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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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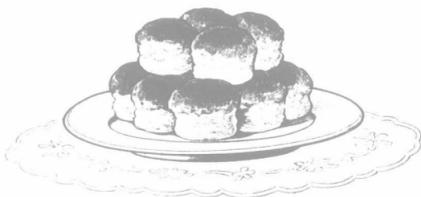
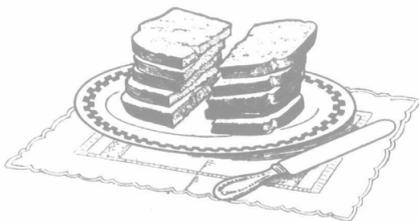
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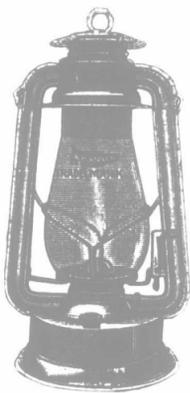
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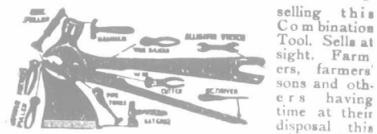
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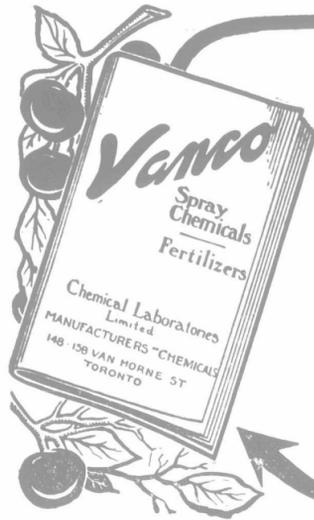
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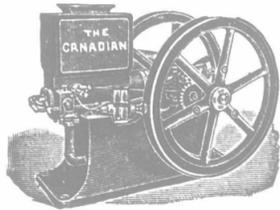
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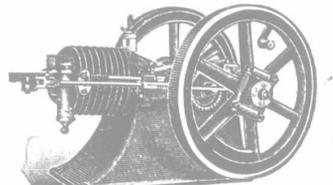
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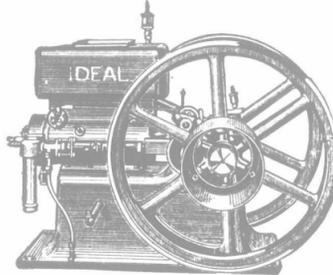
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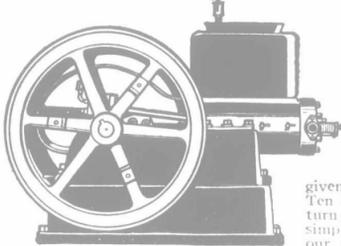


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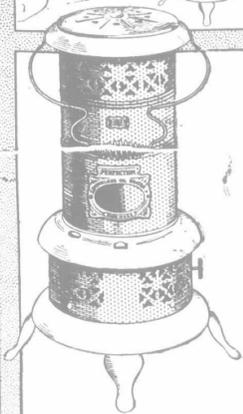
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That is the kind you should use on your farm and save expense and worry.

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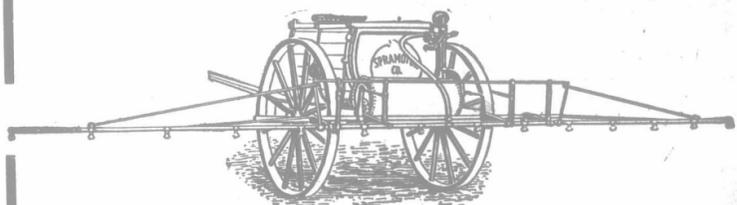
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Easily Installed anywhere in your home.  
Inexpensive to Operate and Positively Guaranteed.  
Odorless and Sanitary.  
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## THE PEST PARALYZER



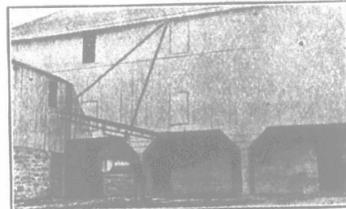
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The first step in financial success is to cut all unnecessary trimmings from your expenses. In the business of farming, the BT Litter Carrier with the whole BT Equipment is planned to increase the profits by reducing the stable expenses.

## THE BT LITTER CARRIER

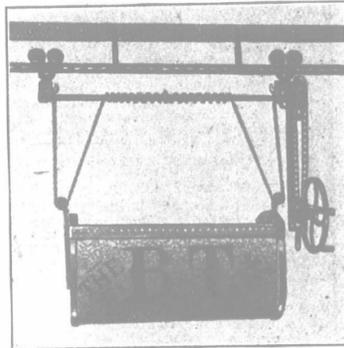
is so simple in its construction that there is nothing on it to get out of order. WE GUARANTEE our Carrier absolutely FOR FIVE YEARS. With no other carrier is such a guarantee given. In fact, most of the firms change their carrier every year, and they will have to keep on changing, for they simply cannot get around the patented points on the BT Carrier.

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Why not start 1912 right in dairying? TRY a DE LAVAL machine for your own satisfaction if nothing else. See the nearest DE LAVAL agent or write us direct and we'll do the rest.

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**Trial Box  
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**6 Pairs Holeproof Hosiery (25c per Pair)  
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FOR MEN WOMEN AND CHILDREN  
None Genuine Without Signature, "Carl Freschl"

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*Are Your Hose Insured?*

**Trial Box  
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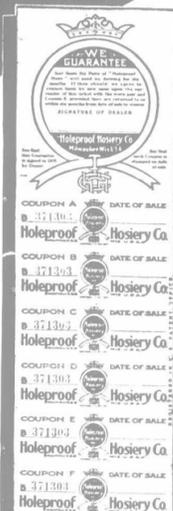
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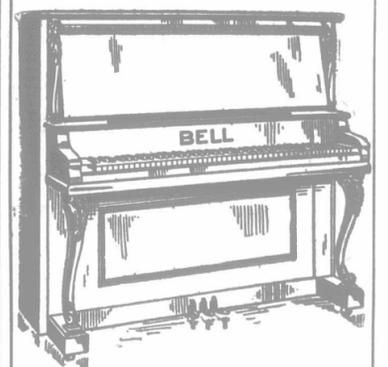
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Made right here in Canada—every bit of it, from muzzle to butt plate—it eads al others, and we give you this added advantage; because we know what goes into the making of a Tobin Gun. We guarantee it with a positive "money-back" guarantee that places us under an obligation to return you the full purchase price, if we cannot give you satisfaction in every way. Priced from \$20.00 to \$210.00. Let us send you our new catalogue. It contains information about the construction of good hot-guns that will interest you.



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AMERICAN  
SEPARATOR**

**SENT ON TRIAL, FULLY GUARANTEED.** A new, well made, easy running separator for \$15.95. Skims hot or cold milk, heavy or light cream. Different from this picture, which illustrates our large capacity machines. The bowl is a sanitary marvel, easily cleaned. Shipments made promptly from **ST. JOHN, N. B.** and **TORONTO, ONT.** Whether dairy is large or small, obtain our handsome free catalog. Address: **AMERICAN SEPARATOR CO.** Box 1200, BAINBRIDGE, N. Y.

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# The Farmer's Advocate and Home Magazine

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1853

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Vol. XLVII.

LONDON, ONTARIO, JANUARY 11, 1912

No. 1007

## EDITORIAL.

A well diversified system of farming is the soundest, safest, most interesting, and, as a rule, the most profitable.

The multiplication table is not to be relied upon recklessly in agriculture. Because a certain line of production succeeds well on a small scale, it does not follow that it would pay proportionately well on a large scale. As a rule, it does not.

The extreme difficulty of making a highly-specialized farm pay well is illustrated by the data in Dr. Snell's third article on rural economics. Broad diversification, with a leading specialty, is for many of us the best line of policy.

The practical, down-to-date information on orchard planting, published in this paper since the New Year may easily be worth a hundred—perhaps a thousand—dollars to an intending planter about to commit one or another of the many mistakes warned against.

There is not only a decline in the American birth rate, but an investigation by the Division of School Hygiene, Boston, Mass., Board of Health shows that only 35 per cent. of the children of school age there are healthy and normal. Some of the defects and disorders are serious. When a city of the intelligence and culture of Boston makes so bad a showing, the conditions in other great cities will no doubt be also alarming.

Quite a widespread interest is being aroused in the bean crop, and many requests come for information thereon. We are pleased to publish a good article on this subject from a practical grower, who recommends an inter-cultivated bean crop instead of a summer-fallow. It is undoubtedly a good crop, though apparently not equally well adapted to all localities, sometimes failing where it is confidently expected to succeed. There is, too, the possibility of overproduction. Where the crowd rush in, it is sometimes well to go slow. This much by way of caution. To anyone who wishes to try the bean crop in a small way, we should say, "Go ahead."

One of the most disquieting tendencies in United States finance is the steadily increasing amount of money which life-insurance companies have been called upon to loan their policyholders. In 1900, one leading company had over \$14,000,000 so loaned, but in 1910 nearly \$100,000,000; in the same period another had increased its loans from \$1,500,000 to \$71,000,000, and a third from \$7,372,000 to \$65,000,000. These increases were from less than one per cent. of the total insurance to nearly 5 per cent., and few of them are ever paid back. Originally designed to enable policyholders in financial stress to keep their premiums paid up, the borrowing is now done largely to use in business, to speculate with, and even to buy automobiles. It is one of the disastrous characteristics of city life and city ways that people are spending more than they should, and a great deal of it in luxury and folly. The practice referred to is reckoned so dangerous that legislative discouragement may have to be applied. In Canada we believe this tendency has not so manifested itself, and the new insurance act is very restrictive in that particular.

### Large versus Small Farms.

Any farmer who has missed the excellent series of articles on rural economics, concluded in the present issue, would do well to get hold of the three preceding numbers, commencing December 21st, and read the four installments at one sitting. In these articles, Prof. J. F. Snell, of Macdonald College, reviews succinctly the published results of an agricultural survey of four townships in Tompkins County, New York State. Dr. Snell has presented to our readers the results and conclusions under four heads, viz., "Large versus Small Farms," "Diversified vs. Specialized Farming," "Good versus Poor Cows," and "Education versus Self-training."

It is a good while since we have come across anything so illuminating on the business side of farming, and, while most of the findings tally quite closely with our previous views on the various points investigated, it is none the less satisfactory to substitute knowledge for opinions, as the evidence thus accumulated enables us in some measure to do, whilst not overlooking the fact that further researches in other communities might qualify conclusions in certain particulars.

The second installment, published December 28th, discussed the profits of large versus small farms, comparing them on a basis of labor income—i. e., according to the definition laid down—the income from the work and management of the farmer himself after all expenses, all other labor, and interest at 5 per cent. on all capital invested, had been allowed for. If a farmer's labor income is \$500, it means that, as a result of his year's work he has made 5 per cent. interest on his capital and has cleared \$500 above all farm expenses, besides having the use of a house and such farm produce as the place furnished for home consumption. Taxes were not allowed for in the calculations, but help furnished by other members of the family than the proprietor himself was allowed for at wages of similar hired help.

The survey under consideration indicated quite emphatically that, as a rule, large farms pay better than small ones. That is to say, the proprietor reaps a larger labor income for himself. Large farms were found more economical of both human and horse labor, and likewise more advantageous in regard to the employment of machinery, which can be better afforded, and also employed more effectively on the large farms. We repeat the words of the investigators themselves: "For greatest efficiency, a farm should be large enough to employ fully at least two men the entire year. One man is at a great disadvantage in many farm operations, and, in case of sickness or other exigencies, the disadvantage is still greater. For general farming, these figures show that a farm should contain at least 150 acres." The twelve most successful farms in the survey averaged 223 acres, being over twice the size of the average farm in the county (107 acres).

While not at all surprised at these findings, having long considered that the farm area of maximum economy was probably in the neighborhood of 150 to 200 acres, still we are not convinced that the last word has been said. Is there any sufficient reason why, with more thorough tillage, one hundred acres should not supply full yearly employment for two men, or, at least, one man and a boy? But leaving this possibility out of consideration, and conceding the economy of large farms, is there not another side to the matter?

Is economy of production the ultimate aim of rural economy, or should our ideal be the greatest good of the greatest number? Assuming that two hundred acres will yield somewhat more return when two men are employed under one management than when the two men own a hundred acres each, does this necessarily establish the superiority of the former arrangement? Which is better for the State, and which is better for the individuals concerned? We must not look at these questions from the standpoint of the employer alone. What is best for the employee—to continue as wage-earner, or to acquire a farm of his own?

Of course, these questions are to a certain extent academic, seeing that they must necessarily be matters of individual decision and adjustment. Each man of foresight and perseverance will naturally do what he considers best for himself, individually. It were sentimental to do otherwise. Drifters and improvident persons will continue to work for others.

But it is just as well to have rational ideas on these matters, and, for our part, we should prefer to see rural Canada very largely a community of self-employed yeomen than one where the few direct the labor of the many, incidentally pocketing the profit thereon. May not co-operation eventually secure to the man with few acres certain advantages now possessed by the large farmer, and may there not be indefinite opportunities for enlarging the third dimension of small farms? Let the man of small means still aspire to a home of his own, for there is much satisfaction, even if only moderate profit, in the poet's ideal of "a little farm well tilled," where the landlord collecteth not and the help problem is unknown.

### The Sheep Commission.

Live-stock men, particularly, are looking forward with interest to the report of the Canadian Commission on the conditions and revival of the sheep industry, to be submitted to Parliament during its present session. The appointment of the Commission was due to the regrettable decline of sheep farming in Canada which had forced itself upon the attention of the Live-stock Branch of the Dominion Department of Agriculture. A thorough investigation was realized to be the first and necessary step, and upon the advice of Dr. J. G. Rutherford, Live-stock Commissioner, the work was wisely entrusted by the Government to W. A. Dryden, son of the late Hon. John Dryden, whose natural and acquired qualifications are well known; and to W. T. Ritch, son of a successful Scottish sheep farmer, who, upon the completion of his education, engaged in the British wholesale woollen trade, which caused him to spend a great deal of time in Australia, New Zealand and South Africa, with occasional trips to Russia, India, the Argentine Republic, Canada and the United States, during the course of which his knowledge of the sheep and wool industries was greatly increased. It was during the course of a hurried business tour in Canada that by chance he was introduced to Dr. Rutherford, and his engagement on this important commission resulted, with the approval of the late Minister of Agriculture, Hon. Sydney Fisher. Their investigation has covered the industry as it exists in Canada, Great Britain and the United States, and this, coupled with the prior knowledge of Messrs. Ritch and Dryden, should place sheep-rearing and the wool trade before public men and the people in a clear and

## THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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IN THE DOMINION.

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comprehensive light, and lead to the development of sheep husbandry in vast areas of the country peculiarly well adapted to the business, and its extension where already in existence.

### Oil-Mixed Cement Concrete.

Some interesting oil-mixed cement-concrete experiments are reported by L. W. Page, Director of the Public Roads Office, United States Department of Agriculture, Washington. Owing to the continually increasing use of cement by our readers, the suggestion might well be put to further trial during the building season of the current year. Speaking generally, his tests seem to show that ten per cent. of mineral oil mixed in concrete makes it completely waterproof, but it retards the "setting" and lessens the strength to a certain degree. It was found, about October, 1909, at the office of the Public Roads, that almost any oil could be mixed with Portland cement after it was thoroughly wet, the oil combining with the cement, and quickly disappearing throughout the mixture. This was also learned to be true of concretes and mortars. In adding the oil to mortar, the cement, sand and water are mixed together as in ordinary mortar, the oil being the last ingredient added. Oil-mixed concrete is best made by mixing the cement, sand or gravel and water to a mortar, adding the oil to the mixture, and mixing until the oil is thoroughly incorporated. This oil-mixed mortar is then combined with the previously-moistened coarse aggregate.

Tests have been made on the compressive strength of oil-mixed mortars and concretes in comparison with plain mortars and concretes. It has been found that, although the addition of oil causes a decrease in the strength, this decrease is not serious with the addition of oils in amounts up to ten per cent., based on the weight of the cement in the mixture. One-year tests in compression show that oil-mixed concrete gains in strength with time, this being true of both air

and water-cured specimens. One-to-three mortar specimens cured in air and containing 10 per cent. of oil have shown a strength of 1,500 pounds per square inch, as against 1,600 pounds per square inch for the plain mortar specimens. Ten-per-cent. mortar specimens cured in water have shown a strength of 2,200 pounds per square inch, as against 2,350 pounds per square inch for plain-mortar specimens. The time of "set" of mortars and concretes mixed with oil is somewhat delayed. The final set of neat cement mixed with ten per cent. oil is 60 per cent. longer than that of plain neat cement. It has been found that the addition of 10 per cent. oil renders 1-3 mortar impermeable under high pressure. The absorption is likewise decreased.

Last May, streets were constructed of oil-mixed concrete, one in New York City, one in Washington, and two bridge surfaces in Ridgewood, New Jersey. A few months ago, a vault 105 feet long, by 18 feet wide, was constructed in the Treasury Department of this material. The top was a flat, reinforced concrete arch, and as sufficient tests in bond had not been made, ordinary concrete was used to surround the reinforcement. After it had set, three inches of a 10-per-cent. oil mixture was placed above. The vault has been perfectly waterproof under very trying conditions. A large water tank, constructed in a laboratory, with a 10-per-cent. oil mixture, is absolutely waterproof. Extensive experiments made with oil concrete in basement floors have given excellent results up to the present time.

The oils that have been used to date have been non-volatile petroleum, with flash points at least 350 degrees. In view of the incomplete character of the tests now being conducted, it is not recommended that this material be used where life and property are endangered.

### Peter, We Protest.

Now, see here, Peter, philosopher and friend, look at what you have done! Week after week you have interested and amused the readers of "The Farmer's Advocate" by your contributions on various subjects. Nothing wrong about that, you say. No, there is not, but the Editor seems to be taking you seriously. No doubt, some of the readers, also, and the thought of you being taken seriously is alarming, Peter, and, furthermore, we don't want any fun poked at the bulletins, nor yet the Farmer's Institute. You must only be a "make-believe farmer," or you would not do it.

Your description of your methods of cutting corn was very natural, and you very candidly admit it tried your temper, and you found it hard work. You did not like it, Peter; your heart was not in that work. Why? Of course, there is a good reason. Later on you tell us about your lonesome calf, and you go off to hunt the mother the wettest day in the year. You return, after a prolonged search, and find your lonesome calf under the drip of the granary. Poor calf! Why did you not put that calf in the stable before you started off on your search or when it commenced to rain? Could you expect even fair returns (say nothing of the rarely attainable) from a calf you would use that way? Then you tell us about your little pigs—thrifty little pigs. I should judge from your description of them—but then, they were not long away from their mother, and you had not tired of feeding them yet. You stood in the sunshine and watched them; you gave free rein to the steed of fancy; you thought of pigs dead and of pigs alive, of the poor man's pig, and of the pig millionaire. But Peter's dreams won't do for the rest of us, or, if we do dream, we must be sure that our dreams will pay their way and leave a balance on the right side of the account. When I see the gay old "Farmer's Advocate," with its sunny cover, I make a dive for it first thing, and lose no time in getting at the first page. There is an indescribable charm in that first page. If anyone is so dense as to ask why, I would ask these people why lovers of flowers will search their gardens and pluck the most beautiful specimens, arrange their bouquets, and place it where the eye will most often rest on it? Or, why will the prosperous farmer walk through his grain, root or corn fields, and come to the house bearing the most perfect specimens of each, and place them in a conspicuous place? Then, Peter, after that first page comes your letter, and I think that most readers' internals have a lively time playing "hide and go seek" as long as your letter lasts. But, again, allow me to ask you to make no more jokes about our O. A. C. or farm bulletins.

There are others who read these bulletins and

farm, also, and we know only too well that when we "fall short" in our crop returns, the cause of the failure, in nine cases out of ten, has been our own (and not anyone else's) blunder. The energetic, intelligent farmer of to-day knows that it is possible to get returns from the land that will equal and even surpass the official returns given in our farm bulletins, thanks to the invaluable information given year after year regarding seed selection, preparation, and cultivation of the different soils. Of course, I'll admit that there is a cow, or there are cows at the O. A. C. with records that are wonderful, and that few of us can hope to own milch cows of this class. There are also a few hens in the O. A. C. henhouse that must take the rest of their connections blush, if they have any shame at all. I fell quite sure that if the hen—I have only heard of this hen—that lays two eggs in the day should meet one of the class that lays once in two days, she would give the lazy one the cold shoulder, even if it was a summer day "and clouds were highest up in the air." But if we treated these cows and hens the way that the average farmer treats his, their wonderful records would fast disappear. After all, I think we mostly get what we work for and deserve.

At the O. A. C., every branch of agriculture has its own special teachers and workers. There are also to be found a few farmers scattered here and there who make a specialty of one or two branches of agriculture, and these are the men who reach the "rarely attainable," and occasionally the Farmers' Institutes are favored with an address from them. The motto of these men appears to be, "Whatever we do, do it well." The average 100-acre farmer seems to have a motto something like this: "We do a little of everything, and nothing very well." "But," says many a 100-acre farmer, "we cannot afford to farm as most of these men farm." Many of these men started with less than you did. Can you afford to sow seed on land that has many weeds and is poorly drained, and is not given half enough of manure? And your seed is often of inferior quality, and not half the quantity that is advised will be sown. Then, you reap as you have sown. The next year you trail your weary horses over that 10-acre field you seeded down—that is, if your seeding-down was worth leaving (sometimes it is not). If it is a favorable year, you may cut two tons (more or less) to the acre, and you'll talk of your good crop. A year like 1911 you will get ten tons, or possibly a little better. Did you ever figure up what that ten or twelve tons of hay cost you? Some of us figured this thing up some years ago, and, as a result, have adopted intensive methods. This year some of us harvested about our usual crop, while others had just as good as usual. Less land, better drainage, more manure and cultivation, would leave dollars with farmers, where now we only receive cents.

You were feeling pretty blue when the last load of hay came in, but it was not until the fall wheat and oats were cut that you really knew what you had to face this winter. Of course, you always intended to build a silo; the farm bulletins, as well as Farmers' Institute workers, advised it; "The Farmer's Advocate" and every other agricultural paper have sung the "Song of the Silo" for years, but you seldom take even one agricultural paper. If you do, you only glance through it, then you expand your chest and say, "What nonsense these fellows talk." You wish to provide a home for your family and pay your debts, so it is necessary for you to scrape together a few cents and subscribe to a local paper, in order that you may know where your neighbors visit, when they left and when they arrived home; then, there are the detailed descriptions of the girls' weddings—"Why! Sol Williams' girl was married in white satin!" Well, if she has married a farmer, such as many we see around us, she would have been wiser and more suitably dressed to have got married in her rain coat! There are many papers every week giving seasonable information on farm work, and we all can read; but it is only a few that will condescend to believe and follow up the methods advised by scientific farmers.

