonia in the wash water materially assists in the scrubbing process. It is well to rinse a second time, adding the glycerine to the rinsing water. Immerse the hat completely and rinse well. When you take the hat out, press out the surplus water with a Turkish towel, and let it rest on the towel when drying.

A discolored straw hat may be cleaned as follows: Put a small quantity of oxalic acid into a clean pan and pour on enough scalding water to cover the hat. Keep the hat in the solution for about five minutes, then dry quickly in the sun. Straw hats may be stained any color by the hat stains and enamels now sold by druggists, or they may be blackened by applying first black hat enamel, then liquid shoe polish to take off the too glossy appearance.

KILLING LICE ON PLANTS.

Mrs. M. S. asks how to kill lice on house plants. This may be accomplished chiefly by spraying. For aphids or ordinary plant louse spray with tobacco water, or dip the foliage in it; or, if you choose, use soapsuds made with ivory soap, 1/4 pound to the pail of water. Red spider will succumb to spraying with



A Homelike House.

Trees form a good background.

Barry, have you not? Having decided that it was fashionable to own a library, she ordered from a bookseller one thousand volumes, to be bound in rose Morocco and stamped with the arms of Du Barry. The whole consignment arrived at Versailles, much to the astonishment of Louis XV. and his court, who, on seeing them brought in, little suspected that the greater number of them were but cheap "remainders" rebound.

If you own a library of classics, with leaves uncut and pages free from the unmistakable signs of usage, you are revealed. If you own one made up of

ornate bookcase is in very bad taste; it detracts from the books, which should be the chief attraction. Dull stain in mahogany, walnut, fumed oak, weathered oak, Flemish or early English, are all very good for shelves or cases, provided the rest of the furniture in the room has the same finish.

Finally, see that the library is supplied with a few essentials that are likely to be overlooked. An ink bottle that will not upset may prevent profanity, and, incidentally, save the rug. A pen-knife will protect the top of the table from ink marks. There should be a bot-



Affording Both Space and Dignity.

Note simplicity of line.

"trash," you are likewise revealed. All of which leads to but one admonition, which you may administer to yourself: At least, be honest. If you don't like books, don't have a library.

On the contrary, if you have a mania for trash, you can still be honest. For the sake of other people, refrain from building up a collection of books until you have cultivated your taste.

The real book-lover will never place bookcases where direct sunlight will fall upon the covers; it fades them. Moreover, he will be careful about the heat-

of mucilage and a brush; also, a supply of pencils and a few "rubbers," hard and "sponge." A bit of art-gum for removing chance soil from the leaves of books will also be a valuable addition. To prevent an appearance of clutter, put pencils, rubber, paper-knife, etc., on a pretty tray. Also see that there is a capacious waste-paper basket and a pair of scissors for clipping.

Magazines usually present a problem, they accumulate so, and often there is something in them that one wants to keep. If a section of a bookcase can

THE LIBRARY.

In many houses library and den are one, an arrangement which works well enough—sometimes. When, however, anyone in the house is of very studious turn of mind, it is as well to have the library by itself.

Here, of course, the chief item of furnishing is the bookcases, and it goes without saying that these should either be built-in or of the "elastic" type. The built-in bookcase has its advantage. It economizes space, and affords no crevices beneath in which dust may lurk. And most certainly it should be provided with sliding doors; this will save endless dusting of books. . . . The "elastic" species, on the other hand, also has its advantages. It is very dust-proof, and you can buy just enough shelves to hold the books on hand, adding more to the top, or at the sides, as necessary.

As a rule, long, rather low cases (not over six feet high) look better and are better than tall ones. It is very exasperating to have to climb upon a chair to reach a book. Besides, the top of fairly low cases gives an attractive spot for placing a jar or two for flowers, while the wall-space provides room for pictures. The latter, by the way, may be sepia portraits of great men, or copies of famous paintings, all of which may be obtained from the Perry Pictures Co., Malden, Mass., or from the Brown and Cosmos Companies, of New York, at very trifling cost. These prints, as a rule, look well when supplied with brown or cream mats and plain wooden frames.

Needless to say, the whole atmosphere of the library should be restful. A wall-covering without figure, in olive or to-

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clear water, applied daily. Mealy bug and scale may be killed by lemon oil or fir-tree oil. Directions for the preparation of the wash go with the oils, which may be bought from any dealer in plant supplies.

WEDDING QUERIES.

Being a subscriber of your "Farmer's Advocate" for a number of years, I take the privilege of asking you these questions: How to have a menu or wedding breakfast served and arranged, there being twenty guests, and how to set the table, it taking place in June. How to decorate the house, if it should be apple-blossom time. How should the groom reply to a toast, making it short, but still thanking them all for their kind wishes? Also, how to furnish a new house, up-to-date, etc., referring to matting on polished floors; also the best kind of window shades to keep the sun out. Asking you to answer all my questions in full, I beg to remain a subscriber to "The Farmer's Advocate," in which I hope to see these questions answered soon.

These questions about weddings have been answered so often in this department that but little remains to be said. However, I suppose people pay no attention until they are "caught in the toils" themselves, and have to. Set the tables for a wedding breakfast exactly as you would for any formal meal, except that you may allow more latitude in the decorations. Small tables may be used, the decorations at the bride's table being chiefly white. Apple-blossom season is a lovely time for a wedding, as the blossoms may be placed everywhere about the house; one can't have too many of them, if they can be spared from the orchard.

If you are wise, you will have the menu simple, but very dainty, say grape fruit or orange pulp in glasses for an "appetizer" as the first course; then sliced fowl, two kinds of salad, jelly, pickles, etc., with potatoes cooked in some fancy way; finally, cakes and ices, fruit, nuts, bonbons, and coffee.

If the groom learns his speech "off by heart," it is sure to be rather stiff. He will not be expected to say much—just a few modest words along the line which you have suggested. He can depend upon himself for that.

In the current articles on house-furnishing you will probably find a sufficient answer to your last question. The choice of rugs for the polished floors must depend upon how much money one is prepared to spend. Axminster and Wilton rugs are very good, also the serviceable Scotch rugs. Window shades of good quality, "two-faced," white on the outside, dark green on the inside, are very good.

QUERIES.

Dear Junia,—As I am a reader of your Nook for a long time, and enjoy it very much, now, like many others, I have come for help. Could you inform me how Wallachian embroidery is done? Also, what is good for house plants in the winter time, when the earth has become full of little white worms? Am afraid to remove the earth now.

BLUE EYES.

Wentworth County. I do not know how Wallachian embroidery is done. Write to the T. Eaton Co., or any other large departmental store, asking for a book containing information on the subject.

Pour lime water on the soil to get rid of the little white worms.

RE PICTURES, ETC.

Mrs. J. Mc., Durham Co., Ont., writes: "Do you ever see colored perilustre embroidered on bureau covers, etc.? Would you also give me the address of the Elson Picture Company, and any others that carry pictures for framing?"

In reply, may say I am informed that perilustre in color is used for any kind of embroidery, and that it washes well if care be taken.

Perry Pictures Co., Malden, Mass., sell pictures of all sizes and the best of subjects. So do the Brown and Cosmos Companies, New York, and the Frederick Hollyer, No. 9, Pembroke Square, London, W., England. I do not know the address of the Elson Co.

Fashion 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 ten cents PER PATTERN. If two numbers appear for the one suit, one for coat, the other for skirt, twenty 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.

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.....

Fashion Notes.

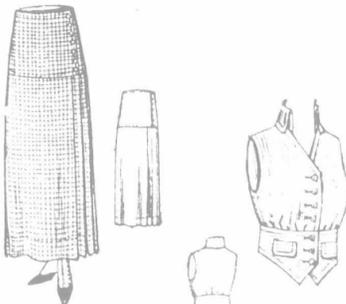
The leading note of fashionable dress for the spring is the full skirt, either fitted at the top and flaring at the bottom, or full from the waist-line. Sleeves are still small, and are usually "set in" at the shoulder, while in many dresses the sleeves and yoke are of different material from the rest of the dress. Ninon, shadow lace and net being used. Suspender effects are also seen, with a promise of a return to "jumper" effects. As a rule skirts have the high waist line, and are very short,—anywhere from 4 to 11 inches from the ground.

The favorite spring fabrics are gabardine, covert cloth, serge, poplin, with faille and taffetas in silk. Many new shades have made their appearance, quiet in tone, for the most part. Among these are sand-color, putty-color, seaweed green, Belgian blue, and khaki, with black and white as a favorite combination.

Hats for spring wear are almost invariably small, with flat trimming and very little of that, but large hats will be shown for later in the season.



8556 Semi-Circular Skirt, 24 to 32 waist.



8515 Two-Piece Yoke Skirt, 24 to 32 waist.

8520 Long-Sleeved Waistcoat, 34 to 42 bust.



8557 Empire Dress for Misses and Small Women, 16 and 18 years.



8576.—34 to 44 bust.



8581 Buttoned Waist, 34 to 42 bust

The Beaver Circle

"Brownie".

A TRUE STORY OF A MUSKRAT.

By Clara L. Saunders.

Brownie and his sister lived in a snug little house, built on the edge of a pretty gurgling brook, which flowed through a bright green meadow.

This brook began away up on the top of a mountain, and rippled along over its stony bed, till at last with many dizzy wanderings and turns found its way to the low-lands where it grew quiet and did not fret and fume so much, but found time to stop and look about, and reflect the blue sky, and the white, fleecy clouds.

Although it grew still and deep, it continued to flow ever onward; and after a journey of many miles it found its way to the sea, and helped to swell the already well filled "Basin of Minas," for this is a real brook in "Nova Scotia," and is still fulfilling its mission.

We started with Brownie and his sister, and have got lost in the brook.

This queer little house was the home of a muskrat family. Happily they spent their time, in the water and out at will; nothing exciting had happened so far, and now Brownie was grown a big fellow. One day the parents of this youthful pair went off for a stroll, and to see their friends. Brownie had for some time been rather restless, and wandering further from home. He had been warned by his wise old father about a suspicious-looking arrangement a little way from their home. "Do not go near it," and especially, "Do not go in, for I fear it is not placed there for our good." But Brownie only wrinkled up his nose when his father was not looking. So far he had not ventured beyond the home limits. As the evening shadows were fast deepening into night, and the pretty stars were coming out, the sleepy birds had gone to rest, and the only sounds to be heard were the crickets chirping in the long grass and the murmuring of the brook. The wind had gone to sleep with the sun; every thing was still and quiet. The youngsters were still alone. Suddenly Brownie exclaimed,

"I am tired of this dull place! I want to see what is over there! Looking away along the brook, and over the hill! I know there must be great things going on there? I am going to see!"

"Oh don't go away, Brownie," pleaded his sister, "stay at home where we are all so happy. You will only find trouble, and perhaps never get back again!"

But Brownie only gave himself an angry jerk and said: "Oh you are only a girl, you are too afraid to go the length of your nose. I tell you I am going, so there now!" and away he bounded, leaving poor little Brown Coat alone trembling with fear.

But we must follow this daring youngster. He soon got tired of swimming, and came out on the bank some distance away from home. But a step or two away he saw a strange-looking house. Going nearer he stopped, as he remembered what his father had told him. "This must be what he meant," so he very wisely did not venture in, but waddled off.

..... "What is that?" as he hears a rustling. Quickly he hides under a bush; and none too soon, for it is his father and mother returning home. They do not see him, but go on their way, little dreaming that their naughty Brownie is running away. When he is sure of not being discovered he hurries on, and soon comes out on the highway. What a hard, white road! Merrily he plods along, and soon he is at the top of the hill. Pausing to get his breath, he hears a strange noise, and an animal several times his size comes bounding toward him, making an awful noise. Hastily he turns aside, seeking a place to hide from this new danger; and luckily for him he finds a little pond of water into which he plunges.

"Oh my! What an escape!" as the animal, which is a big dog, runs round, and round the pond barking and jump-

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ing in a frightful way. But he cannot reach Brownie; and after a time gets tired, and trots away home to his warm bed in the stable.

Our brave explorer does not venture out of his hiding place, but as several hours pass and no further trouble comes, he sallies forth. He does not meet with any more hindrances, and soon arrives at the foot of the hill. Oh! what a good time he thinks he is having; no one to prevent him from doing as he pleases. (he has forgotten the dog).

He wanders on, and soon finds himself in the drive-way of the farm. Passing quietly along he comes in sight of the farm house, but as the hour is now very late, no lights twinkle from the windows, not a sound is heard but the crickets, and the rustle of the leaves in a passing breeze. This is fine, and around he goes on a tour of inspection. He is very close to the house now, and presently spies an open door, but on looking in finds only steps leading down, but he does not care yet to explore the regions below. Off he goes toward the farmyard, he can hear the horses stamping and the breathing of the cattle, but thinks it best not to go too near. He begins to miss his home, and wish (although he would not admit it for the world) that he could find a brook. When, oh joy! he finds quite a bit of water. Here he thinks will be a capital place to build a home, and have a place to flee to in case his enemies try to stop him in his quest for knowledge and freedom, and to come and go at his own sweet will.

Several days pass without any one disturbing him, but he is not to be left in this quiet way any longer. The bright September days, the orchards with the trees loaded with luscious fruit, the busy harvesters reaping the



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ASK YOUR GROCER—IN 2, 5, 10 AND 20 POUND TINS. The Canada Starch Co. Limited, Montreal.

golden grain, all combine to make one want to spend as much time as possible out of doors. So it comes about that one fateful afternoon—for our wanderer—

the family are all out enjoying the beautiful sunshine; and nibbling at the pears and apples scattered under the trees. They come near the pond where

poor little Brownie is hiding—or rather trying to—as he makes a dash for the other side, thinking to hide in the new house he has built.

"Come quick, there is something in the pond!" some one cries. All rush to see what it can be, and there is Brownie swimming for dear life, at last disappearing in his house. They all hurry to that side, but he sees them coming and plunges off into the water again. "There it is!" "Look!" Back and forth they go till at last he goes down in the middle where it is deep. With wildly beating heart he remains there, while his enemies destroy his new house which has taken him so many days to build.

"Come away children," says mother, "and perhaps to-morrow if we are careful, we may find out what strange animal is trying to live here." But when the morrow comes the blue sky is blotted out, by thick, gray clouds, and the rain is coming down in big drops, the wind driving it against the windows. No going outside to day for pleasure, but the bright open fire and interesting games keep the little folks busy and happy.

Several days pass before it is warm and sunshiny again, and the desire to go out in the fruit-scented air is hailed with delight. On approaching the pond, sure enough there is again to be seen the little brown thing swimming about.

"Oh, hurry! Quick! Shouts one of the number, and all rush again to see the strange sight. This time they seem determined to rout him out. With long sticks they often give him an ugly whack. What shall he do? He is at his wits end. Oh, if only he had listened to the good advice he got at home! But it is too late now; he must do the best he can. He must leave this place at any rate. It is no

tonger safe. Coming out of the water he looks about for a place of concealment, and plunges over a nearby wall, and finds himself falling, landing several feet below on the hard ground.

Where can he be? It seems dark, after the bright sunlight he has just left. Suddenly he sees coming slowly toward him a big, white thing, uttering a very queer noise. What is this? As the animal comes nearer with its ugly mouth open, and its wicked little eyes fixed upon him, Brownie decides to "move on;" but the terrible thing is after him, making a blood-curdling sound. Back and forth he goes, but the firm stone wall offers no loop-hole of escape. "Ah!" as he comes to a part where the wall is of wood, and surely the fates are with him. He finds an opening just large enough to squeeze his fat little body through, just as the horrid pig comes to the place, only to find its prey gone.

Brownie is safe for the present, and is pretty well used up, and crawls behind some barrels, and tries to still his fluttering heart. Poor Brownie, is this the good time he thought to have?—two escapes in one short afternoon, his house in ruins; and now he is in a very queer place of which he knows nothing. But he wisely decides to keep quiet and watch out.

As the pig has gone back to his nap, and everything is quiet again, Brownie goes to sleep too, and dreams of his home in the meadow and how nice it is to be there again, when he is awakened by some one coming down into the cellar to feed the hungry pigs. What a

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squealing and jumping they make, but after a good supper they go off to a distant corner and go to bed, and soon, with much cackling, and calling to each

CREAM

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We want more individual shippers and more men to gather cream for us.

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day; but now, as night is near, they are looking for a place to pass the hours of darkness. For a time they keep up a great peeping and moving about, but after a time all seem to be in a comfortable position and quiet reigns, except for the breathing of the animals, and an occasional stamp of the horses overhead.

He is growing hungry, and feels he must make a move in quest of something to eat. Suppose he tries those steps, where the fowls came down. Cautiously he moves along, carefully looking about him. It is very dark, and he feels a little bruised and sore from the blows he received from the nasty sticks out there in the pond, but he must have something to eat at all costs, and pushes on. He finds no trouble in reaching the top, and finds himself in the cool night air. How nice it seems? The stars are shining, and a faint light in the east tells him the moon will soon be up flooding the earth with her silvery light. There is a hint of frost in the air, and Brownie soon begins to wish for his warm nest, but alas! he remembers it is gone, and he must find some other place to live, and has forgotten his dream, and does not think any more about going home.