"But," you say, "I know of very successful farmers who neither take nor read an agricultural paper or bulletin." Well, so do I, but these are exceptional cases. These men are great observers and clever, and usually slaves to work, and often deny themselves and their families the "almost necessities" of life; they seldom live to be old men, and are often found crippled with rheumatism, or are nervous wrecks early in life. I know of one who has four sons, and it is not likely that any one of the boys will stay on the farm, although it is considered one of the finest in the county.

You say that the biggest fool-farmer you know of went to the O. A. C., and reads much on farming. That might be, too, but our professors and editors do not undertake to make men over and "make them right" (pardon the slang).

Well, you do "as my grandfather did." Yes, and most farmers have threshed out; many had a half-day threshing on 100 acres, and would like to shut out from their weary, dusty eyes the gray, blurred picture before them now, instead of the bright, hopeful one they had when they cheerfully toiled in the spring sunshine and dreamed their dreams. They will carefully hide their own disappointments, and say little about the debts that are to be paid they don't know how. But what of the Johnnies, little men of eleven years, and upwards, trying to do a man's work and forget the ache in the tender young bones? Some of them have dreamed their dreams; they are going to stay with you and have a most beautiful farm. What encouragement or inducement have you to offer? Others of these little men have dreamed of a business or professional world where they are going to win fame and fortune in this world; they think the hours are short and the clothes fine, and a "fellow can have some fun." They have told you that they will soon pay the mortgage off and buy you an automobile, and mother is to have the richest of silk and a diamond ring. The truth can be hid no longer; you must tell your Johnny to-night that he cannot commence business college or collegiate institute this year. His eyes will be bright with unshed tears, but he'll go whistling to the pump or to close a forgotten door at the barn.

Then, there are the Marys and Lizzies—the second mothers in your homes. They know what work is, and aching bones, as well. Some have hoped for one thing, and some for another; it might be extra lessons or a winter session at some school—perhaps it was a piano or a parlor suite. There is no effort to hide the tears here. Mother looks reproachfully at her girl, the tears are wiped away, and poor, patient mother, what about her hopes and plans?—we will pass that over.

You feel as if you could and would give years of your life to make the dear ones happy and comfortable, but next morning you will go to your stables and piggins and throw out the valuable manure just as your grandfather did (the soil at that time did not need manure, and he would be ashamed of you if he saw the poor use you make of your opportunities); the straw part will lie for months in your barnyard; the most precious part will run away any place but where it is needed. You have no better place to put it, you say, and, of course, you would never think of loading it up and drawing it to the fields daily.

Then you look at your "pot-bellied, dry-in-the-hair cattle," and wonder why you can't get a better price for them. You forget that, as little calves they lived in a pasture field from early spring to late fall when the snow came, unprotected from the cold winds and the rain. In July and August the hot sun blazed down on them, and you regaled them on thistles and burr leaves to supplement the pasture, while some other farmers were giving their calves clover hay and corn, with a shed or stable for shelter. Of course, you can't see anything wrong in your treatment of them, but ask the editor or any progressive farmer to buy them! They would not be taken as a present.

The spring will come again and again. Your fields will be plowed. You have heard much about drains paying their cost in the first year, but will you put in two or three and build that silo?

Over and over again last spring we were told to sow one-third more mangel seed than usual, the vitality of the seed being low. I know of several who followed this advice, and put their seed in well-drained and richly-manured land, then gave the required cultivation. The result was the

usual heavy yield in this unfavorable year. Thanks again to our college professors and farm editors. Hats off! and three long cheers for these men! We can never correctly estimate the value of the information that these men give so freely. If there is any honor in knighthood, these are the men that deserve it, and not the bloated millionaires who often make their money by the sweat of the laboring man's brow. But, to return to the mangel seed: Did you spend an extra dollar for seed? Not many of you, I think, or there would have been better returns given in this fall. And the result of your failures are—

Ah! what is that about asking for bread and being given a stone?

Did you ever hear the story of the pious man who was fast losing his hearing? For weeks he had prayed that the Lord would spare him from this affliction. But his hearing did not improve, so he decided to go to a doctor and see if he could see anything wrong about his ears. The doctor understood the trouble, and used a small instrument for a few minutes, and the man recovered his hearing immediately, and the doctor told him that there was no use expecting the Lord to clean his ears for him—He expected us to do some things for ourselves.

"DAD'S SECRETARY."

**Hired Help.**

Editor "The Farmer's Advocate":

No doubt the greatest problem before the farmers of this county is that of procuring a satisfactory supply of hired help. One is inclined to think that this problem will never be solved, and that every farmer will have to reduce his acreage to the amount he can handle single-handed or with the help at his disposal, for the reason that it is so easy for a man to get a start on his own account here in Canada, and this independent spirit is so prevalent that every man will be working for himself, at least in agricultural pursuits. That there is something in this, there is no doubt, and perhaps one might venture the opinion that it would do more good than harm. However, there is no doubt that there always was and always will be a great number of people who find it more profitable to work for others than to work for themselves, as evidenced by the large numbers working in factories, on railroads, etc. And to-day we find that, in the event of a vacancy occurring in the ranks of labor employed by these concerns, there are a dozen applicants for the one job. Now, what are the reasons for the fact that there is an oversupply of labor in some branches of industry, and a dearth in another? Firstly, the manufacturers and railroads offer slightly better wages and more definite hours of labor; secondly, the great tendency prevalent in all classes to flock together in the cities to obtain the excitement incident to life under these circumstances.

In regard to the first reason, why should it exist? Why should the manufacturer be able to pay better wages and in most cases be able to give shorter hours than the farmer? Simply because these branches of industry are developing at the expense of agriculture. The Government cheerfully pays out subsidies, exempts from taxation, or by some means helps to increase their profits at the expense of the farmer, and at the same time outbid the farmer in the labor market. This may have been well enough in times past, but it is becoming a burden too heavy to be borne. Of course, the remedy is obvious. "United we stand, divided we fall," is just as applicable to the farmers of this country as to any other body. However it would not be fair to put all the re-

sponsibility on this one point. The second part of that—e. g., more definite hours of labor—must be thought of, for I am afraid that many farmers, even if their financial position allowed them to pay high wages, would give but very little thought to definite hours of labor. It would go a long way towards solving the labor problem if farmers would set definite hours for their hired help, at least, and keep account of all overtime, and, when it is possible, let the man have a day off when he wishes, over and above public holidays. Then, at the end of the year balance the account, and pay for all overtime at a certain rate per hour, agreed to before. The agreement should be in writing, and cover all points necessary, including the very important one of chores on Sunday and holidays. The agreement ought to be signed by both parties, and everything done in a businesslike manner, so that there will be no room or cause for dispute later on.

The next reason, that of the tendency to flock to the cities, is a difficult one to overcome. In a case of this kind, dollars are the only argument. The farmer must pay good wages, and, further, he must engage a class of men that, once they get established, will not be disposed to look further afield for other employment. This means married men, and so a cottage for the hired man and his wife becomes an absolute necessity. Such need not be an expensive affair, but rather comfortable, and very homelike—not bare and uninviting—so that the man and his family may become attached to it, and loath to think of leaving it. Then, too, the wages may be largely supplemented by a large plot of land for a garden and pasturage for cow, all of which would not be missed by the farmer, and would make the lot of the hired man a very agreeable one, without paying extremely large wages in ready cash, which is sometimes so hard to get. Another reason a house should be provided for the hired man is that it is not doing the square thing by your wife to make her board the hired man and wash his dirty clothes, be he decent or otherwise; and, further, it destroys the privacy of the home, a sacred possession, especially of country homes, and one which should on no account be done away with. Any farmer who avoidably compels his wife to board the hired man, should not have a wife.

It would almost seem unnecessary to say anything regarding the fact that the farmer must supply all-year-round employment for his hired help, if he does not wish to be left in the lurch. He cannot expect his hired man to live on air during the winter, and be ready to hire with him in the spring. The system of hiring only in the summer cannot be expected to provide a permanent supply of satisfactory hired help.

Before ending this short article on a great problem, I would urge on all farmers the importance of not gaining a reputation with their hired help, such as the old Scotch farmer in the following story did: This old farmer went to the market place to hire a young lad to work for him. His search proved successful, and he found a youth having all the requirements he wished for. Then he bethought himself of the lad's reference, or character, as it is called in the Old Country, and he queried, "And now, Sandy, whaur is your character?" "I hae nae got ane," answered Sandy. "Weel, you must get ane," answered the farmer, "and meet me here at noon." So Sandy departed to procure his character. At noon the farmer and Sandy met at the appointed place, and the farmer inquired, "Weel, Sandy, hae ye gotten your character?" "Nae," replied Sandy, "but I gotten yours and I'm nae goin'." Prince Edward Island. W. R. C.



Ormsby Grange Stock Farm. Showing the splendid new farm buildings of Dr. D. McEachran, Ormstown, Que.

## HORSES.

### Wintering Idle Horses and Colts.

The economic wintering of idle horses offers food for thought and practice more markedly this year than usual. With hay selling at from \$17 to \$20 per ton, and oats about 55 cents per bushel, with a probability of an increase in the price of each, the man who has to winter a few horses which cannot be used to earn their keep has reason to consider how he can do so with as little cost as is compatible with health and vigor. It must, of course, be understood that it will not be profitable to allow the horses to fail too much in flesh. This applies especially to horses that will be required for spring work, also brood mares, as when these are allowed to become thin and weak, their value either as workers or breeders is so reduced that it requires more food and time to make them up again than has been saved in food during the winter.

In regard to weanlings, we think it unwise to attempt to save the food. The ultimate usefulness and value of a horse depends so much on his care and food during his first winter that, while, of course, care should be taken to waste no food, we do not find it profitable to attempt to economize. In a recent issue of "The Farmer's Advocate," an article appeared, entitled, "The Winter Care of Weanlings," and, notwithstanding the scarcity and high price of food, we think that weanlings should be wintered largely as detailed in that article. With yearlings and older animals it is different, and any system that lessens expense, and at the same time keeps the animals in fair condition should give fair results. It must be understood that whatever food is given it must be of good quality. Musty or partially-decayed material must not be fed. This applies to all classes, but especially to brood mares. It cannot be too thoroughly understood that partial decay, especially in roots or silage, or water containing decaying animal or vegetable matter cannot with safety be fed to horses. Musty or dust hay or oats is very undesirable, but not nearly so dangerous as decay, even though slight, of the foods mentioned. Decay of this kind tends to produce in horses a disease known as cerebro spinal meningitis, the first symptom of which, generally, is an inability to swallow. This is usually followed by progressive paralysis and death in a few days. We have known of many cases of this kind caused by feeding horses silage that had become just a little mouldy, or roots that were beginning to decay. Cattle can eat such food with reasonable impunity, but horses are unable to withstand the toxic effects.

In our opinion, idle horses should be given a daily ration of grain, preferably oats, but other grain, as wheat, rye, peas, barley or corn, or a mixture of any or all of them may be used. It

is probably hardly necessary to say that when the heavier grains are used, the bulk should be correspondingly less, as we take it for granted that too much will not be fed when the feeder is endeavoring to feed cheaply. We think chopped or rolled grain gives better results than whole, and when any grain other than oats is fed, chopping is practically necessary. While the allowance of grain may be small, it is necessary to allow a sufficient quantity of bulky food to satisfy hunger. Either hay or straw, or a mixture of them, must be given for this purpose. When necessary, hay can be dispensed with altogether, but when a little can be given, it does not require so much grain to keep the animals in fair condition. A little time and care spent in the preparation of the food is profitable. We consider that the hay or straw, or both, should be cut, and the roots pulped.

For a grain mixture, we would suggest three parts, by weight, of oats to one part barley. If peas or wheat is to be added, about one-half of the weight of the barley would be about right. This mixture should be chopped and mixed with its own bulk of bran. If the food be mixed in the proportions of, say, one bushel of cut hay or straw, or a mixture of them, a peck each of silage and pulped roots, and a gallon of chop thoroughly mixed and allowed to stand for a few hours before feeding, a slight fermentation and heating occurs, the whole mass becomes somewhat moist, and the flavors become mixed, which makes it more palatable, and thus more easily digested. It is not wise to allow fermentation to take place to too great an extent. Sufficient quantities of mixtures of this nature are made for cattle to last for two or three days, but for horses not more than enough for one day should be made. For an ordinary horse, about one-half bushel of this should make a fair meal. For small or young animals, of course, the amount should be less, in proportion to size. If this amount should be found insufficient to satisfy the hunger of some of the animals, a little whole straw or hay should be given.

We are not prepared to say just what the actual cost per day feeding as above would be. We could figure it out at what a person who had to purchase everything, say at \$18 per ton for hay, 55c. per bushel for oats, 15c. per bushel for mangels or turnips, 20c. per bushel for carrots, and, of course, we would have to exclude silage, as, so far as we know, it has no set market value, and cannot satisfactorily be used, except when taken freshly from the silo. We think that, even at these prices, the cost of keep would not be, at most, more than half of that when whole hay, oats and bran, with a few roots, are fed. The farmer who produces his own food can figure more correctly what the actual cost of the different foods are, and hence can estimate the daily cost more correctly.

It is necessary that the animals, whether work

horses, colts or brood mares, get regular exercise, in order that health and vigor may be retained. Where possible, it is better to stand the animals in box stalls when in the stable, but we appreciate the fact that this is not possible in the majority of cases. When they stand tied in single stalls, exercise becomes more necessary. For work horses or brood mares, the best way to give exercise is in harness. A drive of five or six miles daily should be given, but in many cases time will not permit of this, and exercise must be given by turning the animals in the yard, field or paddock. Of course, when two or more horses are turned out together, their shoes should be removed to lessen danger of injury by kicks. Especially is this the case with brood mares, for whom regular exercise is more necessary than for others. When at all possible, it is wise to drive them daily, as, by so doing we know that they get the exercise, and are not standing in the barnyard or paddock, and it removes the danger of abortion being caused by fighting with other horses, slipping, etc.

Horses that are expected to work in the spring should be gradually prepared for at least a month before work is expected to commence. During this preparation, the principal food should be hay, oats and bran. The change from the mixture mentioned should be made gradually, and exercise in the harness on the road or at light work should be given daily. The amount of exercise or work should be daily increased in order to get them in proper condition to do a full day's work when needed. Too often this precaution is not taken, but the team that has been idle all winter is, without preparation, put to regular work in the spring, and the driver often wonders why the horses tire so easily, get sore shoulders and become thin. A little consideration will convince any person that an hour or two daily for a month given to preparing a team for spring work is time profitably spent. "WHIP."

### Breeding Light Horses.—My Most Profitable Mistake.

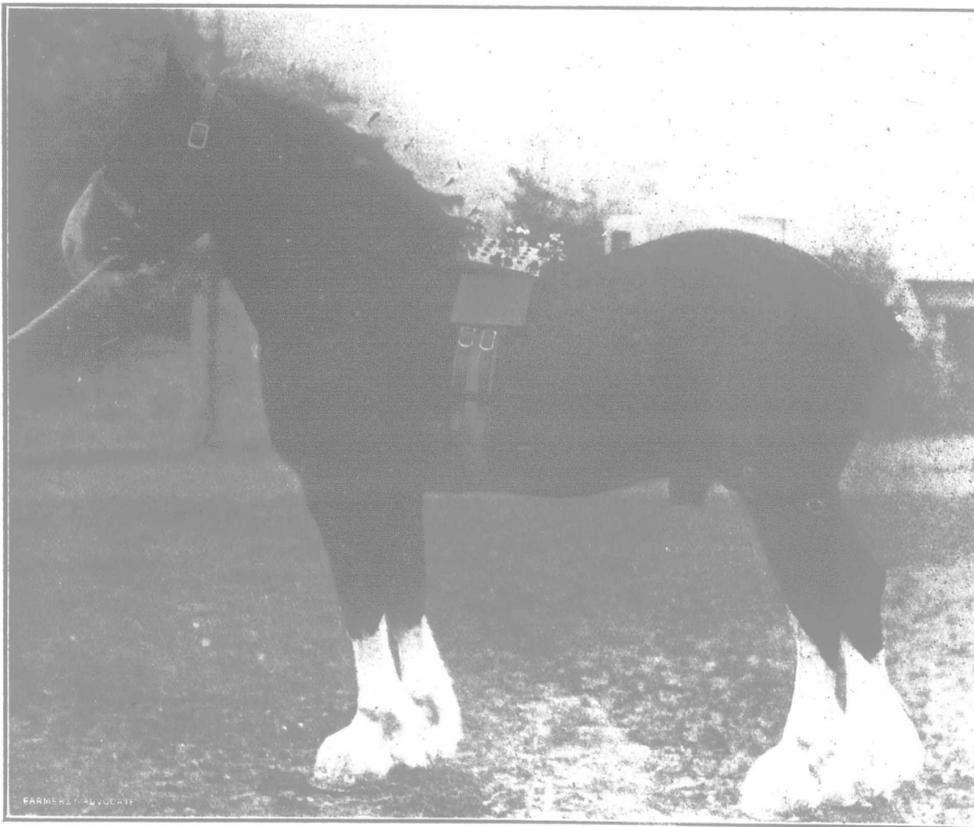
We are all prone to make mistakes, but there is an old proverb which says: "It's a wise man, indeed, who does not make the same mistake a second time."

I consider that, during my efforts to be a successful farmer, one of my greatest mistakes (and one which a great many farmers are making at present) was that of raising horses of the lighter breeds. As a rule, this type of horse is of very little use to a farmer, often becoming so crippled as to be of little use to anyone. Of course, I was not always so wise on this subject. "Experience is the best teacher," and I wish to show how, in the end, I profited by my mistake in breeding blood horses.

My father used to keep a couple of heavy mares for breeding purposes, and raised one or two colts a year—usually two. Thus, we always had a good supply of cool-blooded horses with which to do our farm work. We had a neighbor, though, who bred and trained blood horses entirely, and he could be seen passing up and down our road at a lively pace almost every hour of the day. This looked very easy work to me, and more exciting than following some heavy work horse. Of course, I never stopped to consider the expense, etc., connected with such sport.

In due time my opportunity arrived for managing the farm. Eager to follow my neighbor's example, I neglected breeding the heavy mares, and in their place I got a couple of blood mares. The latter proved excellent breeders, so in a few years I found myself the owner of a number of almost useless horses. At least, we found them of very little use to do the work on a dairy farm, where there is so much team work and heavy hauling to be done. Then, when it came to breaking these colts, we found it was not convenient to hitch such skittish creatures to a farm wagon. Accordingly, light rigs and harness had to be bought for driving on the road—additional expense. And, as everyone knows what sudden notions these high-lived colts will take for jumping into ditches or climbing fences, there were often some repairs to be made to harness or rig after each trip. This caused more expense. On the other hand, a Clydesdale colt can be hitched to almost any sort of vehicle, and will trot along like an old horse.

Well, to continue my story, in a few years we were the possessors of quite a stock of light horses of a class which we found difficult to dispose of. The majority of them bore some blemish, as spavin, etc. Had they been colts of a heavier breed, a slight blemish would not have hindered their sale greatly, as they would still be fit for work. Moreover, a colt of the heavier breeds can be trained to do considerable farm work, such as harrowing, rolling, etc., when they reach two years of age. A blood colt is of practically no use until three or four years old. Usually, at four years, one will know whether it will make a good driver or not. There need be no mention made



Scotland Yet (14839).

Clydesdale stallion; brown; foaled 1906. Bred by J. Ernest Kerr. Sire Royal Favorite.

of its doing farm work, for if you give a lifey colt into the hands of a hired teamster nowadays, it will not be long until it is a spoiled colt.

Finally, when I started figuring the cost of raising and training blood colts, and the careful handling required to bring them to a marketable stage. I concluded we farmers were making a great mistake in trying to raise this class of horses, and decided to dispose of my stock. The prices received ran from fifty to one hundred and fifty dollars for horses from three years old up. I leave the reader to conclude how much profit was left for the breeder.

We then purchased two pure-bred Clydesdale mares, and commenced raising colts from them, for which we found ready sale at from two hundred dollars for yearlings, to six hundred dollars for three-year-olds.

There is a good demand for any sort of heavy horses to-day. Even grade colts of a heavy type at six months old will bring as much as seventy-five dollars. Being so easily raised, there is little risk in buying them young. Every spring, carloads of heavy horses are bought up for shipment to the Canadian West. Any ordinarily good heavy horse brings a high figure then, because such horses are a necessity in breaking up prairie soil.

Although my experiment with blood horses proved a temporary loss, it was a profitable mistake, because I am now contented raising heavy horses at a good profit to myself.

Wright Co., Que. W. H. STEWART.

[Note.—This article was entered in our competition, and while not winning a prize, is well written, and offers some good suggestions to farmer horse-breeders.—Editor.]

### The Economic Wintering of Idle Horses.

At this season of the year, the economic wintering of idle horses is of first importance. This is emphasized by the high price of foods this winter. Because of this high cost, a few of us err by turning our horses out to rough it through the winter, feeding on cornstalks, straw and the like, thus often inducing "straw colic," while by far the greater number of us make the mistake of denying our horses sufficient exercise, keeping them too closely confined in the stable, and overfeeding on grain and rich hays. This method is as likely to produce disease as the former, though of another kind.

#### WINTERING THE IDLE WORK HORSE.

In the wintering of the idle horse there are two factors that must be kept constantly in mind: the supplying of sufficient nutrients to keep the horse in condition, and the permitting of an abundance of exercise. It is more economical, and perhaps advisable, to turn the idle horse into a lot, providing it affords good protection, as a shed open to the south, to be carried through the winter, rather than to confine him too closely in the barn. This affords the horse an opportunity to have the much-needed exercise. As winter comes on, the horse grows a heavy coat of hair, which will afford excellent protection.

The amount of food to feed will depend on the kind. If the hay consists of good timothy, or of sweet, clean clover or alfalfa, the amount and kind of grain will vary considerably from what would be necessary to maintain the horse if straw or cornstalks constituted the roughage. Thus, if clean timothy, clover or alfalfa is used, five pounds of grain—two in the morning, and three at night, per 1,000 pounds live weight, will usually prove sufficient. If timothy is used, it should be fed ad lib., though it may be necessary to limit the clover or alfalfa, particularly if the horses have a tendency to gorge themselves. On the other hand, if the roughage consists of very coarse materials, as straw, cornstalks, and the like, then it may be necessary to increase the grain, perhaps to six or eight pounds per thousand pounds live weight.

For best results, the grain may consist of half oats and half corn, by weight, ground together, though one may use such foods as are available. While, as a rule, corn is not considered a very good horse food, it is less objectionable if fed in the winter, as the horse needs much heat-producing food.