After a little, looking about, he finds himself again looking down the outside collarway of the farm house. "Why not go down and see what is to be found down there?" Perhaps he will be successful in finding something to fill his hungry little stomach. Arriving at the bottom he is in the dark again, but after

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You never saw anything stronger in leather than you get in these Giant traces. You never saw a leather trace that would wear longer— $\frac{3}{4}$ inch hard tested rope with malleable ends and electric welded heel chains. Remember the price—\$4.00 (all charges paid). You can fit out four teams for the usual price of one. (West of Fort William price is \$4.50 prepaid).

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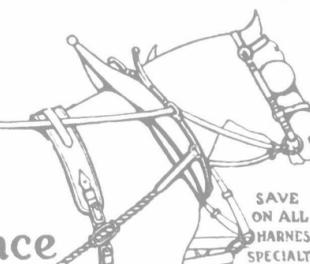
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a little he can discern a lot of barrels piled up in neat rows. Passing along a little further he comes to some low boxes—and oh what luck! They are filled with apples! What a find! No need to go further for a meal. He is soon satisfied with the delicious fruit, and seeks a secluded corner where he goes to sleep.

He does not dream this time, and sleeps on, till aroused by the household getting up. What a tramping and hurrying, opening and shutting of doors, the crackle of the fire, and all the sounds of early morning on the farm! To poor Brownie it is terrible, for he has never been so near it before. He crouches back into the corner, as some one comes down into the cellar. Peeping out he sees the same person who was with the children yesterday. She opens a door into a small room, and brings out something in a dish and goes back upstairs. He can hear the children talking. One little fellow asks: "Mamma can we find the pitty little doggie in the water to-day?" "Perhaps so, if it is there; you know it went away yesterday, and may not come back again." He hears no more as the family goes to breakfast, and only the murmur of voices, and the rattle of the dishes come to him. How he hugs himself as he thinks how they will hunt for him to-day; but they will not find him.

What is that rumbling like thunder which is coming near? Only a carriage coming in the driveway, and with a loud whoa! from the driver comes to a stop. Leaving the horse standing at the door, a neighbor steps inside. "Oh what lazy people! not done breakfast yet!" is his greeting. "Hello have you been out all night?" is the reply. With much good natured banter the men go out followed by the children, who run off to find the "pitty doggie in the water," but no little brown head is to be seen. In vain they poke in the water with long sticks; but they find nothing for their pains; and go away to the orchard to hunt for pears that may have fallen during the night. They find a nice lot; and soon forget their disappointment eating the delicious fruit. The weather continues fine and warm for some time. What joy it is to be living in the beautiful country at this season. Everywhere as far as the eye can see are the fruit-laden trees of the orchards, and the rich grain fields, where the harvesters are busy gathering in the different grains to feed the sleek herds now grazing in the near-by pastures. In a few short weeks the bitter winds of winter will be blowing over all this delightful scene, the green fields will then be brown and sere from the frosts which will come as a warning of "King Winter," who will cover all with his mantle of snow, as if to atone for all the havoc he has caused. Naked and bare, the trees stretch their limbs, as if imploring aid, for they moan, and sigh as if in pain. But alas! the pretty green leaves are gone. Under the snow they lie, sodden and dead; the outlook seems very dreary, does it not? But nature knows her business, and although we question we must wait, for she never hurries, even if we do get impatient, but bides her time.

But where is Brownie all this time, surely we have gotten a long way ahead of our story. We left him in the farmer's cellar, and there he is still. He finds it too comfortable to leave; all he wants to eat, and lots of cozy corners in which to hide and sleep. True, he misses the water of the pond, in which he likes to swim and clean his glossy coat; but why not go out when the busy household are asleep, and nothing is about to disturb him?—for our explorer has grown wise, and does not show himself in daylight.

When the bright sun has disappeared behind the distant mountain, and the curtain of night has fallen, he cautiously makes his way out by the outside door, where he came in, and is soon in the open air, and without much trouble is soon having a fine swim in the same old pond. My, what fun he has! But he very nearly makes a mistake by staying too long, as the stable door has not been very securely fastened and the dog comes out to look about. He has scented something strange; but Brownie keeps very quiet, as he hears his old enemy sniffing around. Carlo does not like the water, and with a sharp bark or two trots away to bed.

Now is Brownie's chance to get back to his home in the cellar, and away he waddles, and is soon fast asleep in his corner behind the friendly barrels. He thinks he has only just gone to sleep, when the sounds begin upstairs.

As the days grow short and cold, he needs all his wits to keep out of sight, as some one is constantly coming and going up and down all day. Poor fellow, he has many a narrow escape from being found. One day the farmer comes down to sort over some of the apples for shipping; and comes quite near where Brownie is hiding. As he begins to look over the fruit he exclaims: "What in the world is at these apples? Surely it is not squirrels; for their teeth are not so large. My! what a lot has been destroyed! Just look! nearly a bushel of the very best, too! It is very strange!" But the naughty little brown thief—for that he is—does not stir; but wishes they would go away and leave him in peace. What a fuss to make over a few apples, when so many have been thrown to those ugly pigs, and to begrudge him a few! He works himself into quite a fury, and instead of quitting this place and going home, as he had thought of doing he decides to stay, and let them know he is not afraid. Not he! But his remaining is his undoing, as we shall see.

Day after day the same program is enacted; the farmer is getting very indignant by this time to think he cannot unravel the mystery. One day he is working at the apples, and some of the children are in the cellar with him, watching father sort the pretty fruit. Suddenly one of them shouts, "Oh, look! What is it?" Immediately all look in the direction in which the chubby finger is pointing; but there is nothing to be seen, for Brownie—for he it is—has darted behind some boxes, which for the time conceal him from their view. The curiosity of the farmer is aroused, and a thought enters his head; perhaps this thing is what is destroying his fruit, and he is determined to unearth the culprit. Poor Brownie is in a bad way, for they are moving everything and looking so carefully, with that bright lighted lantern. Surely he will be found this time; but he scuttles away as fast as he can, when they are not looking in his direction, and finds a hiding place.

The call to dinner comes, and with the words, we will have a look after dinner, they all troop upstairs. Now is his chance for a nap. He sleeps on; he has forgotten his troubles for a time; but the first thing he knows he is rudely awakened by a bright light from the lantern, and he is obliged to run for his life. They catch a glimpse of him as he whisks behind the barrels; but they are after him. From one place of concealment to another he goes; but as he has grown very fat, he soon tires and does not go so fast; and his wits are not so sharp, as he is frightened. At last he makes a false turn and finds himself in a corner, where the farmer heads him off and catches him, and giving him a sharp blow across his dainty nose ends all his good times. "Come mamma and see the 'littie doggie'—which the child persists in calling the poor little rat.

As the mother comes hastily down into the cellar to see what all the hubbub is about her husband holds up to view poor little Brownie, who is still and quiet enough now. "I do not think he will eat any more apples," says the farmer, and carries him away. As the mother goes slowly back upstairs, the sight of the limp, brown body with the life gone out of it, strikes her painfully; and with a very sober face she goes about her household duties.

As night comes and supper is over, and the bright fire in the open stove is throwing its cheerful light over the room, a rather tired little boy climbs into his mother's lap, and begs for "tory 'bout the pitty 'littie doggie, dead." He looks up with his blue eyes, so full of questioning wonder, and waits for the story to begin; but for a time no sound comes. As the mother looks into the innocent childish face, she asks herself the question, "Was it right to punish the poor little 'rat' by taking its life when it knew no better than to eat the fruit?" But "tory mamma!" brings her thoughts back, and holding the little form close, she tells of the home in the "meadow brook," and how

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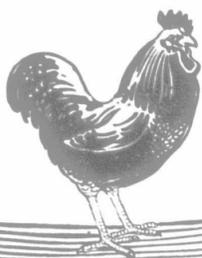
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Brownie ran away, and how he got into trouble, and at last gave up his life, because he did not stay where he could be safe and happy; but because of his discontent and roving nature—But the blue eyes have closed, the little tired head is quiet, while in one dimpled hand is clasped a bright red apple. Outside a cold, raw wind is blowing and an occasional dash of rain, mingled with hail comes against the window panes.

Down in the "muskrat" home they will look in vain for the return of the venturesome Brownie to tell them of the wonderful things he saw and did.

News of the Week

Major-General Sam Steele, D. S. O., is slated to be Commanding Officer of the Second Canadian Contingent.

Colonel F. D. Farquhar, commander of the Princess Patricia's, has been killed in action in Northern France.

The bill to give municipal franchise to married women has been defeated in the Ontario Legislature.

Hon. Walter Scott, Premier of Saskatchewan, has announced that on and after July 1st all the bar and club licenses in the province will be cancelled, and the sale of intoxicating liquors rendered unlawful.

Mr. Lloyd-George announced on March 17th that the British Government will take over control of the factories in Great Britain for the production of war material. The output of munitions will be greatly increased.

A census will be taken of all the women in England who, by working, can release a man for service at the front, should such a step prove necessary.

During the month's blockade, 28 British ships were torpedoed by the Germans, some without notice. Twenty-four of the vessels were sunk, and in all 220 lives were lost.

It has been learned that the battle of Neuve Chapelle, near La Bassée, in which the British took 1,720 prisoners of war, was one of the bloodiest battles fought so far in the western war area.

The Russian and British Ambassadors at Tokio last week informed Japan that if she persists in pressing upon China demands beyond those contained in her original communication to the Powers, it will be difficult for the Allies to negotiate diplomatically. It is understood that the United States has given similar intimation, and a satisfactory solution of the difference is expected. Japan has been claiming Port Arthur and the adjoining parts of Manchuria.

Lord Kitchener and Chancellor Lloyd-George have both warned the British people of the danger to Britain, in the war, of the liquor traffic, and steps may be taken to prevent its sale. "Drink is doing us more damage in the war," said Mr. Lloyd-George, "than all the German submarines put together."

German and Austrian subjects residing in Italy have been advised by their respective Consuls to leave the country as quickly as possible. The probabilities increase that Italy will enter the war at an early date.

At time of going to press, unfavorable weather has again interrupted operations in the Dardanelles, where the Turks are

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Government Standard

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defences, as they are also in the Bosphorus. . . . In the west, but little of great importance has been reported since the terrible battle of Neuve Chapelle, but the French report some gains at Les Eparges. Against these the Germans report an advance in Champagne. A spectacular night raid upon Paris by four Zeppelins accomplished nothing more than the wounding of a few people. . . . On the Russian war front events have been moving. After a two months' struggle, the Russians have gained the upper hand in the Carpathians, and the siege of Przemysl has come to an end, the Austro-German army having failed to pierce the Russian lines which have been surrounding the Hungarians in the fortress. The Russians have also taken the port of Memel on the Baltic.

The Windrow.

Four Canadian Universities are to supply several hundred medical students and doctors to form a field hospital corps, with all equipment necessary.

Mrs. John D. Rockefeller died recently near Tarrytown, N. Y., in the seventy-fifth year of her age.

Madame Curie is working in French hospitals near the front with a complete radiographic equipment, and is being kept busy by the military surgeons.

Henry Ford, inventor and manufacturer of the Ford automobile, is almost as much interested in flowers as he is in motor cars. In appreciation of that fact, a new orchid—the only one of its kind known—has been named after Mr. and Mrs. Ford. It is a most unusual white orchid of the species cattleya mendallii alba, with white petals and a yellow center.

The Boston Transcript publishes a letter written by Miss Elsie Burr, a nurse in the American Ambulance Hospital in Paris, who tells this incident:

There is a most interesting case here of a man who was in the trenches with eight other men. A bomb fell among them. It made hash of most of them, but this man, Etienne Jacquemin (a very brave, patient little soldier), had a dog named Fend Fair, who had followed him for months at the front. Etienne told me that the first thing he realized was that he was buried and would soon suffocate, so he called, as best he could, to his dog. The dog, which was unscathed by the bomb, heard his master's voice. Perfectly crazed, he dug the debris away from his master's face and saved his life. They are both here now, and the dog, a brown and white setter, comes in and lies for hours with his head and paws on his master's chest. I wish you could have seen him the first time they let him in! I thought he would dig Etienne out of bed. Poor man, he is badly off, with one leg gone, the other leg pierced, both arms pierced, and his back burned. He is patient and suffers a great deal.

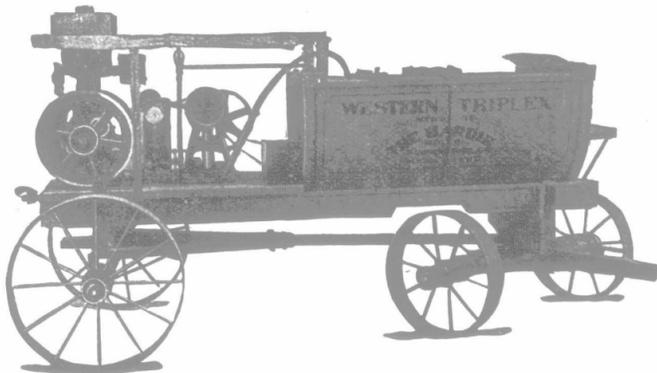
Iceland has gone dry. Thirty-four out of 40 members of the Icelandic Parliament have so voted, and the manufacture and sale of intoxicants is now a thing of the past. The fight for a dry country goes back to 1884, when the Good Templars began their work. Since then the dry sentiment has steadily increased. In 1909 the Alting (the Icelandic Parliament) passed a total prohibitory measure, under which the importation of liquor would cease in 1912, and the sale of intoxicants would cease on January 1, 1915. And now Iceland is dry.

During his sojourn in the United States the now famous Japanese writer, Yone Noguchi, served a rough apprenticeship, which he recounts fully in his autobiography, lately published. He left home with less than £20 in his pocket, and in San Francisco he washed dishes and did "chores," and was just a Japanese "boy," a Frank or a Charley, indistinguishable to his many employers from any other Japanese boy. By that time, however, his early and steady passion for learning English had developed. With his savings he bought books. He began to write. When he reached Chicago for the first time, in 1900, he was already known as a poet.

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One of the best chapters in Yone Noguchi's book is the description of the young student's life with old Joaquin Miller, the flamboyant "poet of the Sierras," in his cottage up on "The Heights" overlooking the Golden Gate. From the chores and the din of San Francisco, Mr. Noguchi escaped to the queer companionship of that quaint mixture of simplicity and display. He loved Joaquin Miller, and Miller clearly loved him.

"He at once reminded me of my imaginary picture of childhood days for a certain Tengu or Mountain Elf with red long nose. . . . It was his habit, as I soon found out, to loaf and invite his own soul, lying in bed the whole forenoon; a silken skullcap which he wore gave him the most interesting touch of an older age. . . . He wished me to accompany him to his old mother's to dine together. . . . On our way to Mrs. Miller's cottage, which stood some hundred yards up the hill, Joaquin Miller picked abundantly the roses, white or red, which he scattered over the large dinner table, exclaiming 'God bless you!' I must not forget to tell you that he wore top-boots and, wonder of all, a bear skin over his shoulders even while eating; a red crepe sash was tied round his waist most carelessly. His dress was of corduroy. But I noticed that there was a large diamond ring on a finger of his right hand which threw an almost menacing brilliancy. He was six feet tall; his white beard fully covered his breast. . . . I accepted him without any question, for the very symbol of the romance and poetry of which my young mind often dreamed; I congratulated myself that the most happy accident had brought me to the right spot where my real soul would surely grow."—The Australasian.

The Women's Institute.

Success From Various Standpoints.

[A paper read at the Harrietsville branch of the Women's Institute by Mrs. (Rev.) L. F. Sutcliffe.]

One great writer says: "Success is not the result of influence or 'pull,' it is the ripe fruit of preparation and effort," and we believe this to be true, whether it be national or individual success.

In considering National success we think the words of Wm. Dargon are helpful. Wm. Dargon, one of Ireland's truest patriots, in speaking at the close of Dublin's first exhibition, said he valued help from National intercourse, yet he felt that the independence of the nation depended upon itself. Further he said: "I believe that with simple industry and careful exactness in the utilization of our energies we never had a fairer chance nor a brighter prospect than the present. We have made a step, but perseverance is the great agent to success." We cannot but see the force of these two thoughts. Self-help and perseverance are both necessary to success.

When Writing Mention The Advocate

We all remember the old maxim:—"Providence only helps those who help themselves." So National success depends, not on, our intercourse with outside nations or what we receive from them nearly so much as on the thrift, independence, sobriety, morality and spirituality of the people within the nation itself. You likely all remember the story of the robin who built her nest in the farmer's grainfield. Day after day the farmer and his son talked of outside help they were to get to take off the grain, but still the robin remained secure, but one day when she heard the farmer say to his son that they themselves would cut the grain, she quickly prepared to remove her brood to another place. So the nation that would succeed financially, intellectually, morally or spiritually, must put forth effort within itself.