It is better to have the digestive tract of the idle horse well distended with hays, rather than contracted, as would be the case if grains possessing only the requisite nutrient were supplied. If the protected area is kept dry and well bedded, the horse can be comfortably wintered in this way at much less expense than by stabling. Full grain feeding, together with some work, should begin six weeks before spring work starts, to put the horse in condition for the spring work.

The drinking water should receive attention. Often this is entirely neglected, and the horse must drink ice-water or eat snow to get the needed water. Such neglect often produces disease. It is important to provide the idle horse with sufficient water from which the icy chill has been removed.

#### WINTERING THE BROOD MARE.

The brood mare will require more attention. While in general the care may be much the same as that outlined above, yet it should vary considerably in detail. Thus, the mare should be permitted to take exercise by having the run of a lot, and this is even more important than in the idle horse; but she should not be allowed to travel over icy or slippery ground. Her quarters should be more comfortable, a box stall prepared, and it is of greater importance that she be not required to drink ice-water, eat frosted, frozen, mouldy or ergoted foods, as these are likely to produce abortion. The mare in foal should be fed much as suggested above, with the addition of more protein foods, such as bran, peas and oil meals, as such foods rich in protein and mineral matter are valuable for mares carrying young foals. A grain ration consisting of five parts ground oats, two parts bran, two parts corn meal, and one part linseed oil meal, by weight, will be difficult to improve upon in most cases. This may be fed in quantities such as suggested above. If the mare is constipative, bran mash may be given occasionally. On the other hand, if she is laxative, it will be necessary to reduce the bran and oil meal, particularly if clover or alfalfa constitutes the roughage. Through the use of the proper foods, the bowels should be kept in the proper condition. If available, it is a good plan to feed a few carrots to the mare in foal, as these have a good physical effect. The brood mare cared for in this way will take sufficient exercise, and not become too fat or too much reduced in flesh, and thus avoid troubles at parturition time and subsequently.

#### WINTERING THE COLT.

As a rule, the first winter is very severe on the young colt. This is due to improper methods of weaning, or, rather, to poor methods of caring for the colt while suckling the dam. As soon as the colt is old enough, it should be encouraged to nibble at grain, preferably oatmeal. As a rule, he will begin to munch in the dam's grain box at two or three weeks of age. At this time the colt should be encouraged to eat by mixing a little sugar with oatmeal or bran and feeding to the youngster. It is a good plan to arrange a grain box for the colt's convenience, though some prefer to lower the dam's grain box so the colt can eat from the mother's supply. In this way the colt may be taught to eat, so that when taken from the dam at weaning time, he will not miss his mother, and may be put on his winter ration without loss in weight.

In choosing the ration for the growing colt, it is important that much protein be supplied, as this constituent is essential in the formation of bone; muscle, blood, nerve, hair and hoof. The food should be palatable and easily digested. Such foods as oats, bran, peas, linseed, and perhaps a little corn, may constitute the grain, while alfalfa, clover or mixed hays, which should always be fed sweet, may constitute the roughage.

The grain mixture suggested above for the brood mare cannot be materially improved upon for the growing colt. If this ration should prove too laxative, reduce the oil meal and perhaps the bran. On the other hand, should the colt seem constipated, a bran mash will prove beneficial. The exact amount of the mixture that should be fed will depend largely on the individual. On the

average, however, excellent results will be obtained by feeding the weanling four pounds of grain daily, and all the sweet clover, alfalfa or mixed hay he will consume, which will be from six to ten pounds each day, by feeding the yearling six pounds of grain daily and all the hay he will take, which will vary from twelve to fifteen pounds each day, and by feeding the two-year-old eight pounds of grain daily and all the hay he will consume, which will vary from fifteen to twenty pounds daily.

Many excellent horsemen prefer to feed the growing colt whole oats once a day, preferably in the morning, and the mixed grain at noon and night. For best results, the colt should be fed the grain ration three times daily, though many feed but twice, morning and night. Twice daily is frequent enough to feed the hay, morning and night. If available, a few carrots may be fed at this time, as they serve as a relish.

The growing colt should be permitted to take exercise as suggested for the brood mare. Colts should have rather warm quarters, for they cannot endure the inclement weather as mature horses. This had led many to confining the colt too closely in the stable. The colt needs abundant opportunity for exercise in the fresh, pure air, uncontaminated by stable odors, as this is essential to a healthy development. It is not sufficient that he be led out at intervals for exercise. He needs an opportunity to romp and play, that he may extend his muscles to their utmost capacity, expand his lungs to their depths, and send the blood coursing through his veins with much vigor. This is essential to a healthy, robust development of heart and lungs, bone and muscle, and nowhere can it be obtained in so great perfection as in the freedom of the open paddock or field.

#### COST OF WINTERING THE HORSE.

The cost of wintering the idle horse will depend on the kind and amount of foods used. At Cornell University, with foods at the market prices, we have been able to carry our work horses through the winter, much as suggested above, at a cost of less than 20 cents per day, while the brood mares have cost slightly more. This, of course, can be reduced somewhat by reducing the amount of grain fed. To carry a weanling colt through, as suggested above, will cost from 10 to 11 cents a day, or \$18 to \$20 for a six-month period; to carry a yearling colt will cost approximately 15 cents per day, or \$27 for a six-month period; and to carry a two-year-old through the winter will cost 18 cents per day, or \$32.40 for a six-month period. This includes the grain rations suggested above, which, of course, could be reduced by reducing the amount of grain, but we have thought it worth while because of the extra development obtained in the colts.

M. W. HARPER.

Cornell University, Ithaca, N. Y.

#### Practical and Up-to-date.

I have been reading another agricultural paper for the past year, but I have decided to fall back to "The Farmer's Advocate," feeling convinced that it contains the most practical and up-to-date information of any journal published. Therefore, I consider it the cheapest paper for any farmer to read. Enclosed find remittance covering a year's subscription for myself and one new subscriber.

Perth Co., Ont.

G. A. HAMILTON.



Marmaduke.

Two-year-old Shorthorn steer. First in class and champion at Birmingham and Smithfield Shows, 1911. Exhibited by H. M. the King.

## LIVE STOCK.

### Alfalfa for Pigs.

Experiments conducted by the Animal Husbandry Department of the O. A. C. in the feeding of alfalfa to pigs have given only encouraging results. Prof. G. E. Day reports upon them as follows: Alfalfa is not suitable for constituting a large proportion of the ration of very young pigs, though a small amount may be fed to good advantage to pigs of any age. By the time pigs are three months old, they can be made to depend to a considerable extent upon alfalfa, and the meal ration can be reduced as they grow older.

In our work, the pigs were fed green alfalfa in their pens, and they ate only slightly more than a pound of green alfalfa each per day. Their meal ration consisted of a mixture of ground barley and wheat middlings. In this test, 4.3 pounds of green alfalfa proved equivalent to one pound of meal, which is a higher value, pound for pound, than that obtained for skim milk. It must be remembered, however, that alfalfa cannot be made to substitute more than a limited amount of the meal ration of a hog, and consequently is not of the same relative importance as in the case of dairy cattle.

Our results with hogs were not equal to those obtained by the Kansas Experiment Station, where they have found, in one case, one hundred and seventy pounds of green alfalfa were equal in feeding value to one hundred pounds of corn. This result, however, may be regarded as an extremely favorable one, and indicates the possibility of materially reducing the bill for meal, even in the case of hog-feeding, though, as stated before, it is suitable for substituting only a comparatively small amount of meal.

Alfalfa hay has also been successfully used in hog-feeding, but only with comparatively-matured hogs. For hog-feeding, however, only the finest quality of hay is suitable, the second and third cuttings being best for this purpose. For wintering breeding sows cheaply, alfalfa hay may be made to play an important part, either fed dry or put through a cutting box, steeped in water and mixed with their meal ration.

### Prof G. E. Day on Sanitary Stabling of Cattle.

Too many of us are not willing to admit that it is necessary to observe the laws of health in the handling of cattle, because cattle are able to adapt themselves to a wider range of conditions and to keep apparently healthy under unfavorable conditions for a longer period of time than most other kinds of stock, said Prof. G. E. Day, in an address upon "Sanitary Stabling of Cattle," delivered at a meeting of stockmen held during the Winter Fair, at Guelph, during the second week of December. An animal which appears healthy and thrifty is not necessarily sound. The seeds of disease may be sown and largely developed before the animal shows any clinical symptoms, and, in the case of slow-moving diseases, which are fostered under unsanitary conditions, it is usually too late to apply any remedy when the symptoms become apparent. Tuberculosis is a striking example of this class of disease, many well-advanced cases showing no clinical symptoms. Therefore, it is necessary that every effort be put forth to maintain sanitary surroundings for the cattle.

#### VENTILATION.

Effective ventilation is one of the first requisites of a sanitary stable. Any system of ventilation which depends upon the opening and closing of windows can scarcely be regarded as satisfactory, for the reason that there are times when it is scarcely safe to have windows open, and consequently there are sure to be times when the stable has practically no ventilation. A good system of ventilation works constantly, because it is necessary to have the air frequently renewed during both day and night. No stable can be regarded as fully equipped, without some reasonably thorough and systematic method of ventilation.

There are two methods of ventilation which are very generally approved. One of these admits the fresh air at or near the ceiling, and has the outlets so arranged that they draw the foul air from near the floor. It is customary, in this system, to have openings in the outlet flues near the ceiling, which may be opened if the stable becomes too warm. The main difficulty experienced with this system of ventilation is to find some method of distributing the fresh air when it comes in near the ceiling, without causing cold draughts upon some of the animals. It is also well known that the foul air, while it is warm, ascends to the ceiling, and consequently having outlets near the floor, does not admit of removing the foul air immediately.

The other well-known system removes the foul air through flues opening at the ceiling and run-

ning up through the roof of the barn, and brings in the fresh air through openings near the floor. The inlets are guarded both outside and inside, so as to prevent direct draughts upon the animals, and the outlets, opening as they do at the ceiling, are in a position to remove the foul air immediately it ascends to the ceiling. The outlet flues are better to run perfectly straight from the ceiling out through the roof, and the top of the outlet should be higher than the peak of the roof. Our experience leads us to prefer this system of ventilation to the one first mentioned, though it causes a lower temperature in the stable than the one wherein the foul air is drawn from near the floor. It is simple, inexpensive and effective, and, when properly arranged, does not permit of any draughts, which is an important consideration. These are undoubtedly the two best systems.

It is impossible to have a really thorough system of ventilation without materially lowering

importance to any cow than a high stable temperature.

There is an advantage in having a fairly cool stable, in that it enables the cows to enjoy a short time out of doors each day without suffering any inconvenience; whereas, if they are kept in a very warm stable, it is almost dangerous to turn them out at all, and the chances are that their milk flow will be affected if they are turned out, even for a short time, on a cold day. Outdoor exercise, though it may be for only a few minutes of very extreme weather, is an important means of maintaining the health and vigor of cattle. Those cattle which have regular outdoor exercise are much less liable to contract tuberculosis than those which are constantly stabled throughout the winter. Constant confinement in a warm, close stable is extremely enervating, and tends to lower the vitality of the animal to such an extent that it cannot throw off disease germs

so successfully as one which is more rugged. Keeping in cool, dry stables, with daily outdoor exercise, is one of the best preventives of that dread disease, tuberculosis.

#### LIGHT.

Light is another important factor towards maintaining health. Dark stables favor the development of disease germs, whereas light (especially sunlight) is more or less of a disinfectant. The sooner we get away from the notion that large windows are a detriment to stables, the better it will be for all concerned.

#### SEPARATE STALLING FOR CALVES.

The keeping of calves in a stable that is crowded with other animals is a plan not to be recommended. If there is any disease in the

herd, these calves are given every chance to acquire it. Suppose, for, example, that there is more or less tuberculosis in the herd, and that the young calves are kept in the same stable with these tubercular animals, and are fed upon tubercular milk, what chance have they to escape the disease? If, on the other hand, they could be kept in a separate shed, where they had plenty of fresh air and exercise, they would have a very much better chance of coming through without infection. If a man had any reason to suspect that there was considerable tuberculosis in his herd, I believe it would pay him to keep his calves in a separate building and to feed them upon sterilized milk, never taking them into the other barn until they were practically full grown. I believe that, by following this method, a person could, in the course of time, practically rid his herd of tuberculosis.

Many people are afraid that calves will suffer if kept in a cold place. Experience, however, goes to show that such is not the case. Young dairy calves at the Ontario Agricultural College are kept in a shed that is simply single-boarded, with battens over the cracks and a straw loft



A Pair of English Prizewinning Tamworths.

the temperature of the stable, and it is this fact which undoubtedly leads many people to neglect thorough ventilation, for the reason that they wish to maintain a fairly high temperature. Dairy-men, especially, seem to be convinced that a high temperature in the stable is necessary to the highest milk production. There may be something in this contention, but, after all, is it worth while to run the risk of ruining the health of our whole herd, in order to break a few milk records? From some incomplete experiments, indications are that a high stable temperature for dairy cows is not so necessary as many people suppose. If the air is reasonably dry and pure, and the cow is accustomed to the conditions, results of our work in these experiments would indicate that rather low temperatures apparently do not materially affect the milk yield. Of course, if a cow were taken from a warm stable into a cold one, she would suffer, but if she is placed in a well-ventilated stable in the fall, and gradually becomes accustomed to a lower temperature as the weather becomes colder, she does not appear to suffer much inconvenience. Good, clean air, so long as it is not accompanied by draughts, is of far greater



The Drummond Cup Winners of 1911.

The champion pen of five lambs, any breed or cross, at the Winter Fair, Guelph. Pure-bred Oxfords, bred and exhibited by Peter Arkell & Sons, Teeswater, Ont.

above, and these calves thrive well, and never seem to suffer any inconvenience. Every winter, also, some young cattle are kept in part of a sheep pen, where it is practically as cold as outdoors, except that the animals are sheltered from the wind. These young cattle always thrive better than those which are kept in the warmer stable. In fact, an animal that is gaining rapidly in flesh should not be kept in a very warm stable, for the reason that it will suffer from heat. In fact, a person has only to try the method suggested in order to be convinced that it is better to give young cattle a cold building, where the air is dry and fresh, than to keep them in a warmer stable.

Prof. Day, in conclusion, urged breeders to give their cattle plenty of fresh air, stating that damp, foul air will sap the vitality of the most rugged animal.

**Attractive and Useful Buildings.**

The illustration on page 43, of Dr. D. McEachran's farm buildings, shows one of Quebec's most modern farmsteads. These buildings are up-to-date in every particular. Nothing is wanting which tends towards animal comfort or the saving of labor. The buildings are all lighted with electricity, and are fitted with large, roomy stalls and loose boxes, with cement floors, and iron fittings of the latest design. Water is on tap in all parts of the stables, and the health of the stock is assured by a thorough system of ventilation.

The barns are specially arranged for Clydesdale breeding, but forty head of steers, besides seven pure-bred Jersey cattle, a number of pigs, and three hundred fowls are being fed at present. The building on the extreme left is the piggery; at the end of the large stable is the power-house; back of this stable is the cattle barn; in the background the large residence, and on the right a large implement shed. The Clydesdales in the foreground, from right to left, are Kintyre, Peggie, Selborne, Mary Park, and the champion Linlithgow Lass. A combination of such stock and buildings, coupled with good management, cannot but produce satisfactory results. There is nothing which adds to the attractiveness of rural life more than good buildings and high-class live stock, and where such modern structures as are here illustrated are provided for the animals, there can be little doubt but that greater strides than ever are possible in the bringing of the various classes and breeds nearer to that perfection which is the desire of every progressive stockman.

**THE FARM.**

**A Study in Rural Economics.**

By Prof. J. F. Snell.

**IV.—GOOD VS. POOR COWS.**

Variations in Receipts per Cow.—From about half of the herds of six or more cows not enough products were sold to pay for the feed they consumed. The value of feed per animal unit was about \$60. By an animal unit is meant one cow or bull or two calves or heifers. The receipts per cow were over \$75 in 28 per cent. of the herds, and in 11 per cent. they were over \$100 per cow.

Receipts per Cow Related to the Value of Cows.—The average value of all cows was \$40 in 1907, and \$41 in 1908. The value per cow depends, of course, to a considerable extent on her producing capacity. The greater the receipts, the greater the value. But the increase in value is not proportional to the increase in the receipts. Thus, the cows yielding receipts of \$51 to \$75 averaged \$40 in value and \$62 in receipts, while the cows yielding over \$100 in receipts had an average value of only \$53, whereas their average receipts were \$121. The average receipts from the latter group are nearly twice as high as those from the former, but the value of the better-yielding cow exceeds that of the poorer by less than one-third.

Cows of poor quality are comparatively high-priced because of their beef value, and they should be turned into beef. Their price is held up by their beef value, rather than by their dairy value.

Relation of Receipts Per Cow to Labor Incomes.—Of the farmers who kept cows producing \$30 or less receipts apiece, 44% made less than \$1 labor income, and none made over \$1,000. But of those whose cows produced over \$100 receipts each, 52 per cent. made over \$1,000 labor income, and absolutely none fell into the class making less than \$1 labor income.

**BREEDS.**

The predominating breed of cattle in Tompkins County is the Holstein-Friesian. Of the 116 herds classified, only six were pure-bred, viz., two Holstein, three Jersey, and one Guernsey.

Classifying pure-bred and grade herds together, 67 herds belonged to the Holstein group, 30 to

the Jersey, and 10 to the Durham group. The Durhams are described as a type of Shorthorn, descended from early importations, and quite different from the modern beef Shorthorns. About two-thirds of all the cows were in the Holstein group. As the subjoined table shows, the cows of the Holstein group had decidedly the advantage over those of the other two groups, both in their value, in the value of their products, and in labor income to their owners. The production of market milk appears to be the most profitable line of dairying in that district, and the Holsteins naturally excelled in this respect. This is, of course, one of the cases where it would not be safe to apply the results of this survey to other localities.

Relation of Breed to Receipts per Cow and Profits.—116 farms with six or more cows, operated by owners:

| Breed.              | Receipts per cow. |                       |            |        |               |
|---------------------|-------------------|-----------------------|------------|--------|---------------|
|                     | Value per cow.    | From milk and butter. | From stock | Total. | Labor Income. |
| Holstein group..... | \$49              | \$76                  | \$11       | \$87   | \$798         |
| Jersey group.....   | 41                | 53                    | 9          | 62     | 481           |
| Durham group.....   | 39                | 59                    | 15         | 74     | 469           |

Pure-bred vs. Scrub Bulls.—The results obtained in this comparison are in line with universal experience. The pure-bred bull gives the best result. Yet so common is blind ignorance of this outstanding fact, that only 29 per cent. of the bulls kept on the farms having six or more cows were found to be pure-bred. In other words there were more than two scrub bulls to every one of pure-bred. Among the Holsteins conditions were better, the pure-bred bulls being just in the majority.

Of the farmers who had mostly Holstein-grade cows, 34 had pure-bred Holstein bulls, and 31 had grade Holstein bulls. The average receipts per cow were \$89 for the herds with pure-bred bulls, and \$63 per cow for herds with grade bulls. The farmers who kept the pure-bred bulls had an average labor income of \$1,012; those who kept grade bulls averaged \$396.

The differences in labor income are due in part to the fact that the men with pure-bred bulls kept larger herds and had larger farms. But that the differences are largely due to the superior quality of the herds headed by pure-bred bulls, is evident from the receipts per cow, which were:

1. For milk and butter, \$79 in the herds with pure-bred bulls, as against \$55 in other herds, and
2. For cattle sold, \$10 in the former, and \$8 in the latter class of herds.

**V.—EDUCATION VS. SELF-MAKING.**

The results of this survey bear striking testimony to the value of education to the farmer. Of the owners, those who went only to district school made an average labor income of \$318. The average labor income of High School men was \$622. Of the more than High School men it was \$847. The differences are emphatic. The labor income of the High School farmers is \$304 greater than that of the district school men. This would be 5 per cent. interest on \$6,080. In other words, the High School education of a farmer is equivalent, financially, on the average, to \$6,000 worth of 5-per-cent. bonds.

The average labor income of the tenants who had only district school education was \$407. The High School tenants made an average labor income of \$473.

Of course, there were instances of educated farmers earning low labor incomes, but these were not so plentiful as among the farmers with the poorer education. Forty-three per cent. of the owners with High School education made labor incomes of \$400 or less; but of the farmers with only district school education, sixty-four per cent. were in this comparatively unsuccessful group. On the other hand, the proportion of better-educated men making over \$1,000 labor income, was vastly greater than among the more poorly educated.

Only 5 per cent. of the district school men made over \$1,000, but 20 per cent. of the High School men made this much.

Education Related to Profits, with Capital Equal.—The objection might be raised that these farmers with higher education made more money, not because of their education, but because they possibly had a better start in business; that many of them probably inherited farms and other property. This is probably not true, but a comparison has been made which would overcome such an objection.

Farmers of the different education groups, with the same capital, are compared. Two groups are used, district school, and more than district school. In every capital division the farmers with more than district school education made a greater average labor income than those with only district school education. The farmers with the better education use their capital more ef-

fectively; that is, if given an equal start at the beginning of a year, the farmers with more than a district school education are ahead at the end of the year. On the average, the High School farmers have made \$211 more than the district school farmers with the same capital.

**EDUCATION RELATED TO PROFITS, WITH EQUAL CAPITAL—500 OWNERS.**

| Capital               | District School. |              | More than District School. |              |
|-----------------------|------------------|--------------|----------------------------|--------------|
|                       | No. of farmers   | Labor income | No. of farmers             | Labor income |
| \$ 2,000 or less..... | 31               | \$ 187       | 3                          | \$ 286       |
| 2,001—4,000.....      | 146              | 241          | 36                         | 275          |
| 4,001—6,000.....      | 122              | 398          | 49                         | 466          |
| 6,001—8,000.....      | 50               | 395          | 40                         | 709          |
| 8,001—10,000.....     | 28               | 618          | 13                         | 796          |
| 10,001—15,000.....    | 18               | 525          | 25                         | 1,091        |
| Over 15,000.....      | 3                | 1,054        | 9                          | 1,272        |
|                       |                  | \$ 488       |                            | \$ 699       |

It should be noted that only three or four of these farmers received any agricultural instruction whatever in the schools or colleges. We must conclude, that these striking differences in profits are due, not to the teaching of the applied subjects, but rather to the extra mental training. If the same training had been received in the study of the subjects pertinent to the industry, how much greater would the differences have been?

**Cost of Cement Silo.**

Editor "The Farmer's Advocate":

Having noticed, from time to time, articles on cement-silo construction, will give an account, with cost, of silo erected on my brother's farm.