Tell the outlay, income and national bank account and we may be able to judge somewhat of a nation's financial success. Go into its homes, study the individual life of the home, note the degree of industriousness of the average individual, the improvement in property, the advance in the use of new inventions and scientific improvements, and we may be able to gain from these indications an idea of how the nation is succeeding. To keep that success that nation must ever keep on persevering and crowning success with success.

If so in the life of the nation, so in the life of the individual. To succeed financially one must not depend on his father's will, his brother's industry or his hope of fortune in the future, but he must depend on his own head and hands. No! No true success attends the life of one who simply uses his father's hard-earned money and seeks not to know what it meant to his father to get it together. All right for him if he have property left to him to use that to good advantage by investment, and by adding thereto by means of physical labor, sweating his own brow, wetting his own hands, or by the exercise of a cultivated mind using the talents left to him not only in gaining more wealth for himself but in helping make the world better.

But there are various kinds of success to be achieved both by the nation and the individual.—Not only does a nation need bank accounts, great national banks, large factories, great cities, extensive docks and magnificent homes to tell its success, but it needs a people physically strong. Doubtless in your institute meetings you talk a great deal on the proper preparation of food, furnishings of homes, proper ventilation of houses, etc. To have physical success a nation must look after the lessening of disease, must establish properly ventilated schools, factories, and homes, must look after the water supply and see that it is pure, must remove rubbish, filth and any refuse that tends to create disease, must see to it that proper measures are taken to check infectious diseases and must persevere in the checking of filth and disease, in the proper care of the young, and in enforcing laws regarding home life etc. Conditions in tenements and crowded sections of cities, especially among incoming foreign population, are to be improved and more room given each individual if health would be insured. In individual life, to be a physical success, we must curb unnatural appetites, whether for meat or drink, must work sufficiently to keep the muscles strong and to give a good appetite, (work is good for anyone) and sleep well and long, especially the young. We quite agree with the answer given in a daily paper to the sixteen-year-old girl's question, "How late should a young girl of sixteen be out at night without her mother?" The answer was "nine o'clock." The habit of keeping evening gatherings till young people get home at one or two o'clock in the morning or later we consider wrong. No wonder card-players, dancers and others who spend their time in such amusements often question the decency of Christians keeping such hours; young people who neglect their proper rest are undermining their health and laying the foundation for a weak body.

Another requisite to physical health is proper clothing. When we see girls and women with necks and arms rudely exposed to the winter winds we do not wonder that Canada has to fight consumption and other such diseases. We

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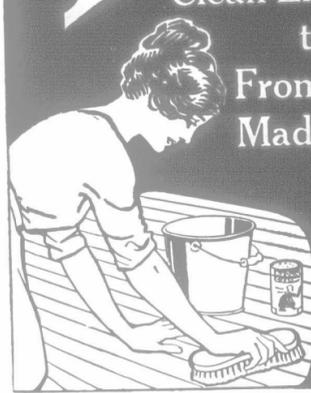


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need plenty of fresh air but that can be gotten while properly and warmly clad. Parents are often to blame in this. Children should be taught to wear warm clothing and taught the necessity of properly protecting the body and keeping it strong.

We spoke earlier of perseverance as essential to success and we think in striving to gain Intellectual Success this is as much needed as any place. We see how men from all the lowly ranks in life have by effort overcome great obstacles and become some of the brightest statesmen, financiers, lawyers, philanthropists, architects, professors, poets, teachers and preachers the world has known. Some one has said, "With will one can do anything," and children should be taught to depend on themselves, to exercise their will power, to keep at their work till they conquer it, and rise if they will. Look at some examples. Shakespeare, the poet whose works have influenced the world; Durand, the great architect, who came from a very lowly station; Van-Quelin, the chemist who rose by overcoming many obstacles till he became professor in chemistry; Dr. F. E. Allen, missionary to China who helped to attain his position by selling papers on the city streets.

Also to be truly great, the nation or individual must gain Moral Success. This kind of success has not attained the place even in fair Canada that it should have. While men are allowed to make and sell liquor to inflame the brains of men and to destroy their souls and have a license to protect such doings, while the government allows the cultivation of the tobacco weed and the red-light districts are guarded instead of being raided by armed men, while boys are allowed to walk the streets pulling the brain-destroying, nerve-consuming cigarette, and the girl with the severed skirt and transparent half-dress waist is allowed to go in any society that pleases her our land will not have attained moral success. How are we to improve the moral conditions? By safe-guarding our children. Teach individual purity. Tell boys and girls about themselves, the proper use of the organs of the body. Teach them truths they must learn. If you mothers neglect to teach your boys and girls they will learn impurely from others what you should have taught them purely. You fear to start too young. Keep them with you till seven or eight years of age, and let them be armed with proper knowledge of themselves before they go to public schools or leave your care. Better you teach too early than leave them to later learn truths in impure dress. We have even heard of men who made it their business to teach boys impurity. While you talk to your girls have just as confidential talks with your boys. Put purity books into their hands, read them with them, teach them to shun the dance and all kinds of amusements that stand opposed to purity. Parents be pure yourselves and teach purity in thought, word and act, and by prayer effect and influence help make the nation pure. Then we feel we cannot close this talk without speaking a moment on Spiritual Success. Financial Success, when used for advancement of God's Kingdom, is a help. When money is all kept for self, squandered or worshipped it is a hindrance to Spiritual success, and so with all other forms of success. If used for the good of humanity, a help, if not, a barrier to Spiritual success.

Dr. Parker says "Success depends largely upon the impression which one has whether he is going to succeed," and this is very true in succeeding in spiritual things. The one who starts out with a determination to succeed is likely to remain faithful. But one thing is necessary to spiritual success. We need contact with Christ. The influence of the Divine Spirit is not enough; we must keep in touch with Him, have Him abiding. Beethoven may be applauded for his music, but he moves on to another city and only the memory of his talent remains. The great athlete amused for a time, but he is gone, and his performance little thought of. But Christ will abide, and the individual or nation controlled by Him, is spiritually successful. To thus succeed we must study the Word, attend to private prayer, to the means of grace, put Christ first in all things and spiritual success is insured.

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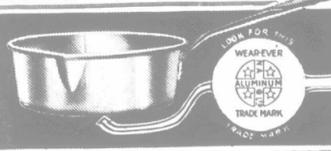
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Skunks and Raccoons.

I am thinking of starting a fur farm. I intend raising skunks and raccoons, and would like you to give me some suggestions as to their habits and food. How many skunks could I enclose on an acre? Also, raccoons? E. E. S.

Ans.—Much regarding fur-bearing animals is learned after the rancher operates for a year or two. The skunk in its natural life preys upon mice, salamanders, frogs and eggs of birds that nest on or near the ground. At times it eats carrion, and everyone knows his liking for the hens' nests and sometimes for the hen-roost. These obnoxious animals, however, are pre-eminently insect eaters. They destroy more beetles, grasshoppers and the like than many other mammals together. The skunk is active through the greater part of the year, and hibernates only during a short part of the winter. They differ from other hibernating animals in that the inactive period is apparently dependent solely on the temperature, while the mere amount of snow has no influence whatever upon their movements. Skunks have large families, from 6 to 8 young being commonly raised each season, and as a rule they all live in the same hole until the following spring. A great number of skunks can be kept in a small area in captivity. It would be hard to estimate the number that could be kept on an acre, for it would be exceedingly large. In ranches they are fed on cheap meats, such as dead horse, etc. Raccoons also feed upon mice, small birds, birds' eggs, turtles and their eggs, frogs, fish, crayfish, insects, and sometimes poultry. They are considerably nocturnal in their habits. However, they do come out occasionally on cloudy days. They haunt the banks of ponds and streams, and find much of their food in these places. The raccoon hibernates during the severest part of the winter, taking to its nest rather early, and appearing again in February or March. It does little in the way of constructing a nest, and usually locates in the trunk or preferably in the branch of a dead tree. From 4 to 6 young are commonly born at a time, generally early in April. The young remain with the mother about a year.

Gossip.

The Brant County Shorthorn Club is in a position to supply purchasers with bulls and heifers of the Shorthorn breed. They will supply them either singly or in car lots, and of either sex. For information, address the Secretary, Geo. L. Telfer, R. R. No. 2, Paris, Ont.

Do not fail to see the advertisement of J. Lloyd-Jones' big sale in this issue. The date is April 6, and anyone wanting a horse, a good pony, any pure-bred sheep or good grade cattle should not miss the sale. The sheep are pure-bred Shropshires and Southdowns. Choice ewes bred to the best of rams. This offers a fine opportunity to start a pure-bred flock right. Wool and mutton are selling well. The cows are grade Short-horns, Holsteins and Jerseys; all are young and some of the best. They are all fresh or coming in soon. The young cattle are in nice condition. See the advertisement; write for bills and particulars. Cheap rates on railroads; lunch at noon.

We are in receipt of a copy of the Canadian Holstein-Friesian Yearbook. This is a neatly-compiled, well-bound little volume containing nearly 400 pages, the third of its kind to be published by the Holstein-Friesian Association of Canada. It gives the record of milk and butter production of Holstein-Friesian cows which have been admitted to the Record of Merit and Record of Performance of the Holstein-Friesian Association of Canada, to September 30, 1914. The record cards are classified under their sires and cows are classified under their dams, which gives invaluable information regarding family histories, and should prove of assistance to breeders. W. A. Clemens, St. George, Ont., is Secretary of the Breed, and those interested should get the volume from him.

John Deere Implements



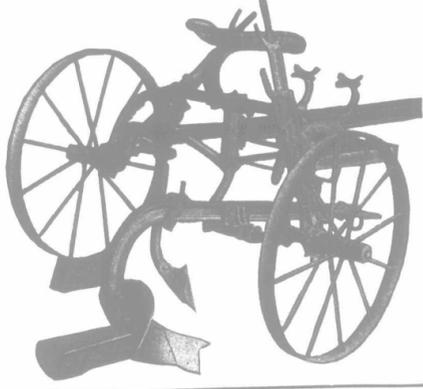
The Spreader with the Beater on the Axle The John Deere Spreader

The beater—the business part of a spreader—and all its driving parts, are mounted on the rear axle. That is why the John Deere is the simplest, easiest running and most efficient manure spreader.

Here is what the beater on the axle means to you: 1st.—No clutches to give trouble. 2nd.—No chains to break or get out of line. 3rd.—Less than half the parts

heretofore used on the simplest spreader—some two hundred parts are done away with.

- 4th.—Manure not thrown on the axle—straw cannot wind around it.
- 5th.—You get big drive wheels and a low-down spreader, without stub axles—traction and strength.
- 6th.—Drive wheels back out of the way when loading—you see where you place each forkful.
- 7th.—Only hip high—easy to load.



John Deere One-Way Plow

The plow with the auto foot frame shift. This feature insures uniform plowing on hillsides or level land and in irregular fields. Full width furrows obtained under all such conditions. Team relieved of all side strain.

Auto foot shift is easy to operate. A slight foot pressure swings frame and moves plow as desired.

A real power lift plow. Slight pressure of foot causes lug to engage in ratchet in the hub and forward movement of horses raises the bottom.

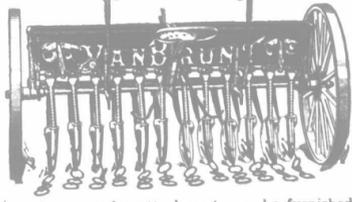
High lift—plow easily transported over rough roads. Easily backed and turned. Wide bearing base permits use of wide or narrow cutting bottoms and prevents plow from tipping on hillsides.

Van Brunt Single Disc Grain Drill

No Seed Wasted—All the Field Sown. Van Brunt Drills have an adjustable gate force feed which compels an even, continuous flow of seed from each seed cup without bunching or cracking the seed. It cannot choke up.

The seed beats the dirt. Individually adjustable pressure springs can be made to force discs to cut furrows of even depth. Seed is conducted from hopper to furrow opener by metal tubes and there protected from dirt until it reaches bottom of furrow. All the grain is up and ready for harvest at the same time.

Van Brunt Drills do not clog up, even in trashy soil, mud or gumbo. Spring steel scrapers keep discs absolutely clean. Disc bearings guaranteed to last lifetime of drill.



Grass seeder attachment can be furnished for any Van Brunt Drill. It will sow broadcast or drill, as desired.

The Accurate "Natural Drop" Corn Planter

The John Deere No. 999 plants 2, 3 or 4 kernels as desired. You merely shift a foot lever. Quick change hilling to drilling, and also in varying drilling distances. Its corn plates all have 16 cells.

Accurate, because surface of hopper bottom and openings to seed cells are oblique or sloping. Kernels naturally move toward and fill

cells rapidly. Better than any other method because more accurate. Enclosed gear case, oil tight, dust proof. Gears always in mesh and not under severe strain. As perfect a driving mechanism as that used on automobiles.

Easily detachable runners, simplified check-heads, disc marker without rope and underhung reel are also improvements you will appreciate.



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Mention this Paper

Western Ontario Consignment Sale Company, Limited
 J. T. GIBSON, President S. R. McVITTY, Secretary

BREEDERS' SALE IN LONDON, ONTARIO

Wednesday, April 7th, 1915

Shorthorns, Holsteins, Clydesdales

Forty Shorthorns selected from some of the best herds in Western Ontario. The get of such well-known sires as Sea Foam = 87888 =, Newton Friar (imp.) 86055, Blarney Stone = 86798 =, Best Boy = 85552 = and Baron's Pride = 72491 =.

Twenty bulls to suit all classes of buyers. Twenty

females - choice show-ring prospects. Choice cows with calves at foot.

Holstein cows with records up to 15,000 lbs. per year. Young bulls from ancestry that are demonstrated producers.

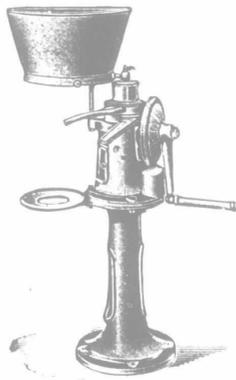
A small but choice selection of Clydesdales.

FOR CATALOGUE WRITE TO :

HARRY SMITH, Manager of Sale, HAY, ONTARIO

CAPT. T. E. ROBSON, Auctioneer

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 TORONTO, ONT. ST. JOHN, N.B.

Lloyd-Jones Unreserved Sale of FARM STOCK AND IMPLEMENTS

AS FOLLOWS:
 Horses, Welsh Ponies, 50 Pure Bred Shropshire and Southdown Sheep; 20 choice young Dairy Cows, and some choice Young Cattle. Sale at one o'clock.

Tuesday, April 6th, 1915, at "The Oaks," Burford, Ont.

(Cheap rates on Railroads)

Write for bill of sale. See gossip page 505.

J. LLOYD-JONES, Prop., - - - BURFORD, ONT.

Run on Coal Oil—6c for 10 Hours

Ellis Engines develop more power on cheap lamp oil than other engines do on high priced gasoline. Will also operate successfully on distillate, petrol, alcohol or gasoline. Strongest, simplest, most powerful engines made; only three working parts. No cranking, no excessive weight, no carbonizing, less vibration, easy to operate.

Horizontal Engine

Vertical Engine

ELLIS ENGINES

Have patent throttle, giving three engines in one; force feed oiler; automobile type muffler; ball-bearing governor adjustable while running and other exclusive features. Every engine sent on 30 days' approval with freight and duty paid. 10-year guarantee. Write for 1915 catalog, "Engine Facts," showing New Models with special prices. Shipments made from Windsor, Ont. ELLIS ENGINE CO., 2855 E. GRAND BLVD., DETROIT, MICH.

Questions and Answers. Miscellaneous.

Ducks.

What is the name of the largest ducks? About what do they weigh, live weight, when full grown? Are they the best for market? R. P.

Ans.—Rotten ducks, Aylesbury ducks and Pekin ducks are all about the same size—drake 9 lbs., duck 8 lbs. They are all good market ducks.

Re Millet and Sorghum.

1. When horses are fed cut out sheaves and a little timothy hay, would it be advisable to feed millet in place of the hay?

2. Which is the best variety of millet to sow for hay?

3. Is Rye Buckwheat a better and surer cropper than Silver Hull?

4. Would you advise sowing sorghum for pasture in drills 28 inches apart on a field pretty bad with sow thistles and Canada thistles?

5. About what date should it be sown?

6. How high should it be allowed to grow before turning cattle in, and how long would it carry the likely to feed 16 cows?

7. Is sorghum suitable for pasture for working horses and colts?

H. W. C.

Ans.—1. Millet should be fed to horses only in moderate quantities, and then with other roughages and concentrates. It would not be wise to replace all the hay with it. Millet for horses should be cut when the heads are "in the dough," and cured so as to be fairly free of dust.

2. Japanese Pampile millet.

3. In the average results of nine years' experimental work at the Ontario Agricultural College, the Rye Buckwheat was found to be superior as to yield.

4. Yes.

5. About the first of June. That will allow of some previous cultivation to eradicate weeds, and it is the best time for the sorghum.

6. It will probably be ready in 6 to 8 weeks. Last summer we observed an 8-acre field seeded about the first of June with 12 pounds of seed per acre in drills. Fourteen cows were doing well on this pasture. They were turned on about the first of August. The time it will maintain 14 cows depends altogether on the land and weather. The sorghum will grow up again after being eaten off, if given a chance.

7. It would not be the best feed for horses or colts.

CHALLENGE COLLARS

Acknowledged to be the finest creation of Water-proof Collars ever made. Ask to see, and buy no other. All stores or direct for 25c.

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REALLY DELIGHTFUL
 THE DAINTY MINT-COVERED CANDY-COATED CHEWING GUM

WE HAVE ADVANCED OUR PRICE FOR Good Quality Cream

We pay express and supply cans. It will pay you to write us, we have had ten years experience, and we can guarantee satisfaction. A man wanted in every county. Easy money.

GALT CREAMERY, Galt, Ontario

WANTED
 We have again advanced our prices for Good Quality Cream

We could use yours. It will be worth your while to write us.

Toronto Creamery Company, Limited
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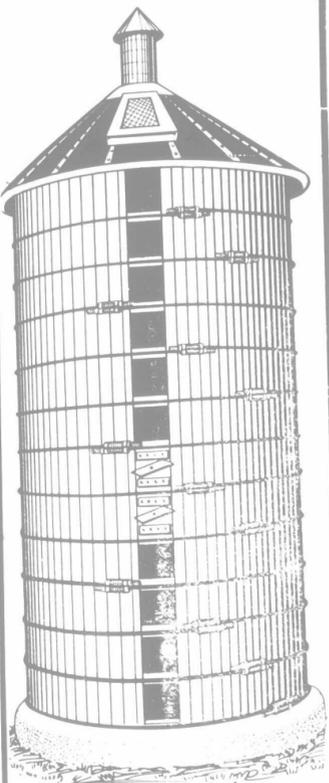
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 The Imperial Life Assurance Company's big advertisement in next week's issue, entitled: "Women and Children First" It has an interesting message for YOU

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you get "Canada's Biggest Piano Value" and at the same time save fully \$100. Write Dept. 4 for Catalogue L.

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A Good Word from England.

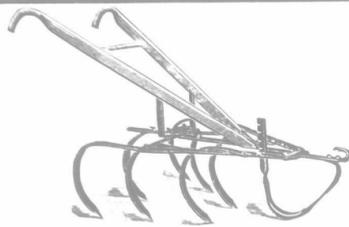
Editor "The Farmer's Advocate":
Sir Merrick R. Burrell, Bart., who has been buying remounts in Canada, is back in Britain, and has got a great impression of the value of Canadian-bred mares. I learn on the highest authority—that of Major-General W. H. Birbeck, Director of Remounts at the War Office—that Sir Merrick has asked the British Board of Agriculture to give him leave to select six of the best imported (Canadian) mares, so that he may try them with a Thoroughbred (race horse) stallion, and see what they produce on this side. Said the Director of Remounts in London the other day: "We are importing a very large number of exceedingly good Canadian horses from Canada, and the buyers who went over there are exceedingly loud in their praise of the mares they found out there. We have asked them to make a report on the subject, and we hope to be able to hand over to the Board of Agriculture a report on how these mares are bred." This is praise, indeed, right from the very best and highest quarters, and it now looks as if all I had written in "The Farmer's Advocate" in favor of army-horse breeding by the aid of Thoroughbred sires, is now perfectly justified. Now is the time to go into the business, and I would advise those Canadians who have the eye for the right type of horse to come over to England in April and May and haunt the British race meetings and buy out of the selling races young stallions which may not be fast enough for sprint racing, but which, if they come from staying lines, can be picked up as cheap as dirt, as the saying goes, and which will help them materially in propagating from the mares you undoubtedly possess the very type of army horse not only England but the whole of Europe requires. Think it over; it is a sound business proposition. On any race course I could buy stallions of extreme usefulness and blood-like qualities, and full of the requisite bone and substance, at from \$250 to \$400 apiece. They are not speedy enough for sprint races, and they are sold on the courses then and there. I once had a stallion knocked down to me for £19 on a race course, because I nodded across the ring to a friend and the auctioneer mistaking the "move," dropped his hammer and the horse onto me. I got rid of him again immediately at a few pounds' profit and after a huge joke, but that horse afterwards got any number of brilliant hunters in the north of England.

G. T. BURROWS

London, Eng.

Illustration Farms Under Agricultural Department.

The Illustration Farms, inaugurated by the Commission of Conservation in 1912, it is said, were one of the most farsighted projects ever initiated by a public body for bringing home to the farmer the resources within his grasp and the possibilities which were his if only he would avail himself of them. The "Illustration" farm was taken to the farmer, instead of asking the farmer to go to the Illustration Farm. It demonstrated that, provided he adopted the methods advocated by the Conservation Commission's advisers, he could largely increase his crops, and, most important of all, that the increase was practically all profit. These Illustration Farms were suggested by Dr. J. W. Robertson, as chairman of the Committee on Lands of the Commission of Conservation, and have been carried on under the supervision of John Fyler, as agricultural instructor. Under the Commission, these farms have attained splendid practical results, but, in view of the \$10,000,000 vote to be expended by the Department of Agriculture, under the Agricultural Act, 1913, it was apparent that operations on a vastly greater scale could be carried on with such a large sum. As it was also advisable that such work be carried on by an administrative department, they have been transferred to the Department of Agriculture, which will conduct them along similar lines to those of the past. That the work may still be under the supervision of John Fyler, he has also been transferred to that department.



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More Profits For Farmers!

This is the result when you build an Adirondack "Sturdy Stave" Silo. Every farmer these days fully realizes that ensilage for Cattle Feeding is the one and only way to economy. You therefore cannot make a mistake when installing—



STURDY STAVE ADIRONDACK SILOS

They cost less money and with hundreds of satisfied owners the Adirondack has proved its superiority over others. No such thing as spoiled ensilage. Its walls are air, moisture and frost-proof. The Adirondack will stand all weather conditions, is made 100% more durable and protected from decay by our special preservative process which every Stave and part is subjected to before leaving our factory.

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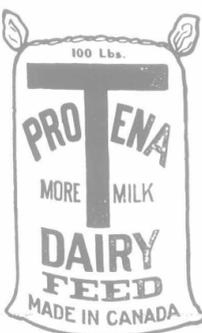
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Prices on application

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Jerseys Blits ready for service from high producing herd. Would exchange for Jersey cows.
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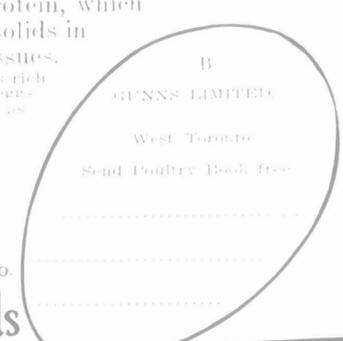
If your Hens could talk

they would ask you for Beef Scrap. They need it in winter for two reasons:

- First—to supply the material for eggs;
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- Cooped up hens miss nature's big meat supply—the insects and worms that abound in the fields. That is the natural source of protein, which forms over one-third of the solids in eggs and builds up body tissues.

When you feed Beef Scrap, which is rich in protein, your hens can produce eggs earlier in the winter and spring months as naturally as they do in summer. Learn how to feed your hens for greater profit from our book, "The Hen that Lays is the Hen that Pays" a complete poultry manual, sent FREE if you use the coupon.

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Fine Vegetables
are grown only from high-grade seeds, of varieties suitable for Canadian climate.

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\$19 Per Set Delivered at Nearest Railway Station

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4 x 3/8 inch Tire

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HAWK BICYCLES
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Consult your best interests and you'll never buy an ordinary spraying outfit: You will buy a

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Questions and Answers.
Miscellaneous.

Insurance.

I took a policy in a life-insurance company on a twenty-year plan. I am seventeen years of age, and I have been working out for myself for the last three years. They gave me sixty days to pay it. I did not understand it very well, so I do not want to pay it. Can they make me pay it, or can they make my father pay it? J. S. M.

Ans.—If you do not pay it the policy is nullified. We do not see that you can be made to pay. Non-payment will cancel your policy.

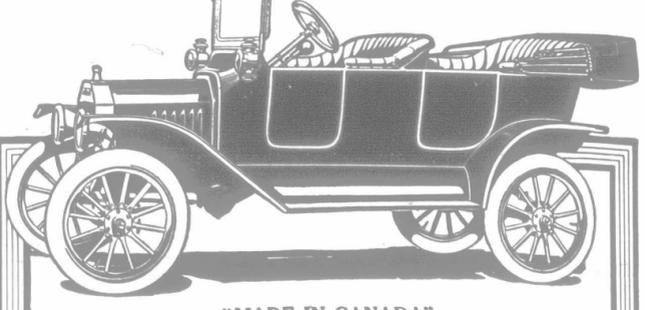
Buckwheat After Buckwheat.

I have a 10-acre field that is badly infested with wild oats and last spring (1914), I plowed the same twice and seeded to buckwheat and had a crop of slightly over 400 bushels of cleaned seed and no wild oats in seed but I noticed a very few green plants were growing when the buckwheat was cut, so I believe that a number of wild oats are left yet. Now if I put grain on this field this spring there is sure to be wild oats come up in same and I do not want to summer fallow the same and as I have already mangled a piece of sod land for my corn I cannot put in a hoed crop on same this summer. So I would like to know if it would do to plough the same twice this spring and seed to buckwheat again. The field was also ploughed last fall. I would also like to seed the field down with alsike and would like to know if I could get a catch with buckwheat. If you could suggest any better way of cropping with wild oats I would be very much obliged for your information. H. M. R.

Ans.—Buckwheat after buckwheat is not good practice and yet in a favorable season with the amount of cultivation you suggest you stand a chance of getting another good crop, probably not as good a yield as last year's crop gave. It is likely there are oats in the land yet. One of the best methods of fighting wild oats is to seed down and leave down for from three to five years. This would clean the field. We have heard of successful catches of clover in buckwheat. In a good season and when the buckwheat is not sown too thickly and does not get so rank as to smother the clover it may do very well. There is a danger however of its being smothered out. Do not sow buckwheat too thickly. If you needed pasture a good plan would be to sow rape in drills, 1 1/2 lbs. per acre and cultivate as long as possible.

Last Year Driest on Record But Drainage Gives Big Results.

The Ontario Agricultural College reports that the year of 1914 was the driest on record in Ontario. The precipitation from harvest 1913 to harvest 1914 lacked 5 1/2 inches of being up to the average. This is a shortage of almost 20 per cent. The College has often stated that tile drainage was effective in a dry season as well as in a wet one, and last year it was able to prove this in a most practical way. Since 1912, the College has been installing Practical Drainage Demonstration Plots in parts of the province where little or no drainage has been done. The plan is to drain half of a field, leaving the other half undrained for comparison. Both parts are sowed to the same kind of grain and the crop from each part threshed separately. Nine plots were drained prior to 1914. The average of the nine fields showed that at market prices at threshing, time was drained half produced \$14.12 more per acre than the undrained half, and that in the driest year on record. In an average season the average increase due to drainage is over \$20 per acre, and in a wet season even more. For a number of years the Agricultural College has been making drainage surveys for farmers free of charge, except for travelling expenses. This offer is again renewed. Farmers having drainage difficulties may secure assistance by writing the Department of Physics, O.A.C., Guelph, for information and regular application forms.



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Ford Touring Car
Price \$590

No advance in the price of the "Made in Canada" Ford will be made because of the additional 7 1/2% War Tariff. We as loyal Canadians will gladly absorb whatever increased duty we are forced to pay on such raw materials as cannot be obtained at home. The Ford is manufactured in Canada—not assembled in Canada.

The Ford Runabout is \$540; the Town car \$840; the Coupelet \$850; the Sedan \$1150—all fully equipped, F.O.B. Ford, Ont. Ford buyers will share in our profits if we sell 30,000 cars between August 1, 1914, and August 1, 1915. Write Ford Factory, Ford, Ontario, for catalogue E.



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You want a Spray Pump with sufficient capacity at slow speed, that has force to throw a fine spray the full distance and a good agitator to keep the mixture stirred and prevent clogging. To get the best equipment and a Spray Pump that has won awards in competition against the world, get an—

AYLMER SPRAYER

It has all the attachments, a nozzle for every requirement. Is built strong, and easy to operate. IT LASTS. You don't have to get a new Spray Pump every season or two when you buy an Aylmer.

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For fine Duster extension, add \$1.50.
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Questions and Answers. Miscellaneous.

Black Leg.

I have bought a farm. The former owner lost four young cattle from black-leg four years ago. He burned the carcasses. He has vaccinated his cattle every year since to render them immune. Would it be wise for me to vaccinate those that will be turned on the pasture, or is there any danger? A. S.

Ans.—We think the danger of disease, by reason of the burned carcasses, is slight, but the same cause no doubt operate now that did when the former owner's cattle suffered. Hence, it would be wise to vaccinate all cattle not over two years old.

How Much Must Each Pay?

A B and C buy a machine for \$45. They were to pay equal payments of \$15 each but B and C thought A had more use of the machine than they, and asked A to pay \$5 more towards the price of the machine than they do. What are their payments? I claim that A pays \$18.33 1-3, and B and C, each pay \$13.33 1-3, while another party claims that A pays \$16.66 2-3, and B and C each pay \$11.16 2-3. G. E. N.

Ans.—If A wishes to pay \$5 more than B and \$5.00 more than C, he will pay \$18.33 1-3. If A only wishes to pay \$2.50 more than B and \$2.50 more than C, making \$5 more than B and C, he will pay \$16.66 2-3. It all depends on what the argument really is. The statement is not clearly set forth in the query.

Cement Cellar Floor.

Would you kindly tell me through your paper the amount of cement and sand it will require for a cellar floor 20 feet by 15 feet, and the proportions of each. Also, how thick should the floor be? A. L.

Ans.—Cellar floors that are not subjected to any violent concussions should stand with a thickness of 4 or 5 inches. The proportions should be 1 part of cement to 2 1/2 parts of clean coarse sand and 4 parts of screened gravel or crushed stone. If the gravel is good, this will mean a mixture of 1 to 6 1/2. At 4 inches thick, it would require 13 1-3 sacks of cement, 33 1-3 cubic feet of gravel, and 33 1-3 cubic feet of sand, or between 2 and 3 of a cord of gravel. Sometimes a mortar finish is put on by mixing one part of cement with 2 parts of sand. This would require about 6 sacks of cement and 12 cubic feet of sand.

Veterinary.

Inversion of Rectum.

My bull strains a lot and inverts his rectum. My veterinarian put in a couple of stitches and applied a truss, but the bull is still uneasy. A. R.

Ans.—Your veterinarian is doing all that can be done, hence it will be wise to leave the animal under his care or instructions. This condition is very hard to treat successfully. All that we can suggest is the administration of about a pint of raw linseed oil, which probably has been done. A.

Lame Mare.

Six-year-old mare doing ordinary work on farm went lame on fore leg six weeks ago. Nothing wrong can be seen on leg or foot. J. W.

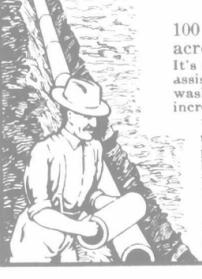
Ans.—Without further particulars as to the peculiarities of the lameness shown it is not possible to diagnose with any degree of certainty. It will be wise to have her examined by a veterinarian. If this be not convenient, we would suggest removing the shoe and blistering the coronet. Clip the hair off for 2 inches high all around the hoof. Get a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vasoline. Tie her so that she cannot bite the part. Rub well with the blister once daily for two days. On the third day apply sweet oil. Turn loose in a box stall now, and oil every day. As soon as the scale comes off, tie up and blister again. V.

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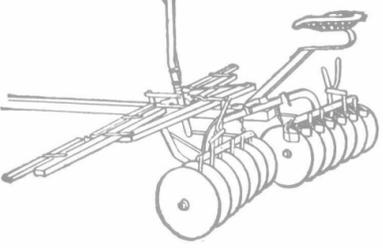


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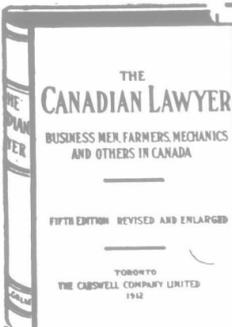
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Gossip.

HIGH-CLASS STOCK AT LYNMORE FARM.