This silo is 14 feet by 32 feet 6 inches, has a base width of 18 inches, tapering to 10 inches at 3 feet, or top of ground, to 6 inches at top. This silo has a continuous opening, with the exception of 7½ feet at top and 5 feet at bottom; ½-inch iron bars cross this opening and extend into the wall, and are fastened to reinforcing wires. Many silos were built in this manner the last few years, and all are satisfactory. It would appear to weaken structure, but all have stood, and, as concrete is supposed to strengthen with age, no doubt these will be all right. A mixture of 1 to 10 Portland cement and gravel was used, and 8 loads stones were used as fillers.

The silo was twice swept with cement outside, after any large holes were filled with cement. As no mason could be secured at the time, the silo was plastered by ourselves.

The roof is very steep, allowing for more space and convenience in filling; 26 gauge galvanized plain sheeting was used on roof; 1½-inch galvanized nails, with lead washers, were used, nailed direct to rafters. The circles are two 1-inch boards; the plates are bolted to silo; for rafters, 2 x 4-inch scantling were used, 17 inches apart at the bottom, tapering to 2 inches at top, and fastened to top circle. A ventilator is used, with 15-inch flue, and gives the silo a very neat appearance.

By way of comparison, the writer has a stave silo, 15 x 30 feet, without roof. This silo has been filled fifteen times, and is practically as good as when erected. It is pine, and set on stone wall. It had never given any trouble until last year, when about 6 feet shifted off wall and fell inwards. This was at once replaced, and an extra wall of concrete built inside, and 3 inches higher than bottom of staves. It is hoped this will keep it to its place. The silage keeps about the same in each silo, perhaps some more spoiling on top in cement. The cause of this, no doubt, is due to the rains wetting top of corn and excluding the air better; the same results could, no doubt, be obtained by drawing up water in roofed silo and wetting corn. Silage freezes more in cement, but this may be due to location.

I consider, with cost of lumber and durability of the concrete, the latter will make more economical silo.

Now, as to cost, we will only consider actual outlay, as other work was done at a slack time of the year:

|  |          |
|--|----------|
| 35 barrels Portland cement, at \$1.70.....                         | \$ 59.50 |
| 8 ½-inch iron rods across opening, at 25c..                        | 4.50     |
| Work in building, including moulds, etc.....                       | 82.50    |
| 60 lbs. No. 6 reinforcing wire, at \$3.50.....                     | 2.10     |
| 10 8 x ½-inch bolts at top, at 5c.....                             | .50      |
| 40 loads of gravel, at 10c.....                                    | 4.00     |
| 150 ft. lumber for chute, at \$19 per M.....                       | 2.85     |
| 60 ft. 2-inch plank for opening, \$19 per M.                       | 1.15     |
| For roof:  |          |
| Circle for plate, and 30-in. circle at top...                      | 4.50     |
| 326 feet 2 x 4 in. x 14 ft. for rafters, etc., at \$19 per M. .... | 6.19     |
| Metal roofing (plain gal.) .....                                   | 16.46    |
| Ventilator, 15-inch flue (no screen) .....                         | 2.50     |

Total cost ..... \$186.75  
Ontario Co., Ont. F. H. WESTNEY.

### The Silo-Filling Problem.

Editor "The Farmer's Advocate":

Again we have seen the corn crop harvested from a larger acreage than before, while, with the passing of another season, the more clearly is the fact demonstrated that the corn crop is our most dependable field crop, and that we are going to grow it, while it is superfluous to add that the silo is to be employed in handling the crop.

While the silos are all filled again, was this operation accomplished in every instance without confronting something of a problem, viz., that of getting the proper machinery and help essential assembled at the right time, and at a reasonable expense? This is a very practical point, and one that has given rise to some objection to the silo, and is the problem we often hear referred to re the silo, as "unsolved."

True, silo-filling will always be one of the big tasks of the fall season, and will always necessitate special machinery and much additional help on all excepting those farms larger than the average, where much help is not steadily employed, and where such financial outlay as is called for in the purchase of a large outfit cannot be afforded. The past season has seen many kinds of motive power employed for filling purposes throughout the Province, including, for the first time, electrical energy, on a few farms in Western Ontario, supplied by Hydro-Electric lines, a part of the electrical development that part of Ontario is being supplied with as a result of the great waterfall at Niagara. Perhaps the large threshing engine and large-capacity blower has been most generally used, with gasoline power a close second, while on not a few farms horse-power has again been employed.

In selecting any one of these motive powers, the proximity of silo-owners to one another has a special bearing. If an outfit of large capacity and expense in operating is to be employed, sufficient help to operate this advantageously should be available at not too great a distance; it should be found in the neighborhood; while, if the silo-owners be somewhat isolated, this could not be accomplished, and an outfit of smaller capacity would be more applicable, and less expensive.

But is it always cheapest to employ the largest outfit? Observation and experience tends to convince me that the use of an outfit consisting of a large 20-horse-power steam engine, and correspondingly heavy blower, is not imperative in handling the corn crop. While more tons of corn can be cut and put in the silo per hour with this outfit, when properly attended, the work is often accomplished at a greater cost per ton than where a smaller outfit is used. The financial outlay of silo-filling is an obstacle many find difficulty in reducing to what it should be, where these large outfits are employed. The hire of such an outfit, fuel consumed, bills for board and help, etc., often total upwards of twenty-five dollars per day, besides helping as many back with work as we can. True, such an outfit is fast, when we can keep it going full capacity, but how often are we unable to do this, owing to help being scarce, the corn-field a long distance from the silo, wet weather, chores morning and night (where considerable milking is to be done), etc.? With a full force at hand, and a silo filled in a few hours, after which the outfit must move on, unless we go to the trouble and expense of refilling, which is no small item, the capacity of our silo is very much decreased, owing to no time being allowed for the compacting of the silage put in the silo so hastily. For each silo-owner to own a complete silo-filling outfit would not be in every instance expedient, considering the amount of help, including horses and wagons, that must be assembled on each farm, let alone the large initial financial outlay necessitated in the purchase of an outfit. Private ownership of the silo outfit, however, has many advantages, particularly where silos are somewhat scattered and where other employment throughout the year may be found for the motive power, and perhaps the cutting box, as well.

Experience warrants me in advocating, as a solution of the silo problem in hand, a system of co-operation, if what is understood by co-operation applies, if not in whole, perhaps in part, or, we may say, perhaps more correctly, joint ownership between two, and not more than three, neighboring farmers of an outfit of suitable size.

The work of filling on two farms could be accomplished nicely in a week by employing a gasoline engine of eight horse-power or upwards, and a corresponding cutting-box or blower of like capacity, while all teams, trucks and help could be supplied by the regular working forces of these farms. Aside from the distinct advantage of being able to fill just when the crop is in best condition, in case of wet weather there would be no time lost, or unavoidable expense incurred, owing to the filling outfit standing idle. With the operation accomplished in this time, we would be through at one stroke, as no "helping back" would be necessitated. It is practically impossible to make an estimate of the value of time of farm hands and teams at this season in farm

operations, with apple crop ready for harvesting, the root crop, work of fall cultivation, etc., at hand; there is, indeed, plenty of profitable employment to be found at home, without spending all fall following a silo-filling outfit. An engine of this power could be very profitably used between the owners throughout the year at such work as threshing, chopping, etc.

Where electric power is at present or is likely to be available, it certainly merits consideration, but for some time to come this will apply to the minority of Ontario farmers; and, with gasoline power in its present perfection we have a good alternative.

As stated earlier, we are going to grow the corn crop, and the old-time objections of "too much work" and "too much expense" must be solved. This plan of joint-ownership of the filling outfit may be extended to the buying of a machine planter, where this system of seeding finds greatest favor; also, on two farms of average size, one of the large horse cultivators may be made to serve both, while this feature may also be utilized in buying materials, building the silos, etc.

Particularly with the corn crop, we are dependent on some help off the farm, and, while our forefathers found the system of "changing work" to be essential in clearing the land and building the first buildings, we may, in a somewhat different way, accomplish the present biggest task on the farm, by slight variations of the old-time plan of "changing work," though on a smaller scale than many of us are now doing.

Dundas Co., Ont. CLARK HAMILTON.

### Widening a Barn.

Editor "The Farmer's Advocate":

In "The Farmer's Advocate" of Dec. 28th, W. B. D. asked for information in widening a barn, and, although the Editor advised him to consult his carpenter, I feel I might tell my experience, with beneficial results, in widening several old buildings.

I have heard of splitting them through the center and moving one side out, but, in my experience the only proper way, and the most economical, is to take off the posts on one side, first shoring up the cross-beams until this is done, when a center post can be put under them, and a piece spliced on to extend them out the desired distance, this piece, of course, to have tennon and brace mortise prepared while on the ground, before being bolted into place. The end and cross-sills are also extended, and the old side sill, if in good condition, is placed on the new wall, and posts and side girths raised into position, and all securely pinned into place. I always leave the main and purline plates lying upon the frame across the main beams, which saves considerable lifting later on, besides keeping the old beams from swaying while adzing splices and providing a means of travelling from one bent to the other.

In widening a barn, it is always advisable to construct a gambrel roof, and, as there seems to be a difference of opinion in the proportioning of this style of roof, a word in regard to this will not be amiss. First divide the span into five equal parts, now take each of the outside divisions, as the span of the side roofs and the three center divisions will be the span of the center roof. The rise of the side roofs is 12 inches in a run of 8 inches, and the rise of the center roof is 8 inches in a run of 12 inches. Make the rafters the same length for each roof, and the result will be as pretty a roof as you ever saw, with the added satisfaction of knowing that it is of the strongest possible design, in truth being a self-supporting roof.

A. A. GILMORE.

Huntingdon, Que.

### Measuring Straw in Stack.

This is the time of year when farmers are buying and selling straw, hay and other roughage in the stack. The question of how to measure these materials in the stack has arisen many times. It is practically impossible to give any definite cut-and-dried rule for such measurement, as a great deal depends on the nature of the feed and the length of time it has been stacked.

Ordinarily, the practice is to multiply the length by the width by the average height of the stack, and divide this result by 500. This rule applies to measurement of straw. At the best this is only an approximation of the correct amount, for it is just as impossible to measure straw with any degree of exactness as it is to estimate the number of bushels of grain by measurement, rather than by weighing.

Many farmers estimate that 350 cubic feet of hay is equivalent to a ton by weight. This depends on the kind of hay, and whether it has had sufficient time to become thoroughly settled—if newly stacked, it would take 400 or 500 cubic feet to equal a ton.

With so many different rules in use in various sections of the country, and the many diverse opinions on the subject, it would be wise, before

closing a deal, to have an agreement as to what method of measurement will be used. This will avoid subsequent disagreements. It might be well to remember, also, in this connection, that, with hay and straw, as with various kinds of grain, the cubic amount which is equivalent to a ton or bushel gradually decreases as the season advances.

—[I. H. C. Service Bulletin.

### A Profitable Crop.

Many farmers do not agree that it pays to take a crop of clover seed from the soil after taking a crop of hay the same year. John Fixter, Superintendent of the Macdonald College Farm, and a man who finds it profitable and comparatively easy to keep records of every field and crop on the farm, reports a yield this year which shows that it has proved very profitable with him, even though the season, according to Mr. Fixter, was a rather poor one in his locality, and much of the success of the crop is attributed to good, thorough cultivation, plenty of humus, the sowing of good seed, and the conservation of soil moisture.

From nine acres, Mr. Fixter threshed 1,270 pounds of seed, and from another fifteen acres 1,506 pounds, making a total of 2,776 pounds from 29 acres. With clover selling at 20 cents per pound, which is a conservative estimate for good seed this season, the crop is worth \$555.20, or over \$23 per acre.

Mr. Fixter reports that the fields on which the clover was thin, and apparently scarcely worth cutting yielded the heaviest crops of seed. The nine-acre field only gave 4½ tons of second-cutting clover, but this yielded 141 pounds of seed per acre, while the fifteen-acre field gave over nineteen tons of second-cutting clover, but yielded only 100 pounds seed per acre.

Besides a paying crop of seed, these same fields produced a good crop of hay. The 65 acres under hay on the farm gave a total of nearly 203½ tons, or an average of 3½ tons per acre. This hay was cut in June. All of this, with the exception of fifteen acres, was new seeding, and from a part of this the seed was taken.

Mr. Fixter values the total profits from his hay crop as follows:

|   |            |
|---|------------|
| Amount in hay, 65 acres.  |            |
| 203½ tons of hay, at \$20 per ton .....   | \$2,035.00 |
| 23 tons 720 lbs. second cutting on 24 acres cut for seed, valued after threshing at \$5 per ton ..... | 116.80     |
| 2,776 lbs. of clover seed from 24 acres, at 20c. per pound .....                                      | 555.20     |
| Total .....   | \$2,707.00 |

This makes an average return of \$41.65 per acre, allowing nothing for pasture of 41 acres for three months.

Mr. Fixter says: "Farmers can improve the production of hay first, by adopting a very much shorter rotation of crops; second, by cutting the hay very much earlier in the season, thus giving time for a second crop the same year; third, by growing more clover, and especially growing it for seed; fourth, by plowing up the meadows when they have been down for two seasons; fifth, by sowing about twice the amount they generally do; and, sixth, by growing and sowing their own timothy seed."

### Water Glass for Cement-Concrete Surfaces.

Replying to an inquiry by "Farmer's Son" in a recent issue of "The Farmer's Advocate," re silage spoiling around the edge of a new cement-concrete silo, the Canada Cement Company write: First, that the continuous door of single boards is faulty, and should be made double; second, with regard to silage spoiling through the walls being too porous, sufficient water not having been used in construction, the treatment of the wall with a solution of water-glass (sodium silicate, 40 degrees, Baume) is recommended. This is based upon tests by a cement expert, Albert Moyer, originally made with great success to prevent the dusting of concrete floors. The solution coming in contact with the lime and other alkalies, hardened to what he called a "mineral glue." The floors which he treated covered about 14,000 square feet, and the cost amounted to about three-tenths of a cent per square foot, including all labor and materials. It has been recommended for water-proofing by the American Association of Portland cement manufacturers. In case of a silo that was filled, it could only be applied on the outside, but for silos in general it is recommended that the surface, both inside and outside, be treated. It protects the outside from weather, and prevents the absorption of moisture from the silage inside. One part water-glass to about five parts water, is used, the surface being first washed with water, then allowed to dry, and the mixture applied with an ordinary whitewash brush or wide paint brush. The surface is allowed to dry between four and twenty-four hours;

again wash with plain water, dry again, and apply a second coat. Three or four coats should make a perfectly impervious wall. In case of newly-constructed walls or of vats and tanks, after the forms are removed, smooth off with a soft brick or stone any projections on the surface. It is explained in the memorandum by the Cement Company, on this subject, that the water-glass which has penetrated the pores has come in contact with the alkalis in the cement and concrete, forming an insoluble, hard material to the depth of from one-eighth to one-half an inch on the surface, according to the density of the concrete. The excess sodium silicate which remains on the surface not having come in contact with the alkalis, is soluble and easily washed off with water. The reason for washing off and allowing the surface to dry is to obtain a more thorough penetration of the sodium silicate. The latter material is obtainable at drug stores.

**Bean Crop as Substitute for Fallow.**

Editor "The Farmer's Advocate":

For years farmers have been seeking a crop that is suitable for destroying weeds, as well as one which can be harvested early enough for sowing fall wheat. The summer-fallow, while it had many advantages, was unprofitable, as it necessitated having the land idle during the season. In addition to this, there was also considerable loss of nitrogen, due to washing from heavy rains. In South-western Ontario the bean crop has proved itself to have all the advantages of the fallow, besides increasing the amount of nitrogen in the soil. As the crop is not planted until June, the weeds have made considerable growth before that period, and many of them are killed during the preparation of the soil, especially the annuals. The perennials also receive a severe check. The crop requires frequent cultivation after planting, and this, with the rapid growth of the plants, either kills or smothers the remaining weeds, if cultivated properly. Harvesting is usually completed about the end of August or the first of September. The ground is left in a moist, mellow condition, and with several workings of the disk harrow or spring-tooth cultivator, is in excellent condition for sowing fall wheat.

**PREPARATION OF THE SOIL.**

Beans thrive on a great variety of soils, ranging from a sandy soil to a clay loam. Fair yields have been received from clay soils, but the close texture of clay soils restricts the growth of vine, and, while the plants are well podded for their size, yet the yield is usually very small. The bean plant being a nitrogen-gatherer, takes most of its nitrogen from the air, and for this reason the soil should be well drained and friable, allowing free circulation of air. The ground may be plowed in the fall or spring, but fall plowing usually gives the best results. If fall wheat is to follow beans, the land should receive a heavy coating of manure, as the manure increases the yield of beans, and is available for the fall wheat. As soon as plowed in the spring, the ground should be worked frequently to prevent loss of moisture and kill as many weeds as possible. By the first of June the ground should be thoroughly cultivated, leaving a fine, moist seed-bed.

**PLANTING.**

The crop is frost-tender, and must not be planted until all danger of frost is past. Planting is usually done between the first and the 20th of June. Some farmers use a bean-planter, but those who do not grow a large acreage usually employ the ordinary eleven-hose grain drill, planting three rows, 28 inches apart. The depth of planting depends largely on the soil. In sandy soils, two to three inches would not be too deep, but in heavier soils one to one and a half inches would be deep enough. The amount of seed sown per acre will depend on the size of the grain. Three pecks is plenty with small seed, and one bushel if large seed is sown.

**AFTER-CULTIVATION.**

As soon as the rows can be seen across the field, cultivation should begin. Many harrow the crop just as the plants are coming through. The harrow breaks a number of the plants, but if plenty of seed is sown, this is no serious objection, and, if a heavy rain has fallen after planting, the harrow loosens the crust and enables the plants to come through more quickly. The two-horse corn cultivator used on almost every farm does excellent work. No definite rules can be laid down as to how often the crop should be cultivated, as that will depend largely on the weather. If frequent showers occur, one cultivation every week will probably be enough, but if the season is dry, the crop cannot be cultivated too often. The important factors in the cultivation of this crop are to destroy weeds and conserve moisture. As soon as the crop is out in flower, cultivation should cease.

**HARVESTING.**

As soon as the pods are ripe, harvesting should begin. The plants are pulled by a bean-puller, which is made to fit the ordinary corn cultivator. The puller pulls two rows at a time, leaving both rows in one. The plants must now be shaken out. This may be done by hand with a fork, but many use the side-delivery hay rake. The side-delivery rake is much quicker, and saves a lot of hard labor. Two men with a side-delivery rake and puller will handle from five to seven acres daily. The crop must be thoroughly turned from time to time, until dry. It is then hauled to the barn and mowed.

**THRESHING.**

It is not considered wise to thresh for considerable time after mowing, as sweating takes place, and, if threshed at once, the beans are apt to heat in the bin. Bean-threshers are used for threshing. The grain-thresher splits quite a percentage of the beans, and for this reason is not satisfactory.

The yield per acre varies from fifteen to forty-five bushels, but thirty bushels is considered a good crop. The price of beans has been steadily increasing for the last few years, until, at the present, first-class beans are worth two dollars a bushel. Last year the yield was exceptionally large, both in Canada and the United States, yet, in spite of the fact that several thousand bushels were shipped into Canada from the States, farmers here received from \$1.60 to \$1.75 per bushel. Judging from the increased rise in price per bushel during the last few years, it would seem as though supply was scarcely meeting the demand. Then, again, when we consider that there are only certain areas suited to grow the crop, with the prospects of a larger population, it would seem as if prices would be even higher yet.

At present, bean-growing is confined largely to Essex, Kent and Elgin Counties, but, even although frost-tender, it would seem that this crop could be grown successfully on a much larger area than is now the case. In addition to the monetary returns from the crop, there is no better rotation for keeping a farm free of weeds and retaining the fertility of the soil, than the short, three-year rotation, beans, wheat and clover.

Elgin Co., Ont. A. A. McMILLAN.

**Top-dressing Wheat.**

Editor "The Farmer's Advocate":

I saw an article in a recent issue of "The Farmer's Advocate" regarding top-dressing wheat. I might say that I have had some experience in top-dressing wheat. I have found that top-dressing of wheat is an advantage in more ways than one. It protects the wheat from the sudden changes of winter, from freezing and thawing; it holds the snow, and is a protection also there. Usually we seed our fall wheat in the spring, and I have found that this top-dressing has prepared the soil so as to give the clover a far better stand than if it were not top-dressed. I would not dress too heavy. I find that long, strawy manure is preferable to heavy, well-rotted manure. The long straw seems to leave the ground in a more friable condition for the clover, thus insuring a better stand than heavier manure. This top-dressing was on clay hills and rolling land.

Haldimand Co., Ont. C. W. L.

**GARDEN & ORCHARD.**

**Pollination of Apple Trees.**

I am intending to set an apple orchard next spring, and would like to set all Northern Spy trees, but have been told that, where the Spy is set alone it doesn't do well, as its blossom hasn't pollen enough to thoroughly fertilize itself. Is there any ground for such a belief? If so, what apples would be likely to most fully overcome the difficulty? Would McIntosh Red be one of them? Would one such tree to three Spy trees be enough?

W. D. B.

Ans.—We can do no better than quote from Bulletin No. 37 of the Dominion Department of Agriculture, entitled, "Apple Culture," by W. T. Macoun:

"It is now known that the cause of the unproductiveness of some varieties of apples, when planted in large blocks by themselves, is often due to either complete or partial self-sterility of the blossoms. It has also been found that varieties self-sterile in themselves will, if planted near each other, be cross-fertilized, if the two varieties bloom at the same time, and fruit will set on both kinds. As it has been found that a variety which is self-sterile in one locality is not necessarily so in another, it is impossible to give an accurate or complete list of those which are self-sterile and those which fertilize themselves. The relative blossoming periods of the different varieties of apples, however, are fairly regular in the Provinces of Ontario and Quebec, and, by planting

these kinds which bloom about the same time, it is not absolutely necessary to know whether a variety is self-sterile or not. For five years, observations on the dates of blossoming of varieties of apples were made by persons in various parts of Canada for the Horticultural Division of the Central Experimental Farm. The data thus accumulated have been compiled, and it is now possible to give the following list of apples, divided into three groups, according to their average time of blossoming. While this division may not hold good in all parts of Canada, it will be found to be fairly correct on the whole.

Early Group.—Antonovka, Duchess, Early Harvest, Fameuse, Gravenstein, Gideon, Haas, Hurlbut, Longfield, Patten Greening, Red Astrachan, Scott Winter, Shiawassee, Tetofsky, Wagener, Scarlet Pippin—16 varieties.

Medium Group.—Alexander, Baldwin, Baxter, Ben Davis, Blenheim Pippin, Canada Baldwin, Esopus (Spitzenburg), Fallawater, Fall Jenetting, Gano, Golden Russet (American), Hubbardston, Jonathan, Keswick, King, McIntosh, McMahan, Magog, Maiden Blush, Malinda, Mann, Newton Pippin, Peach, Pewaukee, Pomme Grise, Primate, Louise, Greening, Roxbury, St. Lawrence, Salome, Stark, Swaar, Swayzie, Wealthy, Winter St. Lawrence, Wolf River, Yellow Transparent, Ontario, Ribston, Colvert, Brockville (Beauty)—42 varieties.