Imported English milking Shorthorns, imported Berkshire hogs, imported Clydesdale horses and White Wyandotte poultry are the lines of pure-bred stock breeding emphasized at the well appointed Lynmore Farm, at Brantford, Ont., the property of F. Wallace Cockshutt. It is seldom in this country that so choice and high-class a lot of foundation breeding animals are purchased as those on Lynmore Farm. Specially selected and imported by Mr. Cockshutt at long prices are such notably bred cows as Fairy Duchess 34th, Imp., at her first calving. In 9 months she gave 7,437 lbs. She is sired by Conjuror and his dam in one year gave 13,920 lbs. and her dam for 10 years in succession gave an average of 10,174 lbs., and the dam of Fairy Duchess 34th, for 5 years has given an average of 6,196 lbs. Out of this cow for sale is a 22-month-old bull. Imp. in dam, Lynmore Duke, sired by Anchorite, whose dam besides being a noted winner of many prizes, in the test in which she was running at the time of the purchase of Fairy Duchess, from Oct. 1st to Feb. 15th, had given 4,930 lbs. This young bull is strictly high-class in quality and a model of a dairy Short-horn bull. Another great cow by Conjuror, is Mimosa, Imp., a daughter of Fair Molly; record for one year 7,399 lbs. Sanford Empress 6th, Imp., is out of Sanford Empress 5th, which in 15 months gave 10,163 lbs. and her dam in one year gave 10,620 lbs. and sires dam in 7 months gave 8,069 lbs. Rosebud 12th, Imp., is by Dreadnought, whose dam for 10 years made an average of 10,174 lbs. Her own dam, Rosebud 7th, in one year gave 8,576 lbs., and her dam in one year gave 11,069 lbs. The stock bull in service on these great cows is the typical, smooth, Director, Imp., by Danger Signal, a son of Conjuror, mentioned above. The dam of Danger Signal, Dorothy D. for 9 years gave an average of 9,953 lbs. The dam of Director was Doralice, which at her first calving, from April 29th to Feb. 15th, gave 5,481 lbs. and her dam in one year gave 8,443 lbs. In the Berkshires the same careful selection was made. The stock boar was bred by T. H. Aitkins, from his famous prize-winning Hollyrood tribe, he is a hog of great length and scale, strong of bone and nicely balanced. The sows were bred by S. Sanday, of Neston, Eng., and belong to the noted Polgate Princess tribe. Imported in dam for sale are two boars and three sows about 9 months of age and a number of both sexes three and four months of age. Breeders wanting new blood in Berkshires should get after these quickly for they will soon go. For a Clydesdale foundation there are the two big quality mares, Thelma of Craig-willie, Imp., by the well-known prize horse, Baron Beaulieu, dam by the H. & A. S. Champion, Prince Thomas, and Dallah, by the H. & A. S. Champion, Benedict, dam by the popular breeding horse, Top Knot 2nd.

The McLaughlin Carriage Company of Oshawa have established a precedent in their generous and valuable gift of a 37 Horse Power Motor Ambulance for service at the front. Their lead, however, has been quickly followed. Last week the Lincoln County Council inspected the McLaughlin Ambulance in the Company's showrooms and unanimously decided to order a similar one and donate it to the Canadian Red Cross Society, on behalf of their county. In appearance it expresses efficiency and practicability. It is grey green in color, with top and sides of specially prepared waterproof duck. The sides can be rolled up to give air when required, or left down for perfect protection. It is so arranged inside, that the seats may be turned into beds for stretchers. It is understood that several other organizations such as Municipalities, Sabbath schools, etc. are contemplating similar donations and in connection with this fact, it is interesting to note that the McLaughlin Company have made special arrangements, by which these ambulances will be turned over to such organizations, for presentation to the Red Cross, at manufacturers' prices. The Red Cross Society has announced that there is no limit at the present time to the number of such ambulances actually needed for service at the front.



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THE "Canadian Lawyer" is a book that will protect the farmer against the sharp practise of agents or any person else, who might like to get him in a tight place. It gives the most important provisions of the Laws of the Dominion and of each of the provinces. The information is given in simple every-day language, so that farmers will be able to do a great deal of their own business strictly in accordance with the law, without having to pay each time for a little bit of ordinary advice. It also gives simple and correct Forms for the preparation of all kinds of legal documents that a farmer would ever have occasion to use. Chattel Mortgages and Bills of Sale are explained fully—how to make them, the law in regard to them, and when to use them. Similar information is given regarding Cheques, Liens, Notes, Land Mortgages, Promissory Instruction as to Exemption from Seizure for Debt; the law in regard to Line Fences; the use and form of Powers of Attorney, and in fact everything else that a farmer would require to know.

The book contains 453 pages, price \$2.00 in good cloth binding, and will be sent, postage paid, when cash accompanies the order. Send your order direct to the publisher.

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on that point we can help you. You will want to do some figuring before you lay out money for fertilizers. "Bumper Crops" is just the book you need. It tells clearly what fertilizers to use for each crop, and what quantity per acre is usually required. Besides, it has many practical pointers on the soil, cultivation, seed, weeds, etc., etc.

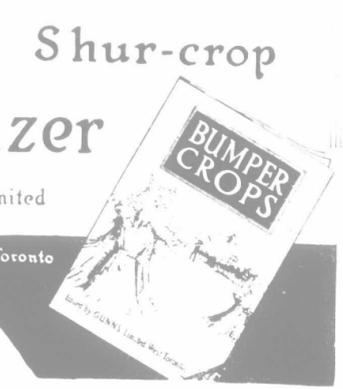
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Questions and Answers. Miscellaneous.

Broken Glass.

About six months ago my son and a neighbor boy cracked a large pane of glass in a village store. The boys are both under age; and the owner of the store did not make it known to the parents until about two weeks ago when the window got completely smashed and had to be replaced by a new one, which he says we must pay for. If it had been looked after at time of accident the cracked glass would have been worth quite a sum, as it could have been made into smaller panes. Are we responsible for full price of glass? Ontario. A SUBSCRIBER.

Ans.—Certainly not.

For Cows Which Eat Wood.

Editor "The Farmer's Advocate": I am very much interested in the articles in your valuable paper. On page 367, of "The Farmer's Advocate," of March 4, T. A. W. asks, "What will keep cows from eating wood? They get plenty of salt, etc." I am an old farmer and have never known this prescription to fail:

1 lb. phosphate of lime, 6 lbs. salt, either common or dairy salt. Mix well and keep in glass. Dose: 1 tablespoonful in bran, or meal, once a day for ten days. If not cured, repeat after one week. All stock will be improved by this treatment. Give calves or young stock smaller doses. FARMER.

In-foal Filly.

I have a filly coming two years old this spring—she is in foal. How should I feed and treat her, with regard to work or exercise? She has never been harnessed yet. Would you advise breeding her again, if so, at what age? A SUBSCRIBER.

Ans.—The filly has been bred too young if she is only two years old this spring. She would not work her. We generally advise working brood mares carefully but so young a colt in foal should have as much rest as possible so that her development will not be injured. Turn out to grass as early as grass is available and do not break in until next spring. It would likely be better to let her miss a year before breeding again, otherwise her growth and development may be permanently injured. A filly should not drop her first foal until three years old at least and some think she should be four years old. Feed well on good hay and oats with about one-third as much bran added as the quantity of oats fed.

Well Drilling—Sowing Fertilizer.

1. D. L. asks about drilling well in barn. Last summer we had occasion to drill a well. We had the well drilling apparatus placed in the barn and lifted a plank in the floor and got along fine, getting splendid water in the rock at the depth of 96 feet. It is now pumping with a gasoline engine. 2. Can fertilizer be sowed with a common seed drill? If so, could you tell me how to set drill to sow 200 pounds per acre. A. P. G.

Ans.—1. We are pleased to pass this information on to our enquirer. We have also learned from a well drilling machine company, that it is possible to dig wells in barn buildings by regulating the height of the derrick for the drill in the barn. 2. It is not generally thought advisable to attempt to sow fertilizer through a common seed drill. For one thing it has a great tendency to rust the drill and no one could tell you just how to set the drill. It is necessary to put in a definite amount and see how the drill sows and regulate it accordingly.

"What's yours?"

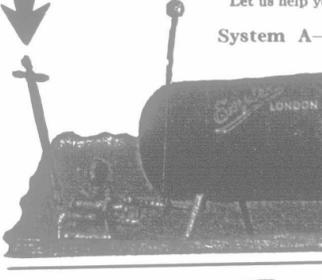
"Coffee and rolls, my girl." One of those iron-heavy, quarter-inch thick mugs of coffee was pushed over the counter. The fastidious person seemed dazed. He looked under the mug and over it. "But where is the saucers?" he inquired. "We don't give no saucers here. If we did some low-brow'd come pilin' in an' drink out of his saucer, an' we'd lose a lot of our swellest trade."

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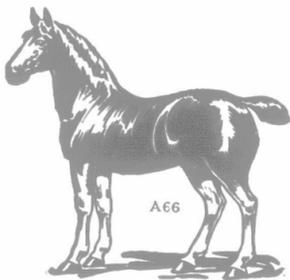
Good Wages for Chauffeurs. THIS is the chance, you ambitious, alert young fellows have been looking for. Expert, qualified chauffeurs are scarce and good salaries are being offered, so hustle. Join our NEXT CLASS BEGINNING MARCH 29th. Learn about all makes of automobiles and gas engines and their repair and Qualify for Government License Examination or for service at the front. Write for Free Booklet, it explains everything fully. TORONTO AUTOMOBILE SCHOOL, Toronto, Ont. Ed. W. Cameron, Principal. 86 Wellington Street, West.

JUST LANDED CLYDESDALE STALLIONS JUST LANDED. I have just landed a new importation of Clydesdale stallions, in ages from 3 years up to the big, drafty kind that makes the money. I can satisfy any buyer no matter what he wants; a visit will convince. WM. COLOUHOUN, Mitchell, Ont. The Germans Missed Them Clydesdale Stallions And They Landed. Yes, they landed at my stable in Markham all right. This is the year to buy if you want one of the best. Mine are topgers of highest quality, character and breeding. Come and see them. JAMES TORRANCE MARKHAM, ONTARIO

Make Your Lame Horse Sound, Like This

You Can Do It While He Works.

We want to show you that there isn't any affection for lameness in horses that can't be cured, no matter of how long standing. We want to send you our instructive book, "Horse Sense" No. 3. We



also want to send you an expert's diagnosis of your horse's lameness free. Simply mark where swelling or lameness occurs on above picture and write us how it affects gait, how long lame and its age.

We absolutely guarantee Mack's \$1,000 Spavin Remedy to cure Spavin, Bone or Bog Spavin, Curb, Splint, Ringbone, Thoroughpin, Sprung Knee, Shoe Boil, Wind Puff, Weak, Sprained or Ruptured Tendons, Sweeney, Shoulder or Hip Lameness and every form of lameness. We have deposited \$1,000 in bank to back up our guarantee. Cures while he works. No soars, no blemish, no loss of hair.

P. B. Smith, Jamestown, Cal., says: "In regard to my sprained horse, am pleased to state that after using one bottle of Mack's \$1,000 Spavin Remedy, my 24-year old horse is entirely cured."

Your druggist will furnish Mack's \$1,000 Spavin Remedy. If he hasn't it in stock, write us. Price \$2.50 per bottle and worth it. Address, McKallor Drug Co., Birmingham, N. Y.

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CAKED UDDERS
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Dr. Page's English Spavin Cure
Cures the lameness from Bone Spavins, Side-Bones, Ringbones, Curbs, Splints etc. and absorbs the bony growths. Does not kill the hot, absorbs Capped Hocks, Bog-spavins, thick-pastern joints, cures lameness in tendons. Most powerful absorbent known, guaranteed, or money refunded. Mailed to any address, price \$1.00. Canadian Agents, J. A. JOHNSTON & CO., Druggists 171 King St., East Toronto, Ont.

FOR SALE
CLYDESDALE STALLION
Golden Ray [11886] (15655).
Dam—Islay Queen (24834); by Loch Sloigh (11388); by Hiawatha (14967); by Prince Robert (7133); by Prince of Wales (673).
Sire—Golden Chief (13011); by Fickle Fashion (10546); by Earl of Knockton (10199); by Prince Alexander (8899); by Prince of Wales (673).
Will be sold reasonably, as we are quitting the stallion business; guaranteed sound and sure foal getter; enrolled and inspected; can be seen at John Rawling's Farm, Forest, Ontario.
McKinley & Rawlings, Props.
Apply to: **JOHN RAWLINGS, Forest, Ont.**

ACME FOR SALE
Holstein Bulls 11 months and under, females all ages. We have decided to give all our attention to Holsteins and offer **Acme (Imp.)**, by Baron's Pride for sale. He is the only horse in America that has stood eighth in breeding list in Scotland. Sound, sire and right and broken to harness. Also Tots Type (Imp.), rising 5 years sure and foaled.
R. M. HOLTBY,
R. R. NO. 4, Port Perry, Ontario
Manchester G.T.R., Myrtle C.P.R.

Dr. Bell's Veterinary Medical Wonder men who will give the Wonder a fair trial. Guaranteed for inflammation of the Lungs, Bowels, Kidneys, Fevers, Distempers, etc. Send 10 cents for medicine, packing, etc. Agents wanted. Write address plainly. **Dr. Bell, V.S., Kingston, Ont.**

Questions and Answers. Veterinary.

Partial Paralysis.

Pregnant ewe was noticed lying down most of the time about two weeks ago and has been getting more disinclined to move ever since. Two or three days ago she seemed to lose power of her legs. She eats well and chews her cud, her eyes are bright and ears warm. Has been fed on good hay, a few turnips and oats in the straw all winter. She is not constipated. J. W.

Ans.—She is partially paralyzed. Give her 1/4 pint raw linseed oil and follow up with 15 grains nux vomica three times daily. Feed on clover hay, raw roots and whole oats. If you can keep her strong until after parturition she will probably recover. V.

Weak Calves.

Two calves did well last summer, but in the fall commenced to fail and lost their appetites. They became very thin and weak and have not been able to rise now for two weeks. W. O. O.

Ans.—The symptoms indicate weakness due to want of sufficient nourishment. Mix equal parts of gentian, ginger, nux vomica and bi-carbonate of soda and give each a teaspoonful in a quart of new milk three times daily. Give good hay (clover if you have it) and chopped oats with the hulls sifted out and pulped roots to eat. If they will not eat drench them with a quart of boiled flaxseed or other nourishing food three or four times daily as you see they can digest it. It is quite possible that they will be past treatment by the time you see this. You have allowed them to become too weak before attempting to treat. V.

Lame Colt.

Since last September my colt has had periodical lameness on one hind leg. He sometimes gets better and then goes lame again. There is no swelling but there is heat just above the hoof. A. F.

Ans.—The symptoms indicate ringbone. It is probable that an enlargement will soon appear just above the hoof. In most cases it is wise to get a veterinarian to fire and blister. In some cases in so young an animal the lameness can be cured by simply blistering. Get a blister made of 2 drams each of cantharides and biniodide of mercury mixed with 2 oz. vaseline. Clip the hair off for 2 inches high all around the hoof. Tie him so that he cannot bite the part. Rub the blister well in once daily for two days, on the third day apply sweet oil and turn him loose in a box-stall. Oil every day and when the scale comes off tie up and blister again and in another month apply a third blister. If this does not cure have him fired by a veterinarian. V.

Sore Teat

Last summer one teat of my cow became hard to milk. A scab would form on the point between milkings. After a time we had to use a syphon, which acted well for a time but this soon failed to get milk and we allowed the quarter to go dry. We continued milking the other three teats until a week ago. She will be due to calve again about May 1. The sore teat and quarter are hard, swollen and sore. J. M. J.

Ans.—No doubt the opening of the milk duct has become closed and you will have trouble when she calves. In the meantime, bathe the quarter and teat frequently with hot water and after bathing rub well with camphorated oil. When she calves if the opening is closed it must be opened, a teat syphon might be forced through, but it will be wise to employ your veterinarian. In any case there is likely to be continued trouble, as the quarter and teat have been inactive so long. It will not be wise to breed her again. V.

His relatives telephoned to the nearest florist. "The ribbon must be extra wide, with 'Rest in Peace' on both sides, and if there is room, 'We Shall Meet in Heaven'."

The florist was away and his new assistant handled the bill. There was a sensation when the flowers turned up at the funeral. The ribbon was extra wide, indeed, and on it was the inscription: "Rest in Peace on both sides, and, if there is room, we shall meet in heaven."

ATTENTION!

Is called to all who intend purchasing stallions this season as I intend renovating and building a large horse barn. I offer my entire stock of horses at greatly reduced prices. We have on hand many of our very best horses

PERCHERONS

Blacks and Grays from 3 to 5 years old

with size and quality from the ground up, also 1st and Champion Belgians, 1 good 4-year-old shire. Come and see this stock and be convinced that our prices are 40 and 50% lower than any competitors. I have sold just lately to men who have seen and priced the stock all over Canada and come back and bought from me. They are all in the best of condition for good service in the season; all were in the stud last year and averaged from 60 to 85%. Every horse guaranteed right in every way. Terms to suit purchaser.

Grenville is midway between Ottawa and Montreal, C.P.R., C.N.R., G.T.R. 3 trains each way on all these lines. Long-distance 'phone (Bell).

J. E. ARNOLD - - - GRENVILLE, QUE.

Ormsby Grange Stock Farm, Ormstown, P. Que.

Owing to my having a number of young stallions coming forward of the first individual merit and breeding, and the prospect of show horses being less required this year, I offer the three following most desirable stallions for sale at low prices. As war conditions make importation from Britain difficult, if not risky, this is an exceptional opportunity afforded to anyone wanting high-class sires. They are all in prime condition to be got ready for spring service.

Clydesdale Stallion, Imported—Favourite Tone (14674)—He is one of the most stylish horses of his breed, a very dark brown, with very attractive markings, 17 hands, superb action, and has proved a most successful breeder. Foaled May, 1907. Sire—Baron Buchlyvie (11263). He was sold at auction for \$17,500. Dam—Dunure Bernie (19779), by Royal Favourite (10630). 2nd dam—Bonnie Jean of Woodend (13165), by Master Robin (8040).
He won first and championship at Montreal 1914.

Clydesdale Stallion, Imported—Fyvie Time (16602) [13588]—A grand, big, stylish horse, 17 hands; of a light-brown color, with but little white; massive bone, good feet and showy action; good, but spirited temperament. His foals, which are large and compact, can be seen. Foaled April, 1910. Sire—Baron Beaulieu (11257), by Baron's Pride (9122). Dam—Lady Kate (26229), by Up-to-Time (10474). 2nd dam—Lady Maud (14177), by Sir Everard (5353), the sire of Baron's Pride (9122), etc., etc.

Shire Stallion, Imported—Bramhope Freebooter [1097], Vol. 35, E.—A true Shire type, with size, form, bone and action; a rich bay, white on both hind legs. Foaled 1912. Sire—Crosby Albert (23191). Dam—Batsford (44042), by Lord Byron of Batsford (16755). 2nd dam—Dora Lively (14015), by Lincolnshire Boy (8188). This fine young horse was specially selected by me to produce increased size, weight and bone, urgently demanded by the best paying markets, which can best be done by Clyde-Shire breeding.

Ormstown is reached from Montreal, G. T. R. Trains leave at 7.20 a. m. and 4.40 p. m. Write, telegraph or telephone, and you will be met. Farm is one mile from station.

D. McEachran, Ormstown, P. Quebec

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We have a larger selection of Percherons than any other firm in Eastern Canada, and our barns contain more prizewinners at the leading fairs than all others combined. No advance in prices, although the source of supply is cut off. Write for beautiful illustrated catalogue.

Hodgkinson & Tisdale, Beaverton, Ontario
Bell 'Phone 18

CLYDESDALES AND PERCHERONS

I did not exhibit at any shows during 1914. I am still in the horse business, and at present have the best lot of Stallions and Mares I ever had at any one time. 24 head; 17 Clyde Stallions and 4 Mares; 3 Percheron Stallions and 3 Mares; a visit to my stable will convince you I have more high-class horses than can be found in any one stable in Canada, and won't be undersold by any dealer in Canada; always a pleasure to show stock to intending purchasers, sale or no sale.

T. H. HASSARD, - - - MARKHAM, P.O., G.T.R.
Locust Hill Station only 3 miles, C.P.R. Long-Distance 'Phone.

Stallions Imp. CLYDESDALES Fillies Imp.

We have just ended the season's show circuit with a practically, clean up of every thing worth winning and can show intending purchasers the biggest and choicest selection of stallions and fillies, imported and Canadian bred, we ever had. Champions and Grand Champions at common horse prices.

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Myrtle C.P.R., Brooklin G.T.R. and Oshawa C.N.R., C.P.R. and G.T.R.

Royal Oak Clydesdales Present offering: 5 Imported Mares (3 with foal by side), 2 yearling Fillies (1 Imp. and 1 Canadian-bred), 1 Canadian-bred Yearling Stallion, 1 Canadian-bred 2-year-old Stallion, 1 Canadian-bred 6-year-old Stallion. Parties wishing to secure a good brood mare or stallion should inspect this offering or communicate with me at earliest convenience. G. A. Attridge, Muirkirk, Ont. P.M. and M.C. Ry. L.-D. 'Phone, Ridgetown.

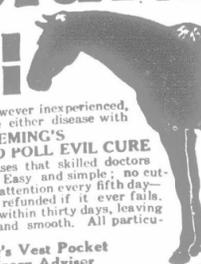
Imp.—Clydesdales, Stallions and Fillies—Imp.
We have had lately landed, an exceptionally choice importation of Stallions and Fillies. They have the big size, the clean, flat quality bone and the most fashionable breeding. Our prices are consistent with the times.
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St. Charles 2nd, 3112, for sale or exchange; will exchange for Holstein cows or heifers.

Albert Mittlefehldt, Smithfield Station, T. H. & B. R. R., Wellandport, Ontario

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Farmers Make Money IN YOUR SPARE TIME

We want men in every vicinity to represent Dr. J. M. Stewart's Veterinary Remedies, the oldest and best known line on the market. Always sold in stores, but now selling direct to the consumer. Every farmer in the county a customer. An established line that repeats. Big money for a man spending all or part of his time selling these remedies. No capital required. Write to-day for full particulars.

Palmer Medical Co., Ltd., Windsor, Ont.
Hereford Bulls and Heifers for sale, from imported stock, at special prices.
 A. S. HUNTER & SON
 Durham - Ontario

Aberdeen Angus Cattle

Cows and Heifers all ages in calf. Prices very reasonable.
 M. G. RANSFORD
 Stapleton Stock Farm, Clinton, Ont.

FOR SALE—2 ABERDEEN-ANGUS BULLS. One a Elm Park Reno, age 22 months; he is a good stock getter and is out of James Bowman's famous herd. The other is a bull calf, age 7 months; he was also bought from Mr. Bowman, of Guelph. There is a very reasonable price on these animals for cash. K. C. Blackwell, Dalcrombie, Williamstown, Ontario, Eastern Ontario, 7 miles from Lancaster Station.

Glengore Aberdeen-Angus—We have several grandsons of the Toronto and London grand champion, Hundred, Mayflowers and Fair Ladys, of serviceable age down; also one and two-year-old heifers. A strictly high-class lot. Geo. Davis & Sons, Erin, Ont. R.R. No. 2

ABERDEEN - ANGUS CATTLE For Sale—Several young bulls from the imported sire and prize-winner, "Pradamere." Address:—A. Dinsmore, Manager, "Grape Grange" Farm Clarksburg, Ontario

ABERDEEN-ANGUS CATTLE OXFORD SHEEP For Sale—good young show bulls and females, also a few oxford rams. Thos. B. Broadfoot, Fergus, Ontario G.T.R. and C.P.R.

Angus Cattle FOR SALE—If you want something good, come to—
ABERDEEN FARM Hillsburg, R.R. No. 1
 J. W. Burt, Prop.

Tweedhill Aberdeen - Angus Excellent young bulls of serviceable ages. Heifers in calf, etc.
 James Sharp, R.R. No. 1, Terra Cotta, Ont. C.P.R. and G.T.R., Cheltenham Station.

Springfield Aberdeen - Angus Choice young bulls of serviceable ages. Females all ages for sale.
 Kenneth C. Quarrie, R. R. No. 5, Belwood, Co. Wellington, Ontario. Bell Phone

1854—Maple Lodge Stock Farm—1915 We have now for sale three young bulls choicely bred for both milk and beef and are good and very promising animals. Come and see them.
 Miss C. Smith, - Glanbeoye, R.R. No. 1 Lucan crossing one mile east of farm.

THREE SHORTHORN BULLS and a number of heifers, all choicely bred and grand individuals. They will be priced worth the money. Newton Friar, Ing. #89355 (112-654) heads the herd. Inspection solicited. L.D. Phone Wm. Walde, R.R. No. 2, Stratford, Ontario

Short Courses in Nova Scotia.

Never in the history of the Nova Scotia Department of Agriculture have such a successful series of short courses been held as that which was completed on March 4, last. To begin with there was the two weeks short course held at the College at Truro during January, the enrolled attendance at which was 286, practically all of whom were from the Province of Nova Scotia, the adjoining Provinces of New Brunswick and Prince Edward Island having held courses of their own. Even more successful, if possible, were the five short courses each of three or four days duration which were held at Bridgewater, Yarmouth, Shubenacadie, Musquodoboit and Antigonish. In each of these places the local Agricultural Society or similar organization have made contributions of the necessary land and also part of the money which supplemented by grants from the Dominion Grant for the aid of Agriculture in the Province, provided the funds necessary for the erection of demonstration buildings in which the courses were held. These demonstration buildings contain one or more large classrooms capable of seating 300 or more students and well suited for demonstrations in live stock judging, seed judging as well as lectures. No pains were spared to make these courses successful. The lecturers, for the most part, were the senior members of the College staff at Truro assisted by B. L. Emslie, Fertilizer Expert of Toronto, J. A. Clark, Superintendent Experimental Farm, Charlottetown, and others. Morning, afternoon and evening sessions were held, the hours being from 10 to 12 a.m., 1.30 to 5 p.m., and 7.30 to 9.30 p.m. The usual procedure was to hold in the mornings lectures and conferences on soil cultivation, manures and fertilizers, etc. In the afternoon demonstrations in the judging of live stock of all kinds and seed were held. In the evening, lectures on the care and management of live stock, soil cultivation etc. were held. One evening at each course was devoted to the very important subject of "Patriotism and Production" and without exception this was the largest meeting at each course.

At each place locally owned stock was used for demonstration purposes and for the most part proved very satisfactory. Moreover, a feature at every course was an informal conference on local agricultural problems which always proved most valuable. At the evening lectures lantern slides were used to a considerable extent for purposes of presenting pictures of the best types of live stock, barn construction, soil cultivation and drainage. In one or two cases bad weather caused a somewhat reduced attendance at the morning sessions, but this was largely offset by attendances at some of the evening meetings of from 250 to 350. The general average at every session of the five courses, morning, afternoon and evening was 147. So successful have these short courses proven that the Department would like to extend them through every part of the Province. The difficulty, however, is to be able to secure thoroughly efficient men for without such men these courses would never attract the interest and arouse the enthusiasm which they did. The College faculty was drawn on to about its limit in connection with these five courses. It would seem that in the future the agricultural staff must be increased in numbers and no doubt this will be done as the country realizes the efficient work which is being accomplished through the short courses as well as through the many other lines of work which are now being carried on.

Gossip.

The horse, Dunure David, illustrated in our issue of Feb. 25, has been sold by W. W. Hogg, to Wm. Bonstead, Alvinston, Ont. He was sired by the 47,000-dollar Baron of Buchlyvie and was imported by Mr. Hogg in 1912. He was travelled in Canada two seasons and proved a good breeder. He should be a valuable acquisition to Alvinston district.

Timorous English lady in wash-room—"One is afraid to turn the tap for fear a sub-marine should dart out."



THE STEEL BOOT is an Exclusive Massey-Harris Feature



No other Drill has Steel Boot for the Discs.
 The Steel Boot has many advantages.
 It is much stronger than a Cast-Iron Boot
 At the same time it is considerably lighter, not only lightening the draft, but also makes possible shallow sowing in light soils—yet by means of the Pressure Springs the Discs may be made to penetrate the hardest soil.
 Another advantage is that the lower part of the Boot is a separate piece, and if worn by use in sand or gritty soil, can be easily replaced.
 Owing to the shape of the Drag Bars and the Steel Boot there is good clearance between the Discs, which is a great advantage in trashy land.
 A Spring-actuated Scraper keeps the Disc clean and can be swung clear of the Disc in an instant if not required.

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Elm Park Aberdeen-Angus Prize Record for 1913 and 1914 Shows

Twelve Grand Championship Prizes, Twenty-five Champion Prizes, Twenty-five Reserve Champion Prizes, Ninety-nine First prizes, at the largest shows in Canada from Toronto to Edmonton. In 1914, First-Prize herd at Edmonton, Toronto and London. These prizes in Western Canada were won in competition with Mr. McGregor's Champions of America. Our Suffolk Sheep also did equally well in 1914. Bulls, cows and heifers for sale. James Bowman, Guelph, Ont.

1909 Canada's Champion Hereford Herd 1915
 For the above six years at the leading shows from Toronto to Edmonton my herd has maintained its supremacy as the champion herd of Canada; American and Canadian bred bulls for sale, the highest attainment of the breed; also cows and heifers.
 L. O. CLIFFORD, Oshawa, Ontario

ROSEDALE STOCK FARM 6—SHORTHORN BULLS—6

From heavy milking dams. These are choice bulls fit to head the best herds in the country. Two are from imported dams. Write at once for particulars.
 J. M. Gardhouse, G.T.R., C.P.R. Weston, P.O.
 Street Railway and Long Distance Telephone.

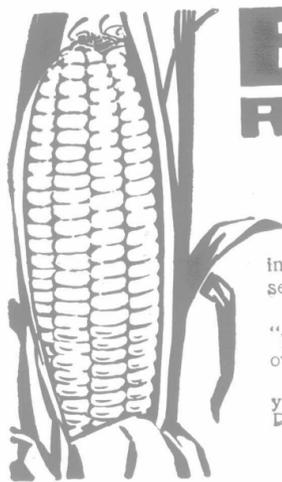
Poplar Hall Shorthorns If you want a herd-header of the highest breeding, visit our farm; sired by the great Uppermill Omega imp.; we have C. Butterflies and Lovelays. Marr Roan Ladys and Cinderellas, from 7 to 18 months of age.
 MILLER BROS., R. R. NO. 2, CLAREMONT, ONTARIO
 Pickering G.T.R. Greenburn C.N.R. Station
 Claremont C.P.R.

SHORTHORNS and CLYDESDALES We have a nice bunch of bull calves that were a year old in Sept., and are offering females of all ages, have a choice lot of heifers bred to Clansman #87809. One stallion three years old, a big, good quality horse, and some choice fillies, all from imported stock.
 A. B. & T. W. Douglas, Long-Distance Phone Strathroy, Ontario

READ THIS SHORTHORN BULLS SHOW QUALITY
 For this season's trade we have the best lot of deep and even-fleshed young bulls we ever bred, their breeding is unexcelled and their sire and dams are prize winners of note at the big shows.
 John Gardhouse & Sons, Weston, Ontario

Scotch—SHORTHORNS—English If you want a thick, even-fleshed heifer for either show or breeding purposes, or young cows with calves at foot, or a thick, mellow, beautifully-fleshed young bull, or a right good milk-bred to produce milk; remember I can surely supply your wants. Come and see.
 A. J. HOWDEN Myrtle, C.P.R.; Brooklyn, G.T.R. COLUMBUS, P.O., ONT.

"Thistle Ha" Herd of Scotch Shorthorns. The oldest established herd in Canada is now offering for sale 10 young bulls from 10 to 18 months old. Some good enough to head the best pure-bred herds and some suitable to get a few steers. All at very reasonable prices.
 JOHN MILLER, CLAREMONT, ONT. Pickering Stn., G.T.R., 7 miles. Claremont Stn., C.P.R., 3 miles. Greenburn Stn., C.N.R., 4 miles.



EWING'S RELIABLE SEEDS

Reproduce the Choicest Stock

"Like produces like".

Given proper soil and care, Ewing's Seeds will reproduce, in your own garden, before your delighted eyes, the choice, selected vegetables and flowers from which they themselves grew.

Breeding counts in plants as well as in animals, as Ewing's "pure-bred" seeds have been demonstrating by splendid crops for over forty years.

Start right—plant Ewing's Reliable Seeds—and get the most out of your garden. Write now for our Illustrated Catalogue, and if your Dealer hasn't Ewing's Seeds, order from us direct.

THE WILLIAM EWING CO., LIMITED,
Seed Merchants, McGill Street, Montreal.



Questions and Answers, Miscellaneous.

Methylene Blue.

I noticed in the last number of "The Farmer's Advocate," you recommend Methylene Blue for abortion. I have had some trouble with the disease. Could you please tell me how you administer it to cows?

J. F. W.

Ans.—At Weldwood we simply fed a heaping teaspoonful to each cow in the grain each day for five weeks. Some is wasted but the cows get most of it. It is put up also in the form of Bluetts and the manufacturers advertise in these columns. By feeding these there is no waste.

Horse Has Eczema.

I have a horse that has some kind of an itch on his neck and along his back. The hair comes out and he is continually biting himself when he can. There seems to be a scale of dandruff all the time and it looks bad to see the hair off. His hair is dry and harsh all the time. The roots of the hair are dead as you can pull the hair out easily with your fingers. What should I do for him?

C. W.

Ans.—This is eczema. Purge with 8 drams of aloes and 2 drams of ginger and follow up with 1½ ounces Fowler's solution of arsenic, twice daily for a week. Wash the affected parts thoroughly with soapsuds in fairly warm water. Make a solution of corrosive sublimate, 30 grains to a quart of water. Heat a little of this lotion to about 110 deg. Fah. twice daily and apply to the diseased parts. Keep dry and comfortable.

Cows Do Not Conceive.

I have a bull four years old that was sure last year (had about forty cows). Have used him on two heifers and five or six cows, began about the last week of November and I do not think any of them are in calf yet. They come around any old time but not very regularly. What do you suppose is wrong? Would methylene blue treatment be all right? How is the best way to feed it? What price per pound?