Late Group.—Blue Pearmain, Cranberry Pippin, Grimes, Lawyer, Northern Spy, Roseau, Tolman, Wallbridge, Westfield (Seek-no-Further), Yellow Bellflower—10 varieties."

In addition to this information, Mr. Macoun, in a letter to this office, writes: "I believe that the bloom of Gano, Ben Davis and Golden Russet apples would overlap Northern Spy sufficiently to pollenate them, but I should not recommend the planting of any of them, the two first being of inferior quality, and the latter being a shy bearer, but I have noticed that where the American Golden Russet is growing mixed with other varieties, it yields fairly well, and no doubt it requires pollination, as well as Spy.

"Of the varieties in the late group, the Cranberry Pippin, Grimes and Westfield Seek-no-Further are perhaps the best commercial varieties. Tolman, of course, is a good pollinizer for Spy, but can only be grown in limited quantities."

The McIntosh is in the medium group, and is, like the Spy, largely self-sterile, therefore it would not be suitable to pollenate the Spy. One such tree to three might be quite sufficient, but better results would likely follow if one were set to every two. A discussion of orchard planting has been going on in these columns in the past few issues. See these articles.

**Topical Fruit Notes.**

**VARIETIES OF GRAPES.**

Because of the high prices realized for grapes last season, there is going to be considerable new planting this coming spring, and it is in place now to consider the varieties most advisable to plant, as well as the conditions most suitable for successful grape culture.

The commercial growing of grapes in Canada is pretty well limited to the Niagara Peninsula, as, according to an Ontario Government estimate, 95 per cent. of the grape crop is produced in the counties of Lincoln, Welland and Wentworth. The native wild species are found scattered widely over the country, and are adapted to a great diversity of soils and conditions; but the cultivated varieties, which have been developed from these wild species, are influenced greatly by the climate, and hence their profitable culture is at present restricted to this one favored region.

Temperature is the main determining factor. The grape-vine cannot stand severe cold weather, and often on the more tender varieties, such as Niagara and Rogers hybrids, the wood, if not well ripened, will freeze back to a considerable extent. Some few years back, whole vineyards were destroyed by a sharp freeze which struck the Niagara district when there was no snow covering on the ground. On the other hand, to ripen the crop satisfactorily, we must have a comparatively hot, dry summer, with plenty of sunshine.

Little rainfall is required—less than for any of our other farm fruits—and a small amount of moisture in the soil will suffice. Too much moisture in the soil and humidity in the atmosphere is favorable to the development of black rot and downy mildew, the only two fungous diseases that threaten our vineyards to any extent.

Soil is usually a secondary consideration, for, if it is not considered suitable for other fruits—well, set it out with grapes. However, grapes will respond to good soil conditions just the same as other fruits, and will probably do best on a friable loam. A heavy, compact clay produces little wood-growth, but supplies good quality and early ripening. Grapes grown on sand lack in quality with us, and some varieties, such as the Vergennes, ripen poorly. A very rich soil will

produce too much wood, at the expense of fruit. It is necessary, then, to choose varieties that are most suitable for the soil on which one wishes to plant, and this adaptability will be noted in the following few varieties which are of greatest commercial importance with us:

The Concord is the most widely grown. It is a blue grape, productive, vigorous, and will do well on a variety of soils. It is very hardy, ripens fairly early, and is not subject to fungous disease. Although a poor shipper and keeper, it is sent to the West and Maritime Provinces in carloads, and thus becomes the grape for the multitude. Twelve to sixteen pounds per vine is a fair crop, and 24 pounds a large crop.

The Niagara is a close second to the Concord in extent of planting. It is a green grape, vigorous and productive, but lacks in hardiness, as the canes often freeze back in winter. In protected areas, however, it will survive ten degrees below zero. Its quality is very good, if allowed to thoroughly ripen before being picked. Like the Concord, it is only a fair shipper and keeper, as it is likely to shell badly if stored for any length of time. Does best on a rich loam.

The Agawam, or Rogers' hybrid No. 15, is the most widely grown red grape. It is vigorous, fairly productive, and with us quite as hardy as the Niagara. The bunch is large, and the berries of an attractive appearance and fine flavor. Its shipping and keeping qualities are excellent. Like other Rogers' hybrids, it is subject to mildew, and consequently should not be planted on low, moist ground. Unlike other Rogers hybrids of commercial importance, it is self-fertile.

The Lindley, or Rogers' hybrid No. 9, is a very excellent grape, of first-class keeping and eating quality. It is a rank grower, but, unfortunately, is self-sterile, and on this account is usually not productive enough to warrant extensive planting. If interplanted with Niagaras, we find it does very well.

The Herbert, the Barry, and Wilder, respectively, Rogers' hybrids Nos. 44, 43 and 4, are most commonly known as Black Rogers, and for eating and keeping quality are easily in the first rank. They are in great demand for the Northwest market, and should never be left out of any vineyard that aims at variety. The vines are vigorous and productive, and do well in this district, especially on a rich, friable loam.

The Warden and Moore's Early are two early varieties of grapes that should be considered when planting. In quality, they are superior to the Concord, but in most respects resemble that standard grape, being equally as vigorous and productive. Coming early, they, as a rule, command a better price.

The Delaware is a handsome little red grape of excellent table quality. Although the price is usually double that of Concord, the demand is limited, and it should be planted sparingly. It requires a deep, rich, warm soil, and careful attention, although very hardy.

Vergennes and Catawbas are late red grapes. They are productive and hardy. The former is a rank grower, and often produces four splendid bunches to a cane. For keeping and shipping, they can't be beaten. Choosing between the two, I would much prefer the Vergennes.

From these few varieties a fruit-grower has sufficient choice for any commercial vineyard in the Niagara Peninsula or similarly-favored regions. There are a few other varieties with good points, but they are of very minor importance to these named.

W. R. D.  
Wentworth Co., Ont.

## THE FARM BULLETIN.

### Skating.

By Peter McArthur.

A few nights ago the boys were testing their Christmas skates, and the familiar ringing sound seemed good in the frosty moonlight. And yet it was sporting under difficulties. All the ice they had to practice on was a frozen puddle about three rods long and a rod wide. As a matter of fact, skating, like everything else, has moved to town. I can remember when we had whole fields for skating ponds, but that was before the days of government drains and underdrainage. Now there are very few ponds or swamps left, and skating is no longer a country sport, except in specially-favored localities. But every town, and practically every village has its skating rink, where they hold carnivals on the solid ice in the winter time, and political meetings in the summer, when statesmen skate on thin ice. Of course, I am not regretting the fact that the country is too well drained for skating. I am merely noting the fact that this change has taken place, and I am afraid that skating is not the only sport that is lost to us. Baseball also seems to have retreated to the cities and towns, and hockey has taken the place of shinny, and is played almost entirely on the town rinks. But there may be another

reason for this. Where could a boy find a shinny stick nowadays? The average wood-lot in which cattle have been pasturing hasn't a stick left in it that is under thirty or forty years old. It is getting rather hard for country boys and girls to have fun of any kind without going to town for it and paying an admission fee. This may not seem of much importance to serious-minded people, but I am inclined to think it is very important. Most of us like to remember the homes of our childhood by the games we played in them, and to have no games is to have fewer ties binding the children to the land. I am afraid the country is getting altogether too practical and joyless. In the big cities they now have "play-masters," who teach the children how to play in the parks and vacant lots, and it has been found that they work better and behave better because of the good times they have. It seems to me that something should be done in the schools to interest the children in suitable sports that will take the place of those that made life richer for their fathers and mothers.

\* \* \*

Apart from the pleasure it gives children, I am sorry that skating has so largely passed from the country, for an entirely different reason. I have been noticing that country people are becoming very dignified, and am inclined to think it is partly because they have given up skating. You may not be able to see the connection at once, but wait a minute. It is really wonderful how much one can find in even the most trivial subject, if he is lazy enough to sit down and think it out carefully. First, let us consider what dignity is. I know the dictionaries give high-toned definitions of it, but I do not propose to be dominated over by a dictionary. It was a man-made institution. You can't claim inspiration for it, and when I am in the humor I make up my own definitions. At the present time, this is the definition of "Dignity" that I am using:

DIGNITY: A stiffening of the physical, mental and moral joints which usually attacks people after they have become prosperous.

Now, take a square look at any dignified man of your acquaintance. Does he use the joints in his neck or backbone? Not if he can help it. When he stalks across a room in his dignified way, he uses only the joints in his hips, and if you try to shake hands with him, he will raise his arm from the shoulder, and you will find that the job is much like priming an old-fashioned wooden pump after the plunger has started to suck air. Try to have a talk with such a man, and you will find that his mental joints all creak if you try to get him to grapple with a live idea. Morally, he is the same. He has a few narrow, stiff principles that he applies on all occasions with pitiless severity. And, with all his dignity he is simply a hollow sham. I confess that dignified people irritate me about as much as they did Douglas Jerrold, the editor of Punch. One of these dignified absurdities used to pass Jerrold's office every morning, until he got on the editor's nerves. At last, when the matter got beyond endurance, Jerrold rushed out, stopped the dignified person, and asked eagerly:

"Excuse me, sir, but are you anybody in particular?"

Another story that gives me much satisfaction is told of Henry Ward Beecher. Once, when he was taking part in some games with the young people of his congregation, a pompous party asked if he was not afraid he would suffer loss of dignity by such conduct.

"I have noticed," said the great preacher, suavely, "that the people who are most careful of their dignity seldom have any that is worth being careful about."

Now to get to the point, I have noticed that few people can even pretend to be dignified when skating. They may be graceful and charming, but they are forced to use their joints. Sometimes they are forced to use them very much, indeed. They may be skimming along with almost a touch of dignity, when they strike a twig or a crack in the ice. Then you see them poise for a moment on the heel point of one skate, swing the other foot wildly around the horizon, clutch convulsively at the air with mittened hands, and hit the ice violently with one ear. When they scramble to their feet again they may have sinful tempers, but they will not have a trace of dignity. When a man loses his balance he invariably loses his dignity at the same time. It would be a good thing if a great many people could lose the kind of dignity they are now using. That is why I am sorry that skating, as a country sport, has passed out.

\* \* \*

I feel that I am now really back on the land and initiated into the mysteries of the country. This week I had a country hair-cut, and am doing as well as could be expected. There was no escape from it. I couldn't get to town, and I was getting afraid that people would think that hair is the only thing I know how to raise on a

farm. And, talking of hair, it beats alfalfa all hollow; at least, it does in favorable localities. Of course, there are some people who have alkali spots in their scalps, and others whose scalps are lacking in humus. The hair they raise is usually straggling and uncertain, but with me it is different. Since I started raising hair, I must have produced enough to stuff half a dozen mattresses, but I never took care of it. I was always improvident. I have left hair scattered over two continents and several islands, but it is too late to grieve about it now. Anyway, I am still raising more than I have any need for, and, as I was saying, I took advantage of the fine weather last week to have it harvested. It was up to me to do this, for I have been cutting hair myself on rainy afternoons for almost a year. It was time for me to take some of my own treatment. Cutting hair is really quite an art, but it isn't like any other art I know of. If you happen to plow too deep on any spot, you can't plaster the stuff back. The only way to right matters is to cut all the rest of the hair as short as the bottom of your first furrow, and few people look natty with their scalp showing through their bristles. I find that shallow furrows are preferred by most people. I noticed that the first men whose hair I cut kept their hats on as much as possible when they appeared in public, and, when obliged to uncover looked gloomy and defiant, and ready to hit anyone who made remarks. The hair-cut I got is cited enough to pass if I am careful to sit so that the light falls on it right. It was perhaps a mistake to have it cut city fashion, when there are so many styles that especially belong to the country. But I couldn't summon up the courage to have it cut by the good old method of having a bowl put on the top of my head, and then trimming to the edges. As a boy, I used to wear my hair trimmed so that the collar of my coat made it turn up like a duck's tail, but I felt that I have outgrown that. At least, I have outgrown it in years, if not in spirit. And I can't say that I care much for the cascade form of wearing the hair, by which it flows out over a man's collar, and scatters dandruff half way down his back. As I examine the haircut I am now wearing, I find that it is neither cited nor countrified, but sort of half and between. But it is a start in the direction, and before long I may be able to wear my hair just like other people.

\* \* \*

### A COUNTRY BOY IN TOWN.

Come, be your happy self, you little rogue:  
You cannot hide your honest country birth,  
Nor seem a city gamin for a day.  
The hard, stone pavement is not yielding sod,  
And your uncertain, shuffling gait tells tales  
Of rambles over pasture fields. That coat  
Shows less of tailor's art than mother's care—  
Stout homespun, liberally cut, with room  
For healthy growth, and hard-sewn, knotted seams  
That would defy the hottest, heaviest goose  
To tame them to your form. Those sun-burned  
cheeks,  
Those sturdy arms, those ever-wondering eyes,  
And stoutest, strangest, surest proof of all,  
Those rough-cut locks, that wake a dream of shears,  
Of tears, rebellion, and protesting howls,  
Proclaim you rustic every inch. I know  
That wide, full window of dyspeptic sweets  
Has won your heart. Come, turn your pockets out,  
And with long-hoarded pennies buy a feast  
To dream and talk of till you come again.  
Heed neither smiles nor jeers, but munch at ease,  
And many a wealthy, careworn, busy slave  
Will envy you your simple, full delight.

[Note.—This poem was published by Mr. McArthur in the Youth's Companion a few years ago, and is reprinted here because it fits in neatly with the hair-cut talk.—Editor.]

### My Most Profitable Mistake.

#### SECOND-PRIZE ESSAY.

Seventeen years ago times were dull and prices for farm products low. Good young horses sold as low as fifty dollars, and feed in proportion. I was working on a farm as hired man, but prospects looked dull for getting a home in that line, so concluded to leave the farm. To spend life as a hireling did not satisfy me, so I began to consider at what trade I could start in with small capital and be my own boss. Most of the trades take you away from home more or less, so I decided to learn blacksmithing, which would not take me away from the little girl I hoped to make my wife. It did not; we were home just eleven years; we were doing a good business, kept a helper, and was supposed to be doing well. I was meeting all bills for stock and paid as I went, never spending money but for actual necessities. My family was now four children, and I could save very little, and was saving less as the family grew. Children in town cannot help in the least till they are about fourteen; the bread-earner has to carry them all.

After careful consideration, we decided to go

back on the farm. We sold out, and had five hundred dollars for eleven years of the hardest kind of toil. We rented a farm, bought a cheap work team, some cows, hens and a sow with the money; also some seed grain and feed, and some machinery on credit, and started in to make both ends meet, and have succeeded thus far. It is getting easier every year, as the children are doing countless chores that help support them. We started with common cows, but now have some good grade Holsteins. From a blocky mare we now have two nice Clydesdale mares, a family driver and a worker. From a mongrel flock of hens we now have eighty fine Barred Rocks. We also have a flock of good grade Shropshire sheep. After six years of farming, I am safe in saying a sale would net me eighteen hundred dollars, and I owe only one hundred dollars.

My mistake was in ever leaving the farm. My profit and contentment commenced as soon as I got a chance to get back, but I had experienced a considerable loss in money, and the best years of my life were gone. My experience will not be everyone's; some will make more, and some less. Most young men would stay on the farm if they could see as much money to be made as in other callings. It is a home they want. Before you move, try this plan: Go to the town you are thinking of living in, find the house such as you would desire, ascertain the rent, taxes, fuel, light, water rates, and all other expenses you will have to meet, then for one week keep account of all meat, bread, milk—in fact, everything to salt—at the retail price, and compare the cost of these with the wage you are to get, and you will see what you can make or lose if you work every day. If you are sick, the hens and cows do not furnish your table, nor do your crops grow in value—everything rests on your shoulders. When you stop, all the income stops, but your outgo does not. If you knew what some of the business men were worth, it might start you thinking the farm was all right. GEO. V. ANDERSON.  
Norfolk Co., Ont.

### My Most Profitable Mistake.

THIRD-PRIZE ESSAY.

"What is a failure? It's only a spur  
To a man who receives it right,  
And it makes the spirit within him stir  
To go in once more and fight.  
If you never have failed, it's an even guess  
You never have won a high success."—[Cooke.]

Three years ago, my poultry flock consisted of about sixty hens, some Barred Plymouth Rocks, some White Leghorns, and crosses of both breeds. Poultry-raising, as a side-line in my farming had received but little attention, so now, with the "rush" of summer work over, I determined that the hens should have their share of tending.

During the summer they had laid only an average number of eggs. The principal achievement of the Leghorns seemed to be the thoroughness with which they scratched up the kitchen garden; the Barred Rocks were the most persistent sitters I ever saw, and the crosses, of Leghorn build and Barred Rock plumage had characteristics of both breeds. Now that winter was approaching, I decided that those hens should atone for their laziness in summer, and give golden returns for the care they would receive.

With that idea in mind, I plastered up the chinks in the poultry house, made new and inviting nests, more roosting places and more feed troughs. I gave the fowl all the corn and oats they would eat, an occasional dish of cold water, and kept the doors and windows closed to exclude cold air. It is true I did not clean the poultry house as often as some might think necessary, but I quieted my conscience on that score by reflecting that hens were rather more fond of filth than otherwise, a manure heap being their favorite scratching place. They were warmly housed and well fed, and what more could an ordinary hen ask?

I fairly hugged myself as I thought of the large profits those eggs would bring. I even bargained with a city dealer, who promised me the highest prices for all the eggs I could muster.

But alas for my plans! The winter days slipped quickly by, and not a single egg did those hens lay. I fussed and fumed, and threatened to break their necks, but not till the middle of March, when a few mild days enabled them to scratch in the barnyard, did they condescend to begin laying. Six or seven eggs a day, with some of the shells painfully soft, was rather an unpromising beginning.

One day I noticed a Leghorn running with a piece of egg in her mouth, and a dozen hens in hot pursuit. It was but the beginning of a long struggle between the egg-eating hens and myself, and the egg basket filled but slowly. I tried the Cayenne pepper and vinegar plan, but the hens, shaking their heads for a minute after the first taste, gobbled the make-believe eggs as greedily and hungrily as though they had not during the

winter emptied the corn-crib and made a ghastly hole in the oat bin. The only satisfaction I had was that of knowing they must have had a very hot time inside for a while.

In the brooding season I lost more than two hundred eggs as the result of mites—tiny insects that can inflict more torture in one-half hour than any other thing fifty times their size. I testify this, as I have had personal contact with the little pests. Two or three of the brooding hens died, several more left their nests, and those that stayed with the game till the chicks were hatched were in a poverty-stricken condition. The chicks, surrounded by vermin from birth, were small and unhealthy, many of them surviving only a few days.

Though thoroughly disgusted with the whole business, a vague idea far back in my brain kept telling me that the hens had not been all to blame. Perhaps, if I had read the "Poultry Notes" in "The Farmer's Advocate" as diligently as the other live-stock columns, my poultry record would have had a different showing.

I gathered a great many much-needed lessons from that season's failure. I learned that a hen must have fresh air and active exercise to be in a healthy condition. She must have variety in food and plenty of clean drinking water. Over-fat hens produce soft-shelled eggs, and egg-eating hens are the result. Filthy quarters are ideal conditions for breeding hen-lice and mites.

Prescott Co., Ont.

THOS. KERR.

### South Perth Notes.

We had spring-like weather throughout December, and if it continues much longer it will have a marked effect on the amount of feed consumed by the wintering stock, and probably most farmers will welcome it, because, in addition to light supplies, many report the quality as below the average. Hay and oats disappear more rapidly than usual, while many of the turnips and mangels are undersized, though corn and straw are up to the average, the latter being generally well saved. Apples are not keeping well, probably owing to the warm season, but some attribute it to immaturity. There are probably fewer cattle being fed in this district this winter, though they could be bought for about a cent a pound less than a year ago. Too many got fooled last year to induce a repetition of the same conditions. Scarcity of feed didn't seem to affect stock sales very much, horses especially holding up well. The demand from the cities and improved railway rates are inducing dairymen to ship their milk and cream, which is greatly detrimental to the cheese and butter factories. There is money in producing milk, beef and eggs, if there is anything to produce it with. The West has been an injury to us in the past, and could now repay us if someone could devise a cheaper method of transportation. If dry seasons continue, Ontario, like Denmark, will become an importer of raw material for producing milk, beef, eggs, poultry and pork, as we have the buildings and help in winter. If Old Ontario wishes to hold its own, it will have to adopt this system or make a success of artificial fertilizers. Fall wheat made a grand showing this fall, though the acreage put in was less than usual. J. H. B.

### Essex County Notes.

We have had a very backward fall, one of the wettest in years, but work has been pretty well advanced. There are some fields of corn standing out of doors yet. Handling the tobacco crop has been keeping most of the farmers in the southern part of Essex busy. Some idea of the amount of tobacco grown can be realized by the amount taken in at Cottam one day lately. Over 130 loads were in by noon, and a large share of the people had from \$300 to \$500 worth on each load. Farmers and stock-breeders took great interest in the stock-judging convention or short course in the town of Essex on January 3rd, 4th and 5th. J. W. S.

### Auto Wagon for Gathering Cream.

C. E. Lister, proprietor of the Maple City Creamery, Chatham, who has been gathering cream and eggs for ten years, having found horses slow and expensive for the work, especially in the very hot weather when roads are dusty, sold some of his horses last spring, and used two auto wagons during the past season. Mr. Lister writes us that he found that one auto wagon would cover two routes a day at about one-half the expense, and bring the cream to the creamery in a much better condition, being several degrees cooler, with the cans always free from dust.

The annual convention of the Nova Scotia Farmers' Association will be held at Yarmouth, N. S., January 23rd, 24th and 25th, 1912.

### Eastern Ontario Dairymen's Convention.

Enthusiasm and business ability was, as is always the case in these meetings, manifest in the thirty-fifth annual convention of the Eastern Dairymen's Association, held at Campbellford, January 3rd to 5th. In 1911 a record crowd was assembled at Perth for this event, and while this year's meeting place was not quite so conveniently situated, the crowds filled the large music hall at nearly every session, and the capacity of the building was especially taxed at the evening meetings. Eastern Ontario is perhaps the district of the Dominion which can boast of the most extensive specialized dairying. Unlike other districts in which beef-raising, fruit farming and general agriculture are carried on in conjunction with dairying, nearly all that large area in the eastern portion of the Province is devoted agriculturally almost exclusively to the production and manufacture of dairy products, and a large proportion of this business is the production of cheese. While the attendance was large and the interest keen, as shown by the lively discussions, the largest percentage of those present were representatives of the manufacturing end of the business. A larger number of dairy farmers should avail themselves of all such opportunities of learning more about their business. The producers' end of dairying is most important, and many valuable points are brought out in discussion, which cannot but increase the returns of the producer who has courage to apply the new principles in his work of milk production.