J. J. W.

Ans.—It would appear that this is not the fault of the bull. Cows showing irregularity in periods of heat seldom conceive. Have any of them aborted? If so the trouble may all be due to contagious abortion. Methylene blue is a treatment recommended. We have been trying it at Weldwood but are not as yet able to report on it definitely. It may be fed in a little grain—one heaped up teaspoonful to each cow or heifer each day for five weeks. Or it may be purchased in the form of Bluetts, advertised in this paper. Be sure to get medicinal methylene blue when buying from a druggist. It costs at druggists up to \$3.00 per pound. Disinfect the bull's sheath after serving a suspected cow and feed him the blue also.

Pea Weevils.

1. Last year just as our peas began to bloom about six inches of the top of the vines got covered with green lice and I thought the peas were going to be a failure. We have had them that way for several years previous and they were a failure. Just then a rain came and a few very warm days and I could see that nearly all the lice had died and the peas were a fair crop after all.

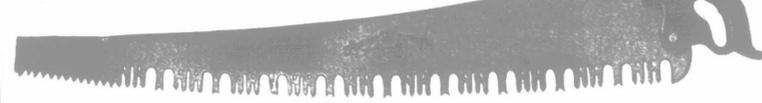
When we were cleaning the peas a few days ago I found a few of them with a brown or nearly black bug burrowed in them. Are these bugs the off-spring of those remaining lice?

2. Is there any way of treating the peas to kill the bugs, as I would like to use some of the peas for seed?

GREY FARMER.

Ans.—1 and 2. The "bugs" you find in the peas are no relation to the plant lice which were on the crop last summer. These brownish or blackish bugs are the pea weevil and to destroy in seed peas use carbon bisulphide, place the peas in a tight bin or box about 18 to 20 bushels capacity, set a shallow dish containing carbon bisulphide on top and taining carbon bisulphide cover tightly. The carbon bisulphide quickly vaporizes, and the vapor being heavier than air settles down through the peas and kills the bugs. A pound of the liquid should do 20 bushels of peas. Keep lanterns, lights of all kinds and matches away from the liquid which is explosive.

WHY YOU SHOULD BUY SIMONDS SAWS



Because they cost no more than unmarked, inferior brands. Because the name "Simonds" on a saw means that the saw is guaranteed. Because all steel used in Simonds Saws is made in our own Crucible Steel Mill.

Vancouver, B. C.

SIMONDS CANADA SAW CO., LIMITED, St. John, N. B.

The illustration shows a one-man cross-cut saw, and is known to your hardware-dealer as No. 237. Ask for it.

Write direct to the factory for any other particulars.

LIMITED, MONTREAL, QUE.

Always buy a saw with a sharp-cutting edge—not a soft saw, because the former lasts longer and keeps its edge better.

Cedarsprings Shorthorns and Tamworths

Present offering: 1 young bull out of heifer that in five months R.O.P. Test has given 4,000 lbs.; another just as well bred, both sired by a son of a 90-lb. cow. Tamworth specialty, young sows bred.

J. M. McCallum
Shakespeare, P. O., and Station

DAIRY SHORTHORNS

For Sale—"Ly nore Duke," age 1 year and 9 months—from imported stock—highly bred.

BERKSHIRE PIGS

For Sale—Boars and sows, 9 months, 4 months and 3 months, from choice Imported English Stock.

LYNNORE STOCK FARM

W. Wallace Cockshutt, Brantford

SHORTHORNS

6 bulls from 9 to 16 months including a high-class herd header dam from an Imp. English Duchess cow; dams are good milkers, priced very low to clear them out before spring, also a few females.

Stewart M. Graham, R.R. No. 4, Lindsay, Ont.
Lindsay C.P.R. and G.T.R. Stations.

Shorthorns For Sale

The Brant County Shorthorn Club offers for sale bulls and heifers of all ages, of the best breeding either singly or in car lots. For information address the Secretary.

James Douglas, Pres. Geo. L. Telfer, Sec.
Caledonia Paris, R.R. No. 2

Oakland -- 61 Shorthorns

Present offering: 4 roan bulls 10 to 12 months, 2 Reds, older; also matured cows and heifers. Mostly sired by one of the best Roan bulls in Ontario. Inspect this dual purpose, prolific herd, or write:—

Jno. Elder & Sons, Hensall, Ontario

Spring Valley Shorthorns

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

KYLE BROS., DRUMBO, ONTARIO
Phone and Telegraph via Ayr.

Two Young Shorthorn Bulls for sale, twelve and thirteen months; both roans and first-class animals, and breeding unexcelled. Also a few young females. One mile east of town station.

HUGH THOMSON, Box 556, St. Mary's, Ont.

Scotch Shorthorns, S. C. White Leg-horn Cockerels and Reg. Banner Oats for sale. Three choice young roan bulls, high-class herd-headers and females of different ages.

GEO. D. FLETCHER,
Erin, R.R. No. 2, L. D. Phone, Erin Sta., C.P.R.

6 SHORTHORN BULLS

25 females, reds and roans, servicable, best type and quality, size; cows milking up to 50 lbs. D. news easy.

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

Please mention "The Farmer's Advocate"

Robert Miller Pays The Freight

Young Shorthorn bulls of Showyard, Quality sired by Superb Sultan and other great Imported sires, from the best imported and Scotch-bred cows to be found, some of them great milkers, ready to sell at moderate prices, and delivered at your home station.

Cows and heifers supplied too; write for what you want.

ROBERT MILLER, STOUFFVILLE, ONT.

H. SMITH - HAY P.O., ONT.

12 SHORTHORN BULLS and as many heifers for sale. Write your wants. You know the Harry Smith Standard.

Escana Farm Shorthorns

—100 head in the herd, which is headed by the noted bulls, Right Sort, Imp., the sire of the first-prize calf herd at 1914 Toronto National Show, and Raphael, Imp., grand champion at London Western Fair 1913. For sale: 20 bull calves, 9 to 14 months old, several in show form, also 20 cows and heifers

MITCHELL BROS., Props., Burlington P.O., Ont.

JOS. McCRUDDEN, Manager Farm ¼ mile from Burlington Jct.

SHORTHORNS—War Tax Payers—SHORTHORNS

They are dirt cheap now. The war will more than double their value in a year, at rock bottom prices. I have choice young bulls from 10 to 18 mos. of age. Cows due to calve in the Spring. Heifers bred and of breeding age.

JOHN MILLER Myrtle Sta., C.P.R. & G.T.R. ASHBURN, ONT.

GLENGOW SHORTHORNS

For this season's trade we have the best lot of young bulls we ever bred. Wedding Gifts, Strathallans, Crimson Flowers and Kiblean Beautys, sired by Broadhooks Prime. These are a thick, mellow, well-bred lot. Heifers from calves up.

WM. SMITH & SON, COLUMBUS, ONTARIO

10 Shorthorn Bulls, 9 Imported Clydesdale Mares

Our bulls are all good colors and well bred. We also have Shorthorn females of all ages. In addition to our imported mares, we have 7 foals and yearlings. Write for prices on what you require. Bell Telephone.

Burlington Junction, G.T.R., ½ mile. W. G. Pettit & Sons, Freeman, Ont.

PLEASANT VALLEY FARMS SHORTHORNS

Herd headed by Imp. Loyal Scot. Have for sale, 10 high-class young bulls of herd heading quality and several of the milking type. Also females of the leading families. Consult us before buying.

Farm 11 miles east of Guelph; **GEO. AMOS & SONS,** MOFFAT, ONTARIO

C.P.R. ½ mile from station.

Woodholme Shorthorns and Clydesdales

For Sale: Eight young Shorthorn bulls of good quality and breeding, sired by Lord Gordon Imp. and other good sires, and out of good milking dams. Also a show Clydesdale stallion rising 3-years old. Farm adjoins C. P. R. station.

G. M. FORSYTH, North Claremont, Ont.

Glenallen Shorthorns

We offer for sale some of the best young bulls we ever bred, Scotch or Booth breeding, low, thick, mellow fellows of high quality; also our stock bull, Climax =81332 =sired by Uppermill Omega.

R. Moore, Manager **GLENALLEN FARM,** ALLANDALE, ONTARIO

High Class Shorthorns

Honest representation and a square deal is our motto. We have still left some choice young bulls, bred in the purple and beef to the heels. Come and see them

RICHARDSON BROS., COLUMBUS, ONTARIO
Myrtle, Oshawa or Brooklin.

SALEM STOCK FARM HOME OF THE CHAMPIONS

Many of our Shorthorn bulls are good enough to head the best herds. Others big and growthy that will sire the best kind of steers. Elora is only thirteen miles from Guelph. Three trains daily each way.

J. A. WATT, ELORA, ONTARIO

Belmont Farm Shorthorns

Herd headed by "Nero of Cluny" (Imp.) and Sunnyside "Marquis," Marquis with calves at foot.

For sale—a number of young bulls and heifers, also young cows sired by "Miss" R.R. No. 2. **F. W. SMITH & SON,** SCOTLAND, ONTARIO Long-Distance Telephone

Shorthorn Bulls and Heifers For Sale

A number of promising young bull from ten to sixteen mos. of age from large good milking dams, also choice heifers from one to three years of age. Write phone or call on

H. J. DAVIS, WOODSTOCK, ONT.

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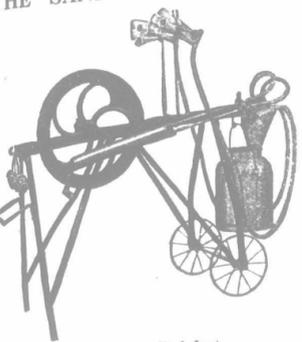
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BBEY FARMER.

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in the liquid which

THE SANITARY MILKER



(Patents applied for)

A boy can operate it.
Milks 2 cows in four minutes.
Will not decrease the milk flow.
Price, Hand Power Machine, \$85.00-2 units.
Electric Power Machine Prices on applica-
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Manufactured in Canada by
The Brown Engineering Co.
419 King St., West, Toronto

Don't Sell the Young Calf

BLANCHFORD'S CALF MEAL

Will Raise It Without Milk

There's big money and little trouble for you in raising your calf the Blanchford way. You save all the milk of the cow for market. As soon as the mother cow's milk is ready to sell, the calf is ready for **BLANCHFORD'S CALF MEAL**. For over a century the Recognized Milk Food for Calves, at One-Fourth the Cost of Milk. Composed of eleven different ingredients carefully proportioned and thoroughly cooked, producing a scientifically balanced ration for the young calf. Successfully used on thousands of American farms for over 30 years.

The Only Milk Equal Made in an Exclusive Calf Meal Factory. Unlike any of the So-Called Calf Meals Made of Raw Cereal By-Products.

Write for Free Illustrated Book on "How to Raise Calves Cheaply and Successfully Without Milk."

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Steele Bridge Seed Co., Toronto Waukegan, Ill.

GREATER RETURNS

"Maple Leaf" Oil Cake

Contains over 35% Protein and 33% Carbo-Hydrates. Purifies the blood—cleans the skin—opens the bowels and keeps all live stock healthy. Write to-day for our free booklet, "Facts to Feeders."



CANADA LINSEED OIL MILLS LTD
TORONTO AND MONTREAL

Cotton Seed Meal

H. FRALEIGH
Box 1, Forest, Ont.
Also dealer in Flax Seed and Linseed Meal.

Lakeside Ayrshires

The herd is headed by the well-known Auchenbrain Seafoam (Imp.) = 35755 = A few young bulls for sale from Record of Performance Dams, imported and home bred.

Geo. H. Montgomery, Proprietor
Dominion Express Building, Montreal.
D. McArthur, Manager, Philipsburg, Que.

High-Class Ayrshires If you are wanting a richly-bred young bull out of a 50-lb.-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy.
D. A. MacFarlane, Kelso, Quebec

The Faiview Holstein Herd

Offers ready-for-service sons of Homestead Colantha Prince, 3 nearest dams average over twenty-nine pounds of butter a week; also daughters from one week to two years old. Priced right.

FRED ABBOTT, MOSLEY, R.R. NO. 1

"The cook is in a belligerent mood to-day," remarked Mrs. Wisply timidly. Mr. Wisply was somewhat pleased with the war news.
"Hand the lady her passports!" he directed grandly.

Questions and Answers. Miscellaneous.

Cottonseed Meal and Beef.
Kindly tell me if cottonseed meal is of any value as a beef producer. I have been feeding barley and oats mixed and ground to 16 yearlings, and two-year-olds. Would it do to change to cottonseed meal at this time of the season. I have been informed that cottonseed meal is of no use except as a milk producer.
A. H. V.

Ans.—A discussion of cottonseed meal appeared in the columns of "The Farmer's Advocate," on January 28, page 117. Refer to it. Cottonseed meal has a certain feeding value in producing beef. However, the price has been such that it has not been an important factor in compounding rations in this country. This season, circumstances are different and the price of cottonseed meal has been within the reach of farmers whether dairymen or raisers of beef. By experiment carried on at the Indiana Station it was found that 116 pounds of cottonseed meal effected a saving of 255 pounds of corn, 63 pounds of clover hay and 226 pounds of corn silage in making 100 pounds of gain. It is usually recommended that 5 pounds per day should be the maximum for a grown animal. Some use even more than that and there are stock farms in Ontario this winter where steers have been fed chiefly on cottonseed meal and silage, plus clover hay. Anyone starting to use cottonseed meal should bear in mind that cattle will not take to it quickly. Very small parts of the ration should be made up of cottonseed meal at the first and after they have become accustomed to the taste the amount may be increased. At reasonable prices, we believe that 2 pounds per day or more could profitably be included in the ration of oats and barley. It has considerable value as a producer of beef. If the cattle are to be fed for any length of time, a change could be made but it should be brought about very gradually.

Corn Queries.
1. I have a new variety of corn. It grows 2 1/2 feet high to tip of tassel. The leaves are not large and it has 1 to 2 cobs, 4 inches long and densely covered with small flint grains. It ripens middle of August. It is fine for poultry and pigeons. It can grow closer than other corns and on shallower land, sandy loam or even more sand. Would not be very profitable drilled but must have sun. Would it do sown broadcast or would weeds grow too well; would it be profitable?
2. Another kind grows 10 to 12 feet high, with broad leaves and 5 to 7 cobs to the stalk, closely covered with rather small flint grains. It is a late variety and only ripens if a long season. If it does not fully ripen would the extra cobs make it a profitable silage variety?
3. Black seeded corns give the appearance of being smutted, yet is the color any disadvantage to an otherwise superior variety?
J. A. Y.

Ans.—1. If this corn requires sun it would not be profitable to sow it broadcast. Most corn will grow very well in drills, if not sown too thickly but if this is impracticable you must resort to hill planting. We cannot see from the description of the corn in question that it would be very profitable grown any way except on a small scale for special purposes.
2. The best silage is made from corn that has arrived at the glazed stage of maturity. Some growers prefer to have a corn not quite so much matured as they consider that the kernels are better digested, however, the majority are still in favor of a well-matured corn for silage. We cannot see that the number of cobs on the stalk are sufficient to recommend this variety over White Cap Yellow Dent, Leaming, Bailey and other varieties which have given such excellent results.
3. The color of the corn kernels has very little, if any, effect upon the quality of the grain itself. One good variety known as King Phillip is very dark in color but it does not affect the variety. A variety with black kernels is not impaired in any way by its color where it is to be used for silo or feeding at home. Corn meal looks best when made from yellow corn and will probably be asked for in that color for some time

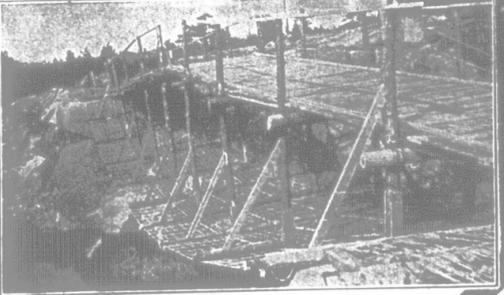


Canadians
are loyal to the colors; loyal to their citizenship; loyal to business enterprises of the Provinces; every patriotic appeal finds a ready response in a Canadian's heart.

We are Canadian manufacturers; we have been doing business in Canada for many years, making Canada's fence, and we are grateful for the patronage accorded us during these years from our Canadian friends.

Now is the time to stand by Canada's interests. We are doing our part to maintain a business regularity, and are manufacturing such a good line of fencing that it is worthy of special mention in connection with Canada's future relations to the Nations of the world. Read this interesting letter, observe the illustration, and then ask yourself this question: "Is not a fence made of material good enough for such an important purpose the kind that should be used by every Canadian?"

Kingston, Ont., 1914.
Banwell-Hoxie Wire Fence Co., Ltd.,
Hamilton, Ontario
Gentlemen— I thought you would be interested in the use we are putting your wire to. The Engineers, Queen's University, have practical work in the field. This year, under the supervision from the Engineer of the Military Department, they undertook to build a bridge.