The record prices of the past summer served to strengthen the milk producers and cheesemakers' faith in dairying, but these prices were largely due to the unfavorable season in many districts of our own and other countries, and it is still imperative that more attention be paid to the quality of the output.

The summer silo came in for considerable discussion, and without a dissenting voice the convention believed in its general adoption to tide cattle over the dry weather and consequent period of short pasture in summer. Every dairy farm should have such a building, in addition to the one which should be there for winter use. The corn crop, by the discussion, is looked upon as the most important crop to the dairyman.

Crop production an essential adjunct to the dairy business was a theme which brought out considerable discussion. To make the most of dairy farming, as much of the feed as possible must be grown on the farm. To do this best rotation of crops is necessary, and the best rotation for dairy farmers is a three or four year rotation, with an abundant use of clover, and in some cases the use of soiling crops besides, and in all cases the growing of plenty of corn.

A point made was that the average farmer in seeding down his land does not sow enough seed, and a heavier seeding is recommended.

Underdrainage has proven to be an essential to the best farming, and as dairying requires the growing of crops and underdrainage increases yields, many of the dairy farmers would be benefited by the practice.

The outlook for the dairy business is very promising, but it was pointed out that the competition is sure to be keen in the Old Country markets, owing to the rapid advancement of cheese and buttermaking in Australia and New Zealand, the two countries which, with Denmark, are our greatest rivals for the trade of the United Kingdom. We must strive to produce a higher quality of dairy products in order to hold the trade, and greater care must be taken in the handling of the milk.

The importance of cooling the cream on the farm was brought clearly before the meeting. It was pointed out that cream cannot be kept sweet in cellars for 36 hours, and water at a temperature of 48 degrees is not cold enough to keep it sweet for delivery twice a week. Pasteurizing has been found to improve the flavor and keeping quality. Cleanliness and low temperatures are the two greatest essentials to fine flavored and good keeping qualities.

In the production of cheese it was shown that to assist the tendency to a lower yield the milk should be delivered in a sweet and pure condition, and be kept at a low temperature, and better care of milk was one of the points most strongly urged by the convention.

The method of buying cheese and the amount of shrinkage reported in shipping to Montreal brought forth a lively discussion. Some of those present complained of too much shrinkage in weight in transit to Montreal, and thought that the weight at place of shipment should be the basis of payment. The Campbellford board practice this latter, and it gives good results. Some complained that when the price was low the shrinkage was greater, thus casting a reflection on the official weigh master at Montreal, but others vindicated him by stating that no difference was shown in the shrinkage no matter what the price, and the loss in weight was due to shipping green cheese, a practice which the meeting thought should be discouraged, as it was injuring the market. A green cheese cannot but lose

weight, and will not arrive in as good condition as a well-cured one.

A. A. MacKergow, of the Montreal Board of Trade, urged that stronger and more uniform boxes be used for the cheese, and out of this grew a discussion as to the advisability of replacing the broken boxes with new ones at Montreal, in order to put the cheese on the British market in the most attractive condition. Too many roped cheese cannot but detract from the appearance of the shipment.

Greater efforts must be put forth to produce what the buyers in the Old Land want, and to impress this upon the minds of the makers.

G. G. Publow had on exhibition three Old Country cheese which he brought back with him from that land this year. He urged that a small uniform cheese of better texture be produced. Care in salting, better care of the milk and avoiding shipping too green he thought would accomplish this.

#### PRESIDENT'S ADDRESS.

Henry Glendinning, President of the Association, welcomed those present to the thirty-fifth annual convention in the village of Campbellford, which, on account of its excellent power facilities, he designated the second Niagara of Canada. Mr. Glendinning, in reviewing the dairy conditions of the past year, referred to them as "sectional," on account of the different weather conditions existing in the eastern and western portions of the Province. West of Belleville clover pastures, hay and grain suffered greatly from heat and drouth, and as a result were short crops, while in the eastern portion of the Province these crops were very good. This had a material effect upon the dairy business. A smaller amount of milk was given by the cows than usual, owing to the unfavorable weather conditions, and one of the lessons learned from this season was that a plentiful supply of water, and feed to supplement the pastures in peas, oats, clovers, alfalfa or silage is absolutely necessary to highest production and profits.

During the months of November and December a series of district dairy meetings were held in each county in Eastern Ontario. These were well attended, and were held with a view to giving the dairymen of all sections a voice in who should represent them as a director on the Board of the Association. These meetings had proved decidedly successful, and were a help to the industry.

G. G. Publow, Chief Dairy Instructor for Eastern Ontario, was sent to the United Kingdom during the past summer to investigate conditions there, with a view to improving the outlook for Canadian dairy products on the British market.

Speaking of the quality and amount of dairy products shipped, Mr. Glendinning said that while larger quantities have been exported, we must remember that our home market is consuming the greater portion of the products, only about twenty-five per cent. being exported. He pointed out that during the eleven months, ending Nov. 30th, 1911, 1,659,261 boxes of cheese, valued at \$18,087,450.70 were exported, and during the same time 134,500 boxes of butter, valued at \$1,732,360, left the country, being an increase of \$1,395,607 worth over last year to leave by the St. Lawrence route.

He had faith in the dairy business, and while our home market is increasing rapidly, and the public are coming more and more to realize its value, the competition is very keen in the Old Land, and the very best product possible should be the aim of all those in the business. It was encouraging to note that cheese had made the record price of 15 cents per pound on the cheese boards during the past year, but greater efforts were necessary in the production of a really high-class product. He urged that more interest be taken in cow testing, and impressed upon the meeting the value of thoroughness in all departments of the dairy industry.

#### SILOS AND THOROUGH CULTIVATION ESSENTIAL.

Senator D. Derbyshire, of Brockville, stated that there were during 1911 68,727 less cheese produced in Canada than in 1910. This, he said, was due to the unfavorable season, yet he firmly believed that corn in summer silos would have more than overcome the shrinkage. Everyone should grow corn, the cheapest and best feed to tide cattle over the hot weather. Better work should be done year after year. While the amount produced showed a falling off the past year, there was an increased return of \$1,311,147 from dairy products sold. More dairy goods were consumed in Canada than ever before. The year 1911 was a great year for the business, because a much better quality of the output was noticed. The district meetings were having a good effect upon the dairying, and much good could not help but follow the sending of Mr. Publow to the home land, but still more interest should be taken in the work. There were 134,500 boxes of butter shipped in 1911, and this brought \$1,395,607 more money than the butter shipped in 1910. The total value of dairy products manufactured in Canada in 1911 was 105 millions of dollars.

In speaking of increasing the production, the

Senator emphasized good soil tillage, underdrainage and crop rotation. Plow two or three times after harvest in place of once. Thorough cultivation will ensure better crops and more feed for the cows, production would increase and a better product would result. Every patron after doing this should have the interest of his factory at heart, and put forth his best endeavor to make it the best factory in his locality. Where possible use full-blooded dairy cattle, and pay regular attention to milking, feeding, watering, salting (salt individually) and general care. He stated that the water needed far more attention than was given it, and that the water on over half the farms in Ontario is contaminated. If it is not fit for human use it is not fit for the cows. Look after the little things, concluded the speaker, and "soak" the man who turns out poor goods.

The general discussion which followed brought out many good points, and several speakers emphasized the need for more care in producing summer feed for the cows. Dry weather is certain nearly every summer, and a summer silo stood in favor with the speakers. The year had been quite uneventful, and everything was running smoothly. Several of the speakers urged that cooling of milk be more thoroughly done, believing that a higher quality product would undoubtedly result.

J. McGregor, of Glengarry, spoke of the work in his district as progressing favorably, as shown by two sales of dairy cows held in his county in 1911, one of which netted \$13,000, and the other \$18,000. He believed in good stock, and urged that all patrons should attend the meetings.

J. R. Dargavel, M.P.P. for Leeds, reviewed the progress noticed during the past 20 years up to the present sanitary inspection and practical control of factories. Improvement started in the factories, which he thought was the proper place, but the instructor should now devote more time to the place where the milk is produced. Millions of money, he said, are lost to-day because all the milk is not as good as the best.

A resolution of sympathy with the family of the late James Whitton was passed by the Association; also one of regret at the retiring of M. K. Everetts from active work in connection with the association.

Another resolution, that the convention ask the Government to appoint more instructors to look after the work on the farms, and that the salary of these men be increased to \$1,500 per annum, was carried after it had been pointed out that the expenses of these men left them a very small amount at the end of the season on the present salary of \$1,000.

#### CROP PRODUCTION AND DAIRY FARMING.

Crop production was the topic handled by J. H. Grisdale, Director of Experimental Farms. Every farmer, said Mr. Grisdale, is interested in crop production. It is his first aim. It is necessary that each farmer produce the kind of crop that is best suited to his conditions and the line of farming he follows.

#### CROPS TO PRODUCE.

There are many crops suitable to dairying. Good grass land is essential, and succulent feed for winter, such as corn and roots, is necessary. A variety of nitrogenous grain and meal is needed, and all must be grown cheaply. All farmers can grow some kind of a crop, but skill is required to produce these crops at minimum cost. Corn, clover and grain are three of the essential crops for the dairy farm, and in these days of scarcity of labor they must be arranged so as to require the least possible amount of this costly commodity. A rotation is necessary, and this, coupled with good cultivation, will not only decrease the labor, but it will increase the yield two and even three fold.

In 1910 the average farm in Canada, considering all crops, produced \$15.50 return per acre, at a cost of \$9.60, leaving a net profit of \$5.90. At the Experimental Farm, Ottawa, under the same conditions of labor and the same kind of crops, each acre yielded \$43.00, at a cost of \$12.00, or a net profit of \$31.00. It is seen from this that a slightly increased cost of labor very materially raised the net income. Practically all feed used was produced by the farm. This, the speaker believed, to be the proper method, and any farmer can do it.

In dairy districts where outside pasture—that is, pasture other than the arable land—is available, Mr. Grisdale recommended a three-year rotation, as follows: Corn sown early in rows, 3½ to 4 feet apart, and 8 to 10 inches apart in the rows; this to be followed by oats, or a mixture of oats, peas and barley, and the land seeded down with 6 to 8 pounds of red clover, timothy and alfalfa, and 2 lbs. of alsike per acre. This heavy seeding, he said, is infinitely cheaper than sowing 4 to 8 pounds of red clover and timothy as is commonly done. More hay results, it is easier digested by the stock, and makes more milk of a better quality. Any one of these items will more than pay for the increased amount of seed, and the crop of grain is not injured. When it is necessary to pasture, the land can be left in

grass two years. This will produce more roughage than any other rotation, where pasturing is necessary.

Where more grain is necessary for feed, pasture land can be plowed shallow early in the fall, and ridged in October, sowed the second year to peas and oats, and the third year to corn. This is the only good rotation where corn is used to follow a cereal. After the corn, seed down as before mentioned. Rotations facilitate all farming operations, and increase the producing power of the soil 50 to 60 and often 100 per cent., which has been proven by experiments. The introduction of a rotation into which clover enters every two or three years is the first step toward heavier yields, said Mr. Grisdale.

In accomplishing the farm work, Mr. Grisdale urged that all open ditches and all unnecessary fences be done away with. He also emphasized the value of using wide implements, two-furrowed plows and wide-cut harvesting machinery in the economy of production. The hired man demands good wages, but he can be kept profitably by the use of these wide implements and machines in large fields free from obstruction.

#### UNDERDRAINAGE AND DAIRYING.

Prof. W. H. Day, of the O.A.C., in opening his illustrated address on tile drainage, stated that dairying, like all other branches of agriculture, is based upon the soil, thus the water content of the soil is of extreme importance to the dairy industry. Poor results are bound to follow if the water supply is over-abundant or insufficient, with the same amount of labor and capital. He produced several slides, showing excellent crops of corn, oats, peas, wheat and barley growing on land which previous to underdraining produced from a half crop to nothing. Cases were cited where crops of wheat of from 15 to 30 bushels per acre were grown on soil which had never before produced anything. This was due entirely to underdrainage, and as wheat that particular year sold for \$1.00 per bushel, and the entire cost of this drainage was only \$17.50 per acre, it is readily seen that it was a good investment. Barley has yielded 15 bushels more per acre on drained than on undrained land; oats, 19 bushels; peas, 10 bushels; hay, 2 to 3 tons; and the time of sowing has been about a month earlier on the drained soil. The average increase in the value of the crops on drained soil from reports sent in during 1909 and 1910 was \$23.00 per acre, with an average cost to drain of about \$25 per acre.

The tile, stone and timber drainage act of 1887 allows farmers to borrow money from their municipality at 4 per cent. interest for 20 years. At \$25 per acre, \$100 will drain four acres. At 4 per cent. for 20 years the annual payment on \$100 would be \$7.36, or \$1.84 per acre. Comparing this with the increased yearly value of the land already stated, it is easy to see the profits which result.

Underdrainage makes clay land suitable for peach-growing, said Prof. Day. It doubles crops by making the land ready to work from three to four weeks earlier in spring, which would, he knew, be a very valuable consideration in Eastern Ontario. It improves the physical condition of the soil, aerates and ventilates it, which is essential to the best growth of plant roots. It aids in holding water available to plants, which is important, as it must be stored, because less than half the required amount of moisture falls in the form of rain during the growing season. Evaporation is cut off earlier, and more root space is available. The soil is warmed, and desirable bacteria flourish. Prof. Day showed by excellent slides the approved method of taking the levels and digging the ditch to a determined grade. He also discussed the value and use of the traction ditcher, and much interest was shown, many inquiring how to get the surveyors from the College, who, by the way, surveyed in 1906 500 acres; 1907, 3,500 acres; 1908, 5,000 acres; 1909, 5,157 acres; 1910, 14,672 acres, and in 1911, 15,200 acres, which shows the great demand and faith in the work, which has increased beyond the capacity of the usual staff, and a double allowance is being asked for next year.

#### IMPORTANT POINTS IN CARING FOR AND RIPENING CREAM.

Geo. H. Barr, of the Dairy Commission staff, Ottawa, showed, from the results of experiments carried on by the Department, that this was one of the most important phases of the dairy business. From the experiments, it was found that cream could not be kept sweet in collars for 36 hours, and if left uncovered it had a strong flavor. Well water at 48 degrees, and changing it nightly, would not keep cream sweet for delivery twice per week. When cream was cooled to 55 degrees soon after skimming, it kept perfectly sweet for 36 hours, or for delivery every other day. Ice must be used to keep cream cool for 84 hours, or for delivery twice per week a temperature of 48 degrees is necessary.

It was found that butter made from cream delivered in good condition, and allowed to ripen naturally at the creamery, soon deteriorated. This is characteristic of a large percentage of the butter made from gathered cream. Experiments were

carried on in pasteurizing, cooling and ripening. The pasteurizing temperature used was 150 degrees for 20 minutes, after which the cream was cooled as quickly as possible. Where starters were used, 10 per cent. was the amount. The butter was made, and afterwards carefully scored, and in every case that from the raw cream scored the lowest. In no case did the raw cream, with starter, score as high as the lots of pasteurized cream. Little difference was found in churning the cream on one or two days after delivery. The sweeter cream scored slightly higher in every case, but the difference in acidity at time of delivery has little effect on the flavor of the butter.

From the experiments it was learned that there is a decided advantage in pasteurizing tainted or sour cream, and a further advantage in using a starter in pasteurized cream. The pasteurized butter scored over two points higher at the same time than did the raw-cream butter.

In eighteen churnings each of cream without starter, and cream with 10 per cent. starter added, there was practically no difference in the yield of butter. In the same number of churnings of pasteurized and unpasteurized cream, the loss in pasteurizing was .78 per cent. In nine churnings each of pasteurized cream with and without starter, the loss in the lots with 10 per cent. starter added was 1.04 per cent. In four churnings each of pasteurized sweet and sour cream (.27 per cent. and .51 per cent. acid), the loss in pasteurizing sour cream was 1.01 per cent.

**Moisture in Butter.**—The following table shows the average per cent. moisture in cream treated in four different ways, nine churnings in each lot:

|   |
|---|
| Raw Cream—13.94 per cent.                               |
| Raw Cream, 10 per cent. starter—13.80 per cent.         |
| Pasteurized Cream—14.32 per cent.                       |
| Pasteurized Cream, 10 per cent. starter—14.10 per cent. |

Experiments were also conducted comparing the cooling of cream in a refrigerator and in water and ice. Each skimming of cream, when brought in, was divided equally, and one portion cooled in the refrigerator, and the other in the water and ice. The refrigerator used 43 pounds more ice than the water, and the average temperature was about one degree lower, yet the acidity was almost twice as high. Both lots of butter scored 42.5 points for flavor, when fresh. On Nov. 1st, the butter from the water-and-ice-cooled cream scored 40.77 points, and the other 39.88 points.

From the experiments, these conclusions were deduced:

An ordinary cellar is not the best place to keep cream.

Cream must be cooled to and kept at about 55 degrees to be delivered to the creamery every other day in sweet condition, and setting the cream in water, or water and ice, is the best method of cooling.

Cream delivered only twice a week must be cooled immediately after skimming, and kept at 48 or 49 degrees.

A refrigerator is not as good a place in which to cool cream as a tank with water and ice.

Natural ripening of gathered cream at the creamery will not produce a good keeping butter. The use of 10 per cent. clean-flavored starter improved the flavor and keeping quality of the butter.

Pasteurizing the cream gave better-flavored and better-keeping butter than adding culture to raw cream, especially when the cream was tainted.

Pasteurizing the cream, and adding 10 per cent. starter gave the best-flavored and best-keeping butter.

It is doubtful if adding starter to pasteurized cream will improve the flavor and keeping quality sufficiently to pay for the trouble and expense of making starter.

There is a loss in pasteurizing cream, but the improvement in flavor and keeping quality should more than offset this loss, as well as the additional expense in manufacturing.

Cleanliness and low temperatures are the two greatest essentials in the production of fine-flavored and good-keeping butter.

#### G. G. PUBLLOW'S REPORT.

The same number of instructors were engaged for the work as last season, viz., 24, and there were but two changes in the staff, Mr. Baker replacing Mr. Graham in Van-leek Hill District, and Mr. McAllister being appointed to the vacancy in Plantaganet section, caused by the death of Mr. Charbonneau.

The instructors were given a course of instruction at Kingston Dairy School, and besides this a travelling conference of ten of them from districts where no cool-curing rooms exist, was held in Prince Edward and Hastings Counties, where a number of the better factories and dairies were visited. This served as an object lesson, from which much good resulted.

There were in operation this year 913 cheese factories, which is 20 less than last season. This reduction is due to the fact that 11 factories were closed, generally to amalgamate with neighboring

factories; seven were burned, and two were operated as creameries. These factories received from their regular instructors 1,432 full-day visits, and 5,124 call visits. In addition, they received 450 visits from Mr. Singleton and myself, making a total of 7,006 visits in all. During the past year there were ten new factories built, and 527 made improvements in buildings or plant, the estimated expenditure, including new buildings, being \$101,150. As a result of the large expenditure for improvements each year, the great majority of the factories now in operation are well equipped for the manufacture of cheese. They are still weak, however, in curing-room facilities, as only 44 are so constructed that a uniform temperature can be maintained throughout the different months of the year.

The number of patrons delivering milk to the cheese factories was 33,107, which is 221 fewer than in 1910. Of this number, 3,167 were personally visited by the instructors for the purpose of improving the quality of the milk supply. This feature of the work is deserving of more attention than we have been able to devote to it, owing to the assistance required by the makers. In nearly every case where a patron's milk was being received out of condition, and his farm was visited and inspected by the instructors, an immediate improvement in the quality of the milk was noted. Another result of these visits to the farms was that 1,253 stables were whitewashed and otherwise put in a sanitary condition during the season.

The number of cows from which milk for cheese-making was obtained was 307,598, which is 12,369 less than last season. The average yield of milk per cow from May 1st to October 31st, was 3,406 pounds, this being an increase of 153 pounds per cow, for the same period last year. This is a good increase, considering the nature of the season.

An interesting point in this connection is the fact that 830 new silos were built during the year, and, as a result, the production of winter milk will undoubtedly be increased sufficiently to materially add to the records of the individual cows for the full year. The average percentage of fat in the milk was 3.65, as compared with 3.64 last season.

The total number of pounds of cheese made from May 1st to October 31st was 93,634,568, which is 3,618,839 pounds short of the output of last season, or, allowing the average weight of a cheese to be 80 pounds, there was a decreased output of cheese to the extent of 45,230 boxes for the same period last year.

The number of factories pasteurizing the whey was 123, and the average acidity of the whey was .37 per cent., as compared with 1.06 per cent. in the unpasteurized. The number of factories making whey butter was 127, and the total amount manufactured from May 1st to October 31st was 358,855 pounds.

The number of factories shipping cream or casein to the United States was 14, as compared with 41 last year, the decrease being due almost entirely to the high prices paid for cheese over the comparative prices available for butter.

The number of samples of milk tested for adulteration was 29,098, and of this number 91 were found to be deteriorated. Of this number, 65 were prosecuted, and paid fines totalling \$2,048.76. There has been a decrease of over 33 per cent. in the number of cases of adulteration since last year. Should this improvement keep up, it would be only three years until there would be no such cases to report. Such a condition should be a real possibility, as this year nine of the twenty-four districts had no cases to report.

A series of tests of the casein-tester now on the market have been made to determine its practicability and reliability under ordinary factory conditions. The results of our experiments would not warrant us in recommending its general use at the present time, as the variable conditions upon which accuracy depend are extremely common in cheese-factory work.

Since last year's convention, 17 district dairy meetings have been held, and 253 annual factory meetings have been attended by one or more of the instructors. These factory meetings are proving to be one of the best means of reaching the people, and are important in dairy instruction.

The number of creameries in operation this season was 26. They are visited regularly, receiving 24 full-day visits, and 86 call visits.

The number of cows from which cream was supplied to the creameries was 23,945, and the total amount of butter manufactured from May 1st to October 31st was 2,311,473 pounds, which is 599,473 pounds more than last season.

There were 65 tests made for moisture in the butter, which showed an average percentage of 14.56, the highest being 17.4, and the lowest 10.6. The average percentage of fat in the cream was 27.5.

Notwithstanding that the weather conditions were much more unfavorable for the keeping of cream, the cream was reported as being received

in better condition than last year, and consequently a better quality of butter was manufactured.

Samples of water from 311 wells were examined. The examination of these samples shows that 63 per cent. are contaminated, 17 per cent. slightly, 34 per cent. markedly, and 11.2 per cent. grossly contaminated, while the other samples are about equally divided between good and passable waters; that is, 37 per cent., with 18.6 per cent. good, and 18.4 per cent. passable. For some years, we have had good reasons to believe that the water supply of many cheese factories had considerable effect in the production of foreign taints and flavors in the cheese. The reports bear out our suspicions.

The past season, so far as our work is concerned, has been notable for two things, viz., long periods of warm weather, which deteriorated the quality of both milk and cheese, as well as decreasing the flow of milk; and for the high prices which prevailed during the greater part of the season. What is usually considered as our spring make of cheese was this year of a particularly high grade, as was also the fall make, but our regular summer cheese were not up to the standard of some other years, when climatic conditions were more favorable.

#### LESSONS LEARNED IN BRITAIN.

Speaking of his trip to the United Kingdom, Mr. Publow said: It seemed to be the general opinion amongst all British merchants dealing in Canadian cheese, that what we consider our best cheese are suitable for any of their markets, and compare very favorably with their homemade cheese and those from other countries. A general improvement has been noticed in our cheese from year to year. In comparing our average cheese with the average English and Scotch makes, it was evident, however, that they excelled us somewhat in flavor and texture, and the principal reason for this is the superior condition of the milk supply, the sanitary conditions at their dairies being much ahead of ours. The demand in England is very strong for a mild-flavored cheese, and the English demand for milder cheese is growing, the quality that was in greatest demand, at best prices, being those of mild flavor, close, smooth, cutting, with a meaty texture. This fact should at once cause us to realize the need of better care of the milk at the farms, as it is only possible to make such cheese from clean, sweet milk. An enormous market exists in Great Britain, but at the same time we should not forget that there will always be competition of a formidable character which will require our best efforts to meet.

Amongst the more common complaints was that of broken boxes, and it was quite evident that the trouble is largely due to the boxes themselves, many of them not being properly built. The covers fall off, the heads and bottoms fall to pieces, many boxes are too large for the cheese, and others are not high enough in the band, all of which tend to give the shipments an unsightly appearance.

Practically all merchants complain of the losses in weight, which vary from one to three pounds on a box. This bears out arguments of past years against shipping of our cheese in such a green, uncured condition. Our competitors are much wiser in this respect, and very few Scotch or English cheese are placed on the counter before they are two months old, while cheese from New Zealand never reach their destination much under three months. The loss of weight is inseparably connected with their next common complaint, which is that of leanness of quality. This year this defect was more pronounced than usual, as, owing to the great shortage of cheese in Great Britain, the cheese went to the consumer almost immediately after their arrival from Canada. This is a defect easily remedied, and means that we simply must discontinue the practice of shipping our cheese at such an early date.

The greatest general complaint on quality is to the effect that our cheese are not smooth enough in texture, not spreading easily, especially our summer or hot-weather cheese. We cannot remedy this condition, by leaving more moisture in the curd, without having a pure milk supply. Much of the dry texture is due to oversalting and high-curing temperatures.

Some complaint was heard, also, that our cheese were too large, and we should bear it in mind that, if we are to cater to the British market, we must give them the goods which the people desire.

#### CHEESE AND BUTTER PROBLEMS.

Cheese and butter makers have many problems for solution, decision and determination, as well as many "knotty points" which require cleaning up, said Prof. H. H. Dean, in opening his address. The first problem dealt with was that of over-ripe milk for cheesemaking—a problem of the cheesemaker in hot weather. By cutting the curd finer and heating it to a higher temperature, fairly good cheese can be made, but it means a loss of material. As a result of five tests made in

1908, the milk solids in whey from overripe milk averaged 6.8 per cent., while whey from normal lots averaged 6.71 per cent. milk solids. The chief difference is in the yield of cheese per 1,000 pounds of milk, as seen in the averages of four years' experiments. In these experiments, the difference in favor of normal milks was 2.145 pounds more cheese per 1,000 pounds of milk.

The practical lesson to be learned from these results is the importance of having milk delivered at the cheese factory in a sweet condition, in order to arrest the tendency to a lower yield of cheese per ton of milk. Stated another way, delivering the milk sweet for cheesemaking means a less number of pounds of milk required to make a pound of cheese, and the tendency is for this number to become greater, which means less profit to the farmer and cheesemaker. Milk can be delivered sweet by keeping everything clean, and by cooling the night's milk to a temperature of 65 degrees F. at the farm. It would be advisable to have all the milk delivered at the cheese factory not above 70 degrees F. The time will doubtless come when mixed night and morning's milk, over 70 degrees F., will not be accepted for cheesemaking.

The problem of milk acidity is also important, and cannot be solved directly by means of a rennet test. In an average of two years' experiments, .577 pounds more cheese per 1,000 pounds milk resulted from "sweet dipping." The solution of the acid problem, with reference to setting vats and dipping curds, is to have the acid under control, and err on the sweet side, rather than develop too much acid before adding the rennet to the milk or removing the whey from a curd.

The moisture problem is an important one in cheesemaking. Each cheesemaker should endeavor to conserve as much as possible, and at the same time make a high quality of cheese. About 35 per cent. is considered about right in green cheese. The moisture content of both curd and green cheese has been increasing the past three years. The greatest loss of moisture is from the rind, although some weight may be lost as a result of the production of gases which escape in curing.

Temperature has an effect on the loss of weight during cheese ripening. There is an increased loss in weight in cheese ripened at various temperatures, as follows, according to experiments

| Ripening Temperature.   | Per cent. shrinkage of cheese in one month. |
|---|---|
| 40 degrees F.   | 2.82  |
| 60 to 75 degrees one week, then 40 degrees for three weeks.   | 2.94  |
| made at the O. A. C. in 1911 : 60 to 75 degrees for one month | 3.93  |

How much of this increased percentage in shrinkage is due to extra loss of moisture, and how much to loss of other food products, we are not prepared to say at present, but it is probable that it is not all due to loss of water. It also seems probable that the rate of evaporation is greater from the cheese ripened at the higher temperature.

Testing cream offers the greatest number of problems in buttermaking. Accuracy is extremely important. "The time is not far distant," said Prof. Dean, "when not only the glassware used in testing must be stamped correct, but the man who does the work must also be stamped competent to do milk and cream testing." Nine or eighteen grams of cream in the Babcock bottle with not too wide a neck, and the water at 130 to 140 degrees F., and accurate readings taken, will insure success. As to whether or not composite samples are accurate, Mr. Dean said: "As a result of a number of tests, comparing ounce samples with aliquot sampling (1 c.c. for each pound of cream delivered), we got an average of 29.8 per cent. fat in ounce samples, and 29.77 for the aliquot samples. Range in fat content of the cream delivered, 25 to 33 per cent."

Composite samples should be kept in tightly-corked bottles in a cool place. Owing to evaporation from the composite cream samples, where the sample bottles are not tightly corked, especially if kept in a warm place, the tendency is for these samples to give results too high.

As a result of tests, it has been found that a bright, clean tin can is just as good as a crock for the keeping of cream on the farm. Never use a chipped or cracked crock. Cream should always be cooled before mixing with that of previous separations, and the best place to hold the cream is in a box or barrel surrounded by cold or iced water.

One objection to pasteurization of cream, which is generally believed to be beneficial in adding to the keeping quality of the butter is the cost. Tests have proven that this can be done at three to four cents per hundred pounds of butter. There is, however, a small loss of fat in the buttermilk. This is about .1 per cent. The increased value of the butter is from one-half to one cent. per pound, which more than covers the cost and loss of fat. The best results at the O. A. C. have

been obtained from pasteurizing at 180 to 185 degrees F., and adding 10 per cent. culture.

Cream with too much acid often comes in during hot weather. Washing soda, lime-water, baking soda or milk-lime in the cream has the following effects: They reduce the acidity of the cream, and there is less loss of fat in the buttermilk, while the overrun is reduced nearly four per cent., and there is little or no improvement in the quality of the butter made by their use.

It is sometimes difficult to get a uniform salt, but, concluded Prof. Dean, all cheese and butter problems can be solved in one way only, namely, the scientific way, which may be summed up as follows: Keen observation of the fact; accurate record of the fact; correct inference from the fact.

#### AGRICULTURAL PROBLEMS.

A short address by G. A. Putnam, Superintendent of Farmers' Institutes for Ontario, was much appreciated by the Convention. One of the greatest problems confronting the farmer to-day is the scarcity of labor. It is next to impossible to do the required amount of cultivation with so little help and wide implements and other time-savers, must be resorted to. He congratulated the dairymen upon the high prices obtained the past season, which were made possible by more efficient makers and the great improvement in the herds. The dry, hot weather of last summer served to impress the needs of summer feed and soiling crops, and summer silage should be supplied to tide the cattle over these periods. Seed improvement was also an important item in agriculture. Cases were cited where, a few years ago, farmers were selling seed oats at 50 to 60 cents per bushel, and now, by selection, these same men are receiving \$2.00 per bushel for their seed. Greater care must be taken to keep the conditions of the farm more sanitary. All phases of agriculture are showing marked improvement. Fruit-growing is progressing rapidly. There is nothing like the practical demonstration in teaching sound methods, and there is nothing which pays better than specialized farming. All we need is more people to make Ontario the greatest specialized farming Province in the Dominion.

A resolution was moved by J. J. Hogan, and seconded by John Hall, that this Association recommend that all milk delivered at cheese factories be cooled as quickly as possible after milking to a temperature of 65 degrees, and, where night milk is held to mix with the morning milk, it should be cooled to 60 degrees, and the whole delivered at the factory at not over 70 degrees. The resolution carried.

#### THE EVENING SESSIONS.

The evening meetings were well attended, and interest never lagged. The speaking was interspersed with good music, and two very enjoyable and profitable evenings were spent by those present. Senator Derbyshire occupied the chair at one of these meetings, and J. R. Dargavel, M. L. A., at the other.

Besides J. A. Ruddick's address, speeches were given by Hon. Martin Burrell, Dr. G. C. Creelman, Dr. C. A. Publow, and A. D. McIntosh. Mayor W. J. Doxsee and Reeve J. A. Irwin, together with Mayor-elect W. Owen, welcomed the Convention to Campbellford, and granted them the freedom of the town.

Dr. Publow dwelt upon the necessity for better management at the factories. He cited a case of a poor factory in Prince Edward County which was placed under good management this past season, and, as a result, the returns showed over \$800 increase over the best neighboring factory for the same amount of milk. He pointed out that the cheese and butter industries were not the only industries needing attention, and impressed upon the convention the need of more thorough inspection of city and town milk supplies. "Ninety per cent. of children who die succumb under one year of age, and eighty per cent. of these deaths are due to impurities in milk," said Dr. Publow. He thought that seventy-five per cent. of milk delivered was unfit for consumption by infants. The trouble all comes from dirty stables and unsanitary conditions in the handling of the milk. A more rigid inspection is necessary, and all whey should be pasteurized. Besides these precautions, to make the largest profits, we must manufacture more cheese to meet the demands of the home market.

Dr. Creelman, President of the Ontario Agricultural College, reviewed the work carried on at that institution, as it relates to the farmers of Ontario. There were 1,557 students in attendance in 1911, and at the present time there are over eighty more applicants for admission to Macdonald Hall than can be accommodated. He emphasized the work of each department, and stated that, from the selection of plump seed alone the crop could be increased twenty per cent. The need of judges at fall fairs was being met by the trained men which the Animal Husbandry Department was turning out, and the policy of the College was not to make farm-

ers, but to take good farm boys and make of them better farmers as a result of their scientific training. The possibilities of each branch of agriculture were briefly touched, and the work of the College clearly outlined.

The Hon. Martin Burrell commenced with the history of the cow in Canada, and gave a brief sketch of the condition of agriculture in the Dominion. The value of our exports of dairy produce in 1877 he gave as \$6,821,000, and in 1911 as \$24,761,000. This, he thought, was a fair increase. He stated that he has been a farmer in Canada for twenty-eight years, and that he has gone through all phases of the agricultural calling, finding that thoroughness was necessary in everything. The agriculture of the country is steadily advancing. In spite of difficulties, British Columbia has, in the last ten years, increased its acreage of orchard from 7,000 to 120,000 acres, and the value of agricultural products in the Province increased six million dollars from 1909 to 1910. There are in Ontario 550,000 acres of orchard, valued at \$150,000,000. Mr. Burrell urged that more intelligent efforts be made, and stated that governments could not do all things, but that they would help people to help themselves. Education is necessary, and every man should make it a point to impart the knowledge he has. Great improvement has been noticed in the quality of our dairy products during the past few years, but greater strides are possible.

Speaking of the work of the new Federal Government, Mr. Burrell stated that it was difficult to know just what the people want. He believed that efficiency should be the basis of holding office, and the first consideration in appointing new men. His only criticism of his predecessor was that he was "too niggardly" in his allowance to agriculture, and he, with the Prime Minister, who, he stated, was in sympathy with agricultural work, proposed to act in conjunction with the Provincial Governments and make a more generous recognition of the claims of agriculture. His final word was that he would move to devise plans to assist agriculture to help itself.

A. D. McIntosh, B. S. A., District Representative of the Ontario Department of Agriculture at Stirling, spoke of the education of the farmer, and placed much stress on the need of teaching agriculture in the public and High Schools.

#### OFFICERS ELECTED.

The officers elected were: President, John H. Singleton, Smith's Falls; First Vice-President, G. A. Gillespie, Peterboro; Second Vice-President, Jas. Sanderson, Kemptville; Third Vice-President, Nelson Stone, Norham; Secretary, T. A. Thompson, Almonte; Treasurer, J. R. Anderson, Mountain View. Executive—James Sanderson, Edward Kidd, Nelson Stone, Jos. McGrath, Geo. Leggatt, G. A. Gillespie, Henry Glendinning. Directors—Henry Glendinning, Manilla; John H. Singleton, Smith's Falls; G. A. Gillespie, Peterboro; Neil Fraser, Vankleek Hill; Edward Kidd, North Gower; W. H. Olmstead, Bearbrook; John McGregor, Alexandria; W. J. Johnston, Eamer's Corners; James A. Sanderson, Kemptville; Chas. Anderson, Overton; Joseph McGrath, Mount Chesney; T. H. Thompson, Madoc; Nelson Stone, Norham; Willett Farley, Campton; G. G. Publow, Kingston; Geo. Leggatt, Newboro; J. A. Campbell, Ormond, and Wesley Willows, McCreary.

[Note.—J. A. Ruddick's address on "The Outlook for Cheese and Butter Making Industries for Canada," and C. F. Whitley's address on "The Present Value of Cow-testing," will appear next week.—Editor.]

#### Death of Frank R. Shore.

The unexpected death of Frank R. Shore, of White Oak, Westminster Township, Ont., while on a Christmas holiday visit, following his extensive sale in December, to his sons in Alberta, removes another well-known figure from the live-stock breeding circles of Ontario. Deceased was in his 67th year, and was the eldest son of the late Col. Thos. Shore, who, with two other brothers, John and Frederick Shore, were among the early settlers from England in Middlesex County. Deceased is survived by six brothers, T. Hardy, Merton, Harry, Charles, Arthur, and Dr. John Shore. One sister, Mrs. W. S. Hawkshaw, of British Columbia, survives. Another sister, Mrs. M. Fisher, and Mrs. Shore, died some years ago. He leaves three sons: Rev. H. M. Shore, of Calgary; Dr. Alf. E. Shore, of Bowen, Alberta (where the father's death occurred from heart failure); and O. J. Shore, of Glanworth, Ont. Two others had died some years ago. Mr. Shore was a man whose genial disposition and conversational gifts made him a host of friends, and he possessed a wide range of knowledge on breeding and agricultural subjects. For several years he was connected with the editorial and live-stock advertising departments of "The Farmer's Advocate." He was widely known as a breeder of Shorthorn cattle and Cotswold sheep, and frequently acted in the capacity of judge in pure-bred classes at leading exhibitions. He was also at various times associated with the organization and de-

velopment of different societies for the advancement of live-stock breeding in Canada. His demise will be very widely regretted.

**The Tillsonburg Holstein Sale,**

With an attendance of close to two thousand of Canadian breeders, gathered from the four corners of the Dominion, and with a sprinkling from the country to the south of us, the big sale of Holsteins advertised to take place at Tillsonburg, Ontario, was successfully carried out on Tuesday, January 2nd, ushering in the New Year with the most successful and most extensive sale of Holstein cattle ever held in this country. The cattle offered were, for the most part, of a high standard of excellence and breeding, a fact that kept the bidding going in a spirited way and the attention of the vast audience rivetted on the business before them. Although no sensational prices were reached, the average, on the whole, was a most satisfactory one, particularly for the females. It would appear that too many bulls were on sale, and certainly there were some snags going for fortunate buyers. It would appear to representatives of the press who were present that, at sales of this kind, where a correct and comprehensive report is desirable in the interests of the breed being sold, some method should be adopted to enable reporters to get a correct statement of the price and name and post-office address of the purchaser. A simple method that would meet the demand would be a "crier," to announce it in a clear and intelligible manner, so that not only the press, but all others present could get the information at once. Such a plan would add greatly to the interest of sales of this kind. And just one thing more: an extra seat or two for the poor scribes would be a thoughtful act very much appreciated.

Following is the list of sales of animals that brought \$100 and upwards, only a few very young things bringing less. Unless otherwise stated the P. O. address of buyer is in Ontario.

**FEMALES.**

|   |       |
|---|-------|
| Bessie Texal Pietertje; calved 1904; W. F. Elliot, Toronto                                  | \$600 |
| Jenima Wayne Johanna, 1904; T. Logan, New Westminster, B. C.                                | 405   |
| Calamity Starlight Butter Girl, 1906; G. S. Gooderham, Bedford Park                         | 425   |
| Calamity Teake Johanna, 1908; Dr. English, Hamilton   | 215   |
| Aggie of Riverside 2nd, 1906; R. Brookfield, Tillsonburg                                    | 205   |
| Pontiac Atlas Maid, 1904; G. S. Gooderham   | 300   |
| Pietertje Poem 3rd, 1909; J. S. Honey, Cherrywood   | 200   |
| Homestead Florence Mercena, 1909; Munroe & Lawless, Thorold                                 | 150   |
| Irene Mercena De Kol, 1908; John McKenzie, Willowdale                                       | 150   |
| Springbrook Queen Canary 2nd, 1904; Munroe & Lawless  | 180   |
| Centre View Butter Gem, 1908; J. G. Currie, Ingersoll                                       | 190   |
| Highland Korndyke Gem, 1911; J. H. Trembly, Smithville                                      | 100   |
| Lady Belle Gretqui, 1908; G. Elliot, Tillsonburg  | 120   |
| Bonnie Lindley, 1902; T. Logan  | 210   |
| Colantha Queen De Kol, 1902; Dr. English, Dewdrop Johanna Bell, 1909; J. C. Kaufman, Cassel | 155   |
| Queen Bell, 1905; T. Logan  | 195   |
| Homewood Duchess Mercena, 1910; C. R. James, Langstaff                                      | 125   |
| Fairy Favorit, 1905; Thos. Harding, Welsford, N.B.  | 215   |
| Lady Bleske Iosco, 1911; W. Pullin, Woodstock   | 120   |
| Homewood Mercena Bell, 1910; A. P. Grey, Britton  | 205   |
| De Kol Paul Baroness Topsy, 1904; Graham Bros., Claremont                                   | 260   |
| Sarah Queen of Middleton, 1904; T. Logan, Princess Susie of Malahide, 1906; W. E. Elliot    | 250   |
| Axie Posch De Kol, 1909; T. Logan   | 275   |
| Mary Perfection, 1908; Mr. Mills, Cedar Springs   | 135   |
| Lady Princess Hiawatha, 1909; Mr. Armstrong, Tillsonburg                                    | 205   |
| Jossie Pauline Posch, 1907; G. S. Gooderham   | 200   |
| Wopke Posch, 1906; R. J. Brookfield, Tillsonburg  | 250   |
| Fanny Fern, 1900; Mr. Mills, Cedar Springs  | 110   |
| Rural Maid, 1904; Wm. Kennedy, Rosanna  | 295   |
| Princess Mercedes Wayne, 1908; Wm. Manning, Woodville                                       | 175   |
| Countess Wayne Mercedes, 1907; J. H. Trembly, Smithville                                    | 205   |
| Aggie Pauline Abbekerk, 1905; R. Brookfield   | 165   |
| Aggie Calamity Mercedes, 1908; R. Brookfield  | 150   |
| Irene, 1908; A. P. Grey, Britton  | 250   |

|  |     |
|--|-----|
| Floss Wayne Mercedes, 1909; J. C. Kaufman, Cassel              | 160 |
| Queen of Oxford, 1904; A. P. Grey                              | 200 |
| Alberta, 1899; J. H. Trembly                                   | 135 |
| Artalissa 2nd, 1905; W. F. Elliot                              | 270 |
| Queen De Kol Posch, 1904; G. S. Gooderham                      | 250 |
| Ianthe Mechthilde Jewel; Richard McNamara, Stratford           | 165 |
| Annie Wayne Princess Posch, 1908; Munroe & Lawless             | 145 |
| Queen Mavourney Posch, 1911; R. J. Kelly, Tillsonburg          | 150 |
| Snowflake of Oxford, 1910; R. Oliver, St. Mary's               | 155 |
| Mercedes Canary Pietertje; G. S. Gooderham                     | 285 |
| Mercena of Campbelltown, 1910; G. S. Gooderham                 | 165 |
| Tenson of Elmwood, 1907; G. S. Gooderham                       | 190 |
| Straford's Netherland, 1904; A. P. Grey, Britton               | 180 |
| Lily of Elmwood, 1906; R. Brookfield                           | 155 |
| Roxie of Elmwood, 1906; T. Logan                               | 225 |
| Aaggie De Boer, 1909; T. F. Pattison                           | 225 |
| Flossie Abbekerk Mercena, 1910; R. J. Brookfield               | 150 |
| Kate Abbekerk, 1910; Mr. Harding, Welsford, N. B.              | 275 |
| Flora Pietertje 4th, 1905; Mr. Merritt, Beamsville             | 225 |
| Mechthilde Pietertje Posch, 1901; W. J. Ellis, The Grove       | 165 |
| Bessie Spink Beauty, 1907; Wm. Manning, Woodville              | 275 |
| Bessie Spink Clothilde De Kol, 1907; W. R. Phillips, Maidstone | 160 |
| Bessie Spink Wietske, 1908; A. W. Harwood, Hickson             | 175 |
| Bessie Spink Abbekerk, 1905; A. P. Grey, Britton               | 245 |
| Bessie Spink Wayne De Kol, 1909; A. W. Harwood                 | 135 |
| Modest Wayne Mercedes, 1911; Mr. Mills, Cedar Springs          | 140 |
| Maye De Kol B., 1909; Geo. Elliot, Tillsonburg                 | 170 |
| Lily De Kol Clyde, 1909; Dr. English                           | 100 |
| Belle De Kol Lily, 1909; A. W. Harwood                         | 135 |
| Mechthilde Pietertje De Kol, 1907; W. B. Poole, Ingersoll      | 120 |
| Houwte Calamity Posch, 1906; E. A. Lloyd, Stouffville          | 310 |
| Substitute for No. 118; C. V. Robbins, River Bend              | 300 |
| National Calamity Posch, 1908; Graham Bros., Claremont         | 295 |
| Houwte De Kol Lady, 1907; T. Logan                             | 145 |
| Sadie Kent 2nd, 1908; Wm. Butler, Dereham Centre               | 250 |
| Rhetta De Kol, 1909; Munroe & Lawless                          | 280 |
| Cairngorm Aggie, 1909; G. S. Gooderham                         | 340 |
| Hillview Jean De Kol, 1909; Munroe & Lawless                   | 275 |
| Floss of Cairngorm, 1909; Munroe & Lawless                     | 150 |

**BULLS.**

|  |     |
|--|-----|
| Schuiling Mercena Posch, 1910; W. H. Cherry, Garnett           | 170 |
| Sir Abbekerk Dewdrop, 1911; C. Trebilcock, The Grove           | 105 |
| Sir Homewood Aaggie De Kol, 1910; R. J. Kelly, Tillsonburg     | 100 |
| Calamity Starlight Butter Boy, 1910; Wm. Cornish, Putnam       | 100 |
| Homestead King Colantha Abbekerk, 1910; E. Campbell, Komoka    | 100 |
| Sir Fancy Canary, 1911; T. H. Dent, Woodstock                  | 125 |
| Dot's Abbekerk of Campbelltown, 1910; Geo. Kilgour, Avon       | 110 |
| Homestead Colantha Prince Canary, 1910; Wm. Watson, Pine Grove | 120 |
| Homestead Sir Colantha Calamity; N. Butler, Renton             | 155 |

**A Live Stock Convention, Feb. 12 and 13, 1912.**

Dr. Rutherford has been authorized by the Hon. Mr. Burrell, Minister of Agriculture, to call a meeting of the Canadian National Live-stock Association, to be held at Ottawa on Monday and Tuesday, February 12th and 13th. Arrangements are now being made accordingly, and it is expected that the gathering will be a large and representative one, and that a number of subjects of interest to live-stock men throughout Canada will come up for discussion.