The stretch is 110 feet and the bridge is 20 feet wide. They used 240 rods. They laid the mesh 5 widths side by side, and 5 layers, making in all 25 lengths of 8 wires each or 200 wires in all, binding them up together at every two or three feet, and then putting the uprights on as you see, and then stretching a wire along the top in the ordinary way as protection. They are now at camp time, when the Rurals come into camp, march the artillery across it and put some gun cotton under it and blow it up. They estimate it capable of carrying a load of 60,000 lbs., or a body of soldiers at close marching order. You can use these photos in anyway you see fit, or if you want I could send you the negative.
(Signed) W. A. Mitchell.

Why Peerless Fence Gives Such Good Service

We build it twice as good and strong as is necessary under ordinary circumstances. We build it of heavy open Hearth steel wire with all the impurities burned out and all the strength and toughness left in. Heavily galvanized. Every intersection is locked together with a Peerless clamp. All wires used in making Peerless-Farm and Poultry Fencing are extra heavy—extra strong. Consequently fewer posts are required. Peerless fencing can't sag—can't rust—can't get out of shape—can't help giving absolute satisfaction. Catalog giving details on request. Describes our farm, poultry and ornamental fencing. Also Peerless farm gates.

Agents almost everywhere. Agents wanted in all unassigned territory.

The Banwell-Hoxie Wire Fence Co., Limited
Winnipeg, Man.
Hamilton, Ontario



CITY VIEW AYRSHIRES Every cow in this herd has a record. All young stock are from R. O. P. cows, sired by bulls from Record Dams. Bull calves by one and two-year-olds. Write, or come and see. **JAMES BEGG & SON, R. R. 1, St. Thomas, Ont.** 1/2 mile west of city limits.

CLOVERLEA HOLSTEINS—Herd headed by Pontiac Norine Korndyke. Our special offerings for this month are two choice bull calves; No. 1 born Nov. 6, 1914; he is large and straight and evenly marked. No. 2 born Dec. 18, 1914; he is a fine calf, more white than black; he is from an imported heifer whose dam gave 17.98 lbs. butter in 7 days, and his sire's dam gave 116 lbs. milk in one day and 34.69 lbs. butter in 7 days. He is bred right. Either will be priced right if taken soon. Bell 'Phone. **GRIESBACH BROS., COLLINGWOOD, ONTARIO.**

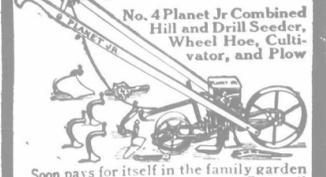
Holsteins—You are too late to secure a son of Pontiac Hermes old enough for service. But NOW is the time to secure a calf for next season's work. You can save money by buying NOW. Also one son of May Echo Lyons Segis out of 15,000 lb. dam. Get a catalogue for our consignment Belleville Sale, April 1st.
E. B. MALLORY, - - Box 66, R.F.D. - - BELLEVILLE, ONT.

Evergreen Stock Farm—High-Class Registered Holsteins—For sale: Two exceptionally fine young bulls, one ready for service, and dams have good official records. Also three heifer calves, six, seven and ten months old; good individuals and bred right. Write for particulars, or come and see them.
A. E. HULET, R.R. No. 2, Norwich, Ont. Bell 'Phone

HOLSTEINS AT HAMILTON FARMS
Young bulls and heifers out of official record dams sired by, and cows in calf to, Prince Hengerveld of the Pontiacs whose 13 nearest dams average over 27 lbs. and brother to the present world's champion and King Isabella Walker, backed up by 4 generations of 30lb. cows, is the kind of breeding I am offering.
F. HAMILTON, - - ST. CATHARINES, ONT.

Planet Jr. Seeder-Cultivators

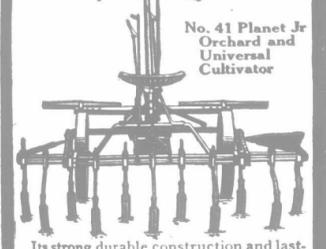
The farm and garden tools that save your time, lighten your labor, and get bigger crops—the longest-lasting and most economical implements made. Fully guaranteed.



No. 4 Planet Jr. Combined Hill and Drill Seeder, Wheel Hoe, Cultivator, and Plow

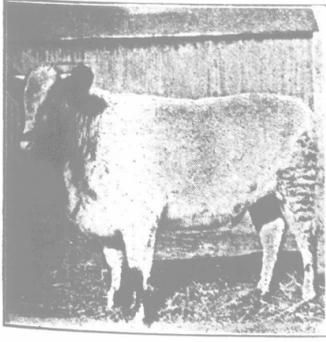


No. 8 Planet Jr. Horse Hoe and Cultivator



No. 41 Planet Jr. Orchard and Universal Cultivator

72-page Catalog (168 illustrations) free. Describes in detail over 55 tools including Seeders, Wheel Hoes, Horse Hoes, Harrows, Orchard- and Beet-Cultivators. Send postal for it now. Box 1108F SL ALLEN & CO Philadelphia Pa Write for the name of our nearest agency



First-Prize Calf of Lambton County Owned and raised by D. A. Graham, Wanstead, Ont., the well-known stock breeder. Captured the cash prize at Lambton County Fair, Sarnia, October, 1914, in spite of strong competition, and was raised on

Gardiner's Calf Meal

"The Perfect Cream Substitute" Contains absolutely no filler or cheap by-products. MADE IN CANADA. Write for prices. We pay the freight. GARDINER BROS., Sarnia, Ont.

The Maples Holstein Herd offers ready for service cows of Prince Aaggie Mechtild from R.O.P. and R.O.M. sisters and dam of Duchess Wayne Calanity 2nd, Canadian Champion two-year-old for butter in R.O.P. 16714 lbs. milk, 84% fat butter. Write: Walburn Rivers, R.R. No. 5, Ingersoll, Ont.

Cattle Raising in the Buffalo Country.

The result of the continued shortage in cattle, the future price of beef, and the solution of the perplexing problem of feeding the world, are vital questions uppermost in the minds of many thinking people to-day.

There is no doubt that the wide acres of Western Canada can, and will, be made to play an important part in bringing about a proper balance in supply and demand. In the Northern parts of Manitoba and Saskatchewan and in Alberta along the Canadian Northern Railway are many thousands of acres of the richest pasture in the world, well watered and treated by the sunniest of climates. These rolling hills for the greater part are still unpeopled and untrampled by the hoofs of domestic animals.

The foot hills district of Alberta is traditionally a cattle country, a natural feeding ground where peculiar climatic conditions prevail which make it best suited to cattle on the range. Ranchers who know old Mexico, Texas, Colorado, Montana, Wyoming and the other ranching states, as well as Alberta, are at a loss to understand the superior qualities of vast sections of this Province as a pasturing field for live stock. They will tell you that so far as the appearance of the grasses are concerned the pasturage is about the same here as it is in Texas or parts of Mexico. But they say also, "Take four yearling steers out of the same herd in Mexico and leave one in Mexico; place a second one thousand miles north in Colorado; a third still farther north in Montana or Wyoming, and the fourth in Alberta, and it will be found that at the end of three years, when all four animals are ready for market, the Mexican product will weigh from 900 to 950 pounds; the Colorado steer will weigh from 1,000 to 1,050 pounds; those in Montana and Wyoming will weigh from 1,100 to 1,150 pounds; while the animal fed in Alberta will go to market weighing from 1,200 to 1,300 pounds."

Why is it that these beef animals take on from 100 to 150 pounds extra weight with each progression northward between old Mexico and Alberta? The Rancher cannot explain or answer the question but cattlemen all over America know that such is the case.

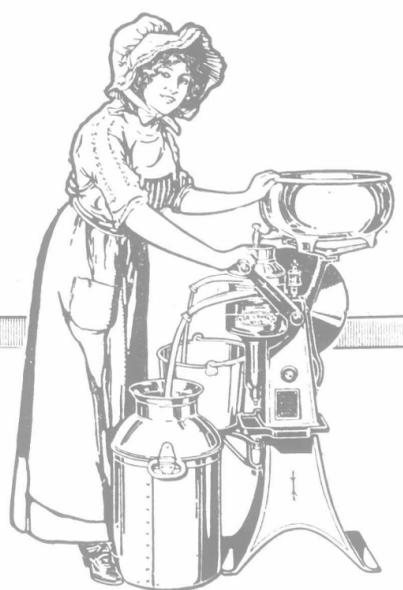
At Vermilion Experimental Farm an interesting investigation was conducted last Winter in the feeding of beef cattle. One lot of steers was fed indoors, each animal being allowed to stand untied in a box stall while another herd of the same number was left to feed and fatten outside on the native grasses. The result at the end of the experimental period was that the animals which had enjoyed the outdoor life weighed more and were of better marketable quality than those cared for in stables.

One of the causes assigned for the decline in stock-raising is the reduction in the areas available for grazing on account of so many big ranches being converted into farms. Experiments conducted at Vermilion would rather go to show that the old grazing grounds were too large, and that the feeding is really better when the animal is confined to a comparatively limited area providing the pasturage is of the right kind and there is plenty of water.

Before there were any cattle in Alberta, or it was known that it was possible to feed them outside all the year round the Indian hunters could always find the buffalo during the Winter months pasturing in the foot hills. In the Summer the herds wandered on the plains and fed on the prairie grasses. The plains have since become grain fields but the foot-hill district extending North from the International Boundary for a thousand miles will always be a natural feeding ground for live stock.

In the Southern part of Alberta the altitude is greater than in the more northerly districts but while the herds in the South have wide tracts of treeless pasturage, in the north from Red Deer on into the Peace River country, there are more trees, a richer vegetation and more natural shelter.

There is unlimited opportunity in this country for mixed farming and stock-raising. The country has only to be better known to attract a large number of people, and there will undoubtedly be a great deal of money made there out of stock in the near future. C. P. G.



The survival of the fittest

TRIED in the furnace of competition and subjected to the test of years of practical use on nearly 2,000,000 farms the world over, the De Laval has proved its overwhelming superiority to all other cream separators.

Twenty years ago there were as many makes of factory as of farm separators, but for the past ten years the De Laval has had this field almost to itself, 98 per cent of the cream separators in use by creamerymen and market milk dealers to-day being of the De Laval make.

It has taken the inexperienced farmer a little longer to sort the true from the untrue, the wheat from the chaff, in the maze of confictory catalog and local dealer separator claims, but year by year the ever-increasing proportion of farm separator buyers is reaching the same conclusion as the creameryman—that the De Laval is the only cream separator they can afford to buy or use.

Many other cream separators have come into the limelight of publicity for a few short months or a few short years, claiming to be "as good as" or "cheaper" than the De Laval, but their users have sooner or later found them lacking in some one respect or another, and even where a few have seemingly done well their users have come to learn that the De Laval was a still better machine.

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Tamworths For Sale—Both sexes. We have four litters of young ones now ready to ship and they are select. Quality right and breeding right. We guarantee satisfaction. We also offer a litter of collie pups. **B. Armstrong & Son, Codrington, Ontario**

TAMWORTHS
25 young sows bred for spring farrow and a few choice young boars, registered. Write for prices before buying elsewhere.

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Poland China and Chester Swine and Shorthorns, many are winners, and the produce of winners at Canada's best shows. Prices moderate. **Geo. G. Gould, R.R. 4, Essex, Ont.**

Gossip.

E. B. Mallory, Belleville, Ont., writes that the fine yearling son of Pontiac Hermes, out of a three-quarter sister of Lulu Keyes has been sold to N. R. MacArthur, of Thamesford. Mr. MacArthur, a young breeder, made no mistake in selecting a grandson of Hengerveld De Kol, backed by excellent maternal ancestors.

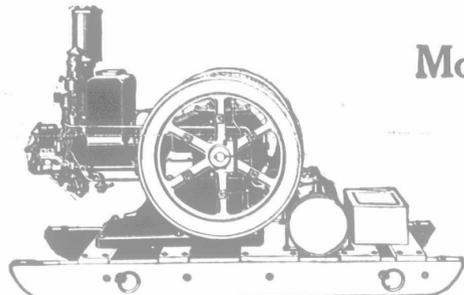
HAMILTON FARM HOLSTEINS.

In establishing his great herd of Holsteins, F. Hamilton, of St. Catharines, owner of the Hamilton Farms, whose advertisement appears in these Columns, did so with a full knowledge of the business requirements that would ensure success in the line of breeding he set out to inaugurate. He purchased animals whose breeding was such as to ensure their ability to make records themselves and to produce record-making progeny. Very many of those in milk that go to make up the herd of 80 head are in the official records. Nine of the mature cows have records that average 24 lbs. and the younger ones are up to an equally high standard. Many of the younger ones are the get of the senior stock bull, Prince Hengerveld of the Pontiacs, whose 13 nearest dams have records averaging over 27 lbs. He is a half brother to the world's champion, K. P. Pontiac, 44.18 lbs. He was sired by King of the Pontiacs, with 82 A.R.O. daughters including the world's champion and 3 others over 30 lbs. His dam is a daughter of Pietertje Hengerveld Count De Kol, with 98 A.R.O. daughters, 4 of them over 30 lbs. and 13 of them over 100 lbs. of milk a day, and he is a full brother to Hengerveld De Kol with 116 A.R.O. daughters, two of them over 30 lbs. The junior stock bull is King Isabella Walker, a son of King Walker, three of whose daughters are now world's champions of some producing division. He has 51 A.R.O. daughters, one over 30 lbs. His grand sire, Admiral Walker Pietertje, out of his 54 A.R.O. daughters has three 30 lb. ones, one of them a 3-times-30-lb. cow. His dam again has two 30-lb. daughters and his grand dam has a son with two daughters over 30 lbs. Four generations of 30-lb. cows in a sire's breeding is bound to show itself in his get, this is the kind of breeding Mr. Hamilton is offering for sale in young bulls and heifers and cows bred to these sires.

BRAMPTON JERSEYS.

About 400 strong, and another importation of 50 head due to arrive at Brampton before these notes appear, and every one of them in the pink of condition, was what a representative of this paper found on visiting the great champion herd of Brampton Jerseys, owned by R. H. Bull & Sons. Never stronger individually nor collectively than now this herd has a reputation for excellence, honestly earned, that extends not only on both sides of the line of this Continent but goes beyond the seas. As a sire, Viola's Bright Prince, Imp., the senior sire now at the head of the herd is proving a wonder for indelibly stamping a remarkable uniformity of type and quality in his get, every one of them showing superior excellence of quality and beautiful heads. His daughters in milk are also making a grand showing, those lately tested being particularly satisfactory. Brampton Bright Kathleen as a two-year-old made 9,295 lbs. milk and 442 of butter fat, and during her test travelled the show circuit. Brampton Bright Princess as a two-year-old made 7,714 lbs. of milk and 395 lbs. of butter fat in 11 months. Another daughter, Brampton Bright Dora, at the Guelph Dairy Test made the highest score ever made by a Jersey in that test. She is now in the R.O.P. test and gave 55 lbs. a day when fresh. A number of his daughters passing the test previously made an equally good showing. He is a great bull individually. Before leaving the Island he won first as bull and his progeny. At Toronto last fall he won first for bull and four daughters in milk, and at Ottawa he was first and champion. Some late shipments from the herd were: One earload to A. G. Hamilton, of Alberta, and seven head to John Pringle, of London. This latter shipment was a particularly choice one, nearly all of them imported and in the R.O.P.

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MARCH 25

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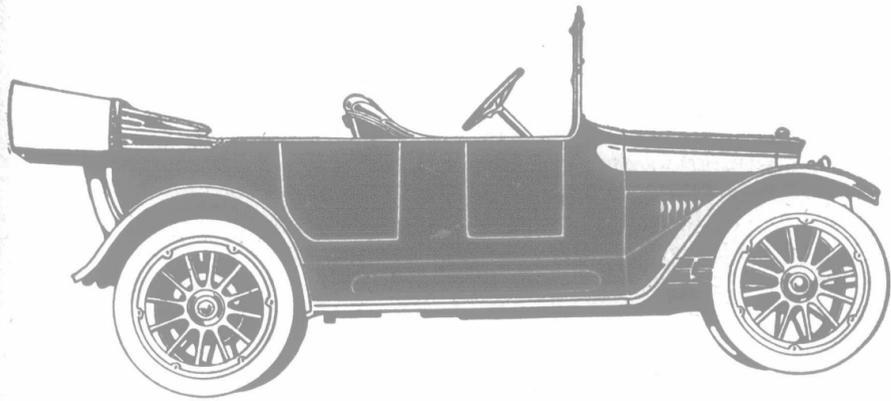
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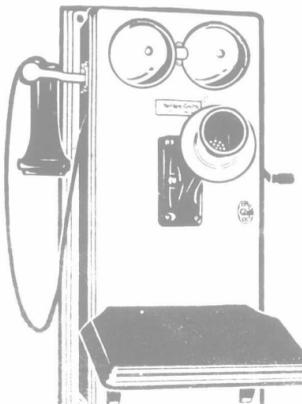
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