The dates above mentioned have been selected as those immediately following the various meetings of the Live-stock Associations to be held in Toronto, while being also convenient to the other Western representatives, who, in addition to taking an interest in live stock, wish to attend the Fruit-growers' Convention, to be held in the Capital during the same week, or the annual meeting of the Canadian Seed-growers' Association, which takes place the week previous.

**Weight of the Christmas Number.**

We were very much pleased to see the interest that was taken in the Guessing Competition of the weight of paper used in the 1911 Christmas Number of "The Farmer's Advocate and Home Magazine." There were hundreds of guesses ranging from one and two tons to fifteen thousand tons.

The number of copies of the Christmas Number run was 40,200, and the total weight of paper used was 19 tons, 1 cwt. 90 lbs.

E. J. Teepell, of Battersea, Ont., guessed the nearest, being within 350 pounds of the correct weight. Following are the prizewinners, with their guesses:

|   |         |
|---|---------|
| First Prize—E. J. Teepell, Battersea, Ont.; 19 tons, 5 cwt., 31½ lbs. | \$15.00 |
| Second Prize—John Muxlow, Watford, Ont.; 18 tons, 15 cwt., 15 lbs.    | 8.00    |
| Third Prize—D. H. Taylor, Corwhin, Ont.; 18 tons, 15 cwt., 35 lbs.    | 6.00    |
| Fourth Prize—Thos. Little, Sr., Hatley, Que.; 20 tons, 3 cwt., 6 lbs. | 5.00    |
| Fifth Prize—Mamie Anderson, Derwent, Ont.; 16 tons, 17 cwt., 50 lbs.  | 4.00    |
| Sixth Prize—Alex. Gray, Listowel, Ont.; 16 tons, 8 cwt., 71 lbs.      | 3.00    |
| Seventh Prize—Wm. Scott, Eramosa, Ont.; 21 tons, 17 cwt., 50 lbs.     | 2.00    |
| Eighth Prize—Miss M. Robbins, Payne, Ont.; 21 tons, 17 cwt., 50 lbs.  | 2.00    |
| Ninth Prize—B. F. Canby, Burnaby, Ont.; 21 tons, 17 cwt., 50 lbs.     | 2.00    |
| Tenth Prize—Joseph Hampton, Holland Centre, Ont.; 16 tons             | 1.00    |
| Eleventh Prize—E. W. Tench, Southend; 15 tons, 6 cwt., 25 lbs.        | 1.00    |
| Twelfth Prize—A. H. Clutton, Dunlop, Ont.; 15 tons, 3 cwt., 60 lbs.   | 1.00    |
| Thirteenth Prize—H. I. Elliott, Danville, Que.; 15 tons, 50 lbs.      | 1.00    |

Three persons guessed the weight as 21 tons, 17 cwt., 50 lbs., and these were awarded seventh, eighth and ninth prizes, and we made each of these prizes \$2.00, although the ninth prize was only announced as \$1.00.

As stated in the announcement of the contest, all those who did not receive a cash prize may have their choice of any of our premiums given for one new subscriber.

**Renewal Offer Extended.**

Thousands of our subscribers have taken advantage of this Special Renewal Offer, but we want to see a great many more take advantage of it, and to this end are making the offer good till JANUARY 31st.

The offer is: For one new yearly subscription and your own renewal for 12 months we will accept \$2.00. For each new name in addition to the first one, we will accept from you \$1.00, the balance of 50c. being retained by you as commission. Or, if preferred, you may send in the new names, accompanied by the full subscription price of \$1.50 each (United States subscriptions \$2.50 per year) and have your choice of some of our splendid premiums.

**A New Name for The Potash Syndicate.**

For nearly six years "The Dominion Offices of the Potash Syndicate" have been doing business and distributing educational propaganda in Canada. The longer name was generally shortened to simply "The Potash Syndicate." Hereafter, the company will be known as the "German Potash Syndicate," which denotes the origin of the potash salts. The company will continue to distribute free advice on fertilizing and soil treatment.

**Death of Mr. Jeffs.**

A wide circle of friends will regret to learn of the passing of Edward Jeffs, of Bond Head, one of the oldest Shorthorn breeders in Canada, and one of the best and most extensively known. Death occurred on January 5th, in his seventy-fifth year. Of late years, Mr. Jeffs' business was carried on under the name of E. Jeffs & Son. At the dispersion sale, on June 8th, 1910, a Shorthorn herd—the product of half a century's breeding—was disposed of, as well as Leicester sheep and Berkshire hogs.

This is an opportune season to commence book-keeping on the farm. Make an inventory of your real estate, goods and chattels, and begin to keep an itemized account of debits and credits. The simpler you make it, the better you will like it. An accurate system need not be elaborate, and at the end of the year you will know just where you stand. It pays in other business not more complicated than agriculture. Why will it not be profitable there, also?

## THE CANADIAN BANK OF COMMERCE

ESTABLISHED 1867

Capital paid-up, \$11,000,000.  
Rest, \$9,000,000.

The Canadian Bank of Commerce extends to farmers every facility for the transaction of their banking business, including the discount or collection of sales notes. Blank sales notes are supplied free of charge on application.

Accounts may be opened at any branch of The Canadian Bank of Commerce to be operated by mail, and will receive the same careful attention as is given to all other departments of the Bank's business. Money may be deposited or withdrawn in this way as satisfactorily as by a personal visit to the Bank.

## MARKETS.

### Toronto.

#### LIVE STOCK.

At West Toronto, on Monday, January 8th, the receipts of live stock numbered 101 cars, comprising 1,964 cattle, 396 hogs, 1,043 sheep, and 44 calves. The bulk of cattle were unsold. Packers refused to buy unless subject to inspection, and drovers refused to sell on these terms. A few cattle were sold to outside buyers and one or two local butchers, prices being about the same as last week. Butchers' cattle—Choice, \$6.15 to \$6.60, and one load of heavy at \$6.90; medium, \$5.60 to \$6; common, \$5 to \$5.50; fat cows, \$3 to \$5.25; milkers, \$4 to \$6; calves, \$5 to \$8. Sheep, \$3 to \$4.25. Hogs, fed and watered, \$6.50, and \$6.25 f. o. b. cars.

#### REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards last week were as follows:

|        | City. | Union. | Total. |
|--------|-------|--------|--------|
| Cars   | 202   | 161    | 363    |
| Cattle | 3,211 | 2,442  | 5,653  |
| Hogs   | 2,053 | 2,358  | 4,411  |
| Sheep  | 2,549 | 1,063  | 3,612  |
| Calves | 271   | 46     | 317    |
| Horses | 23    | 46     | 69     |

The total receipts at the two yards for the corresponding week of 1911 were as follows:

|        | City. | Union. | Total. |
|--------|-------|--------|--------|
| Cars   | 182   | 128    | 310    |
| Cattle | 2,222 | 1,539  | 3,761  |
| Hogs   | 4,105 | 4,035  | 8,140  |
| Sheep  | 1,132 | 815    | 1,947  |
| Calves | 188   | 42     | 230    |
| Horses | 5     | 54     | 59     |

The combined receipts of live stock at the City and Union Stock-yards show an increase of 53 carloads, 1,892 cattle, 1,665 sheep and lambs, 87 calves, and 10 horses; but a decrease of 3,729 hogs, compared with the same week of 1911.

The deliveries of live stock at both markets have been fairly liberal, considering that it was the holiday week. Good cattle were scarce, and the demand exceeded the supply, which caused prices to advance from 25c. to 30c. per cwt.; but the common and medium remained at about the same as in our last letter. There was nothing doing in export cattle; that is, there were none bought for export, although there were a few loads of cattle that were good and heavy enough, but they were all taken for local butcher purposes.

Butchers.—The best cattle were all taken readily by the local abattoirs and wholesale butchers, at prices ranging from \$6.25 to \$6.65, and one load was reported at \$6.70 at the Union yards, loads of good, \$5.75 to \$6.15; medium \$5.30 to \$5.65; common, \$4.90 to \$5.25; cows, \$3 to \$5.25; bulls, \$3.50 to \$5.50.

Feeders and Stockers.—No sales of stockers and feeders were reported on either market.

Milkers and Springers.—Trade in milkers and springers was dull. Prices ranged from \$40 to \$65 each.

Veal Calves.—There was no change in the prices of veal calves, which ranged from \$4 to \$8 per cwt., and two or three choice ones brought \$8.50 to \$9 per cwt.

Sheep and Lambs.—Receipts were moderately large, considering that it was the first week in the new year. Prices were firm for sheep, and lambs advanced in price. Ewes sold from \$3.50 to \$4; rams and culls, \$2.75 to \$3 per cwt.; lambs, \$6.50 to \$6.75, and a few selected lots brought \$6.85 to \$7 per cwt.

Hogs.—Receipts were light. Selects, fed and watered, were quoted at \$6.20, and \$5.90 to \$6, to drovers, for hogs f. o. b. cars at country points. On Thursday, prices advanced 10c. per cwt., selects, fed and watered, \$6.30, and \$6 to \$6.10 f. o. b. cars.

#### BREADSTUFFS.

Wheat.—No. 2 red, white or mixed, 87c. to 88c., outside points. Manitoba No. 1 northern, new, \$1.09; No. 2 northern, \$1.06; No. 3 northern, \$1.02, track, lake ports. Oats—Canadian Western No. 2, 47c.; No. 3, 45½c., lake ports; Ontario No. 2, 43c. to 43½c.; No. 3, 42½c. to 43c., outside points. Rye—No. 2, 94c. to 95c., outside. Peas—No. 2, \$1.05 to \$1.10, outside. Corn—No. 3 yellow, all rail from Chicago, 68c., track, Toronto. Flour—Ontario 90-percent winter-wheat flour, \$3.50 to \$3.60, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.50; second patents \$5; strong bakers', \$4.80. Rye—No. 2, 94c. to 95c., outside. Barley—For malting, 75c. to 80c.; for feed, 60c. Buckwheat—61c. to 62c., outside.

#### HAY AND MILLFEED.

Hay.—Baled, in car lots, No. 1, \$16 to \$17; No. 2, \$14 to \$14.50, track, Toronto.

Straw.—Baled, in car lots, track, Toronto, \$6.50 to \$7.50.

Bran.—Manitoba bran, \$23 per ton; shorts, \$25; Ontario bran, \$23 in bags; shorts, \$25, car lots, track, Toronto.

#### COUNTRY PRODUCE.

Butter.—Market firm. Creamery pound rolls, 32c. to 34c.; creamery solids, 32c.; separator dairy, 30c. to 32c.; store lots, 25c. to 26c.

Eggs.—New-laid, in case lots, 40c.; cold storage, 28c.

Honey.—Extracted, No. 1, 12c. per lb.; combs, per dozen sections, \$2.50 to \$3.

Cheese.—Large, 15½c.; twins, 16c.

Potatoes.—Ontario potatoes, car lots, track, Toronto, \$1.25 to \$1.30; New Brunswick Delawares, \$1.30 to \$1.35, track, Toronto.

Beans.—Broken lots, \$2.20 to \$2.25 for primes, and \$2.30 to \$2.35 for hand-picked.

Poultry.—Receipts light; prices firmer, as follows: Alive—Turkeys, 18c. to 20c.; geese, 11c. to 12c.; ducks, 13c. to 14c.; chickens, 12c. to 13c.; hens, 11c. Dressed—Turkeys, 21c. to 22c.; geese, 14c.; ducks, 15c.; chickens, 14c. to 15c.; hens, 12c.

#### HIDES AND SKINS.

E. T. Carter & Co., 85 East Front street, have been paying the following prices: No. 1 inspected steers and cows, 11½c.; No. 2 inspected steers and cows, 10½c.; No. 3 inspected steers, cows and bulls, 10c.; country hides, cured, 11c.; green, 50c.; calf skins, 12c. to 15c.; sheep skins, 60c. to 85c. each; horse hides, No. 1, \$3.25; horse hair, per lb., 33c. to 35c.; tallow, No. 1, per lb., 5½c. to 6½c.

#### FRUITS AND VEGETABLES.

The Dawson-Elliott Company, wholesale fruit, produce and commission merchants, corner West Market and Colborne streets, Toronto, report Canadian vegetables and fruit as follows: Apples—Spies, No. 1, \$1.50; No. 2, \$3.25; Greenings, No. 1, \$3; No. 2, \$2.50; Baldwins, No. 1, \$3.25; No. 2, \$2.50; Snows, No. 1, \$3; No. 2, \$3.75; Russets, No. 1, \$3; No. 2, \$2.25. Onions, Canadian, per bag, \$1.85; turnips, per bag, 45c.; carrots, per bag, 40c.; parsnips, per bag, 75c.; celery, per dozen, 30c. to 30½c.; tomatoes, hot-house, 15c. to 20c. per lb. Potatoes, Canadian grown, 10c. to 15c. per dozen, Canadian Delawares, per bag, \$1.50.

#### TORONTO SEED MARKET.

The William Bonnie Seed Company report seed prices as follows: Alsike No. 1, per bushel, \$9.50 to \$10; alsike No. 2, per bushel, \$8.50 to \$9; red clover,

No. 1, per bushel, \$11 to \$12; red clover, No. 2, bushel, \$9.75 to \$10.50; timothy, No. 1, per cwt., \$15 to \$16; timothy, No. 2, per cwt., \$13 to \$14.

### Montreal.

Live Stock.—There was a fair amount of trade passing in the local market, but very little change in prices noticeable. Colder weather seems to have stimulated demand a little, but prices held about the same, at 6c. to 6½c. for best. Fine stock was bought at 5½c. to 6c., and good at 5½c., while medium sold at 4½c. to 5½c., and canners sold down to 2c. Lambs were, as usual, in good demand, and prices were steady, being 6c. to 6½c. per lb., while ewes were 3½c. to 4c., and bucks and culls were 3½c. to 3½c. per lb. Calves changed hands at all the way from \$4 to \$11 each. Select hogs were in fair demand, but the quantity offering was not large, and prices ranged in the vicinity of 7c. per lb., weighed off cars.

Horses.—Dealers were much more chipper last week. The coming of the snow seems to have made all the difference imaginable, and although the frost is needed to make the ice on the river of such thickness that an army of carters will be employed carting it and thus a demand for horses will be created, dealers are quite encouraged by the demand experienced. The demand has been principally from the city, and a number of good animals have been purchased. Heavy draft, weighing from 1,500 to 1,700 lbs., \$300 to \$350 each; light draft, 1,400 to 1,500, \$225 to \$300 each; light horses, 1,000 to 1,100, \$100 to \$200 each, and broken-down animals, \$50 to \$100 each. Choice saddle and carriage animals sold at \$350 to \$500 each.

Dressed Hogs and Provisions.—There was a slightly stronger tone in the market for dressed hogs. Fresh-killed, abattoir-dressed stock sold at 9½c. to 10c. per lb., while country-dressed sold at 8½c. to 9c. per lb. Extra large hams, weighing from 28 to 45 lbs., sold at 11c. per lb.; large, at 13c., and lighter than 19 lbs., at 14½c., while boneless rolled, were 11c. to 15½c. per lb. Breakfast bacon, boneless, thick, was 14c. per lb., Windsor backs being 16c., and spiced rolls, 11½c. Salt pork in fair demand, at \$16.50 to \$23.50 per barrel, beef being \$14.50 per barrel. Lard is going out steadily, prices being 8½c. to 9½c. per lb. for compound, and 12c. to 13c. per lb. for extra pure. Throughout the entire provision market, the demand is very fair, and prices steady.

Poultry.—The weather is now more favorable for keeping poultry, and dealers are accordingly thankful. However, choicest qualities showed little change in price when compared with prices of a week since. Inferior qualities were in rather better position, and sales were not being forced. Finest stock was quoted at about 18c. to 20c. per lb. for turkeys; 10c. to 14c. for chickens; 13c. to 16c. for ducks, and 8c. to 12c. for fowl. Geese continue scarce, and 13c. to 15c. must be paid for good stock.

Potatoes.—The market holds about at last quotations. Green Mountains were said to be costing \$1.40 per 90 lbs., on track, here, in carloads, and selling at \$1.50 to \$1.60 in small loads of 90-lb. bags, and at about 5c. more in single bags.

Honey and Syrup.—White clover comb honey sells at 11c. to 11½c. per lb., while extracted is 7c. to 8c. per lb. Dark comb honey is 8c. to 10c. per lb., and extracted 7½c. to 8c. per lb. Maple syrup, in wood, is quoted at 7c. to 7½c. per lb., and in tins at 70c. to 75c. each, maple sugar being 8½c. to 9½c. per lb.

Eggs.—Market very firm, supplies being light. Selects sold from 31c. to 33c. per dozen, according to quality and quantity. Single cases of new-laid were quoted at 60c. per dozen, the cost of these being 15c. to 50c. in the country.

Butter.—The market was firm and steady, grocers paying about 33c. for choicest creamery, in single packages, premiums being 30c. to 31c. Western rolls or dairy butter was 26c. to 27c. Manitoba, 23c. to 24c. per lb.

Grain.—No. 2 Canadian Western oats, 17c. per bushel, carloads, ex store No. 1 extra feed oats, 16c.; No. 3 Canadian Western oats, 4½c. per bushel No. 2

local oats, 46½c. per bushel; No. 3, 45½c. and No. 4, 44½c.

Millfeed.—Market for millfeed quite active. Bran, \$23 per ton; shorts, \$25; middlings, \$27 to \$28; pure grain mouille, \$32 to \$34; mixed mouille, \$26 to \$29 per ton.

Flour.—Although there is still considerable inquiry from abroad for flour of various grades, prices show no change. Manitoba spring-wheat patents, firsts, \$5.60 per barrel, in bags; seconds, \$5.10, strong bakers', \$4.90. Choice Ontario winter-wheat patents, \$4.75 to \$5 per barrel; straight rollers, \$4.25 to \$4.40 per barrel.

Hay.—Hay in very good demand, and prices hold steady. No. 1 hay, \$16 to \$17 per ton; No. 2 hay, \$15 to \$15.50 per ton; No. 2 ordinary, \$13.50 to \$14 per ton; No. 3, \$11 to \$11.50 per ton; clover mixture, \$10.50 to \$11 per ton.

Hides.—Market steady, at 11c., 12c. and 13c. per lb., for Nos. 3, 2 and 1 beef hides; 13c. and 15c. per lb. for Nos. 2 and 1 calf skins; 80c. each for lamb skins, and \$1.75 to \$2.50 each for horse hides. Tallow, 1½c. to 3½c. per lb. for rough, and 5c. to 6½c. for rendered.

### Buffalo.

Cattle.—Prime steers, \$7.25 to \$8, butcher grades, \$5.80 to \$6.75.

Calves.—Common to prime, \$6.75.

Sheep and Lambs.—Choice lambs, \$7 to \$7.15; cull to fair, \$5 to \$6.80; yearlings, \$5.50 to \$5.75; sheep, \$2 to \$4.65.

Hogs.—Yorkers, \$6.65 to \$6.70; pigs, \$6.30 to \$6.35; mixed, \$6.60 to \$6.70; heavy, \$6.65 to \$6.70; roughs, \$5.50 to \$6; stags, \$5 to \$5.50.

### Chicago.

Cattle.—Beeves, \$4.75 to \$8.50; Texas steers, \$4.25 to \$5.80; Western steers, \$4.30 to \$6.60; stockers and feeders, \$3.25 to \$3.70; cows and heifers, \$2 to \$6.40; calves, \$5.50 to \$8.50.

Hogs.—Light, \$5.95 to \$6.30; mixed, \$6.05 to \$6.45; heavy, \$6.05 to \$6.50; rough, \$6.05 to \$6.20; good to choice hogs, \$6.20 to \$6.50; pigs, \$4.90 to \$5.70.

Sheep and Lambs.—Native, \$2.75 to \$4.60; Western, \$3.25 to \$4.65; yearlings, \$4.65 to \$5.80; lambs, native, \$4.25 to \$6.65; Western, \$4.75 to \$6.65.

#### BRITISH CLYDESDALE PRIZEWINNINGS.

The 1912 Scottish Farmer Album recently issued, contains, among many other interesting features, a list of prizewinning progeny of 47 stallions in 1911, at leading shows in Scotland and England. Heading the list is Baron of Buchlyvie (11263), represented by 28 animals, with a total of 61 prizes to his credit, 16 of which were firsts, followed by his sire, Baron's Pride (9122), represented by 20 animals, with 36 prizes, 11 being firsts. Everlasting, another son of Baron's Pride, was third, with 27 winnings, by 15 animals. Following these, in the order named, is Hiawatha, Revelanta, Apukwa, Royal Favorite, Oyama, Marmion, Sir Hugo, Baron Burgie, Scottish Crest, Garty Bonus, Royal Edward, Benedict, Scotland Yet, Bonnie Buchlyvie, etc.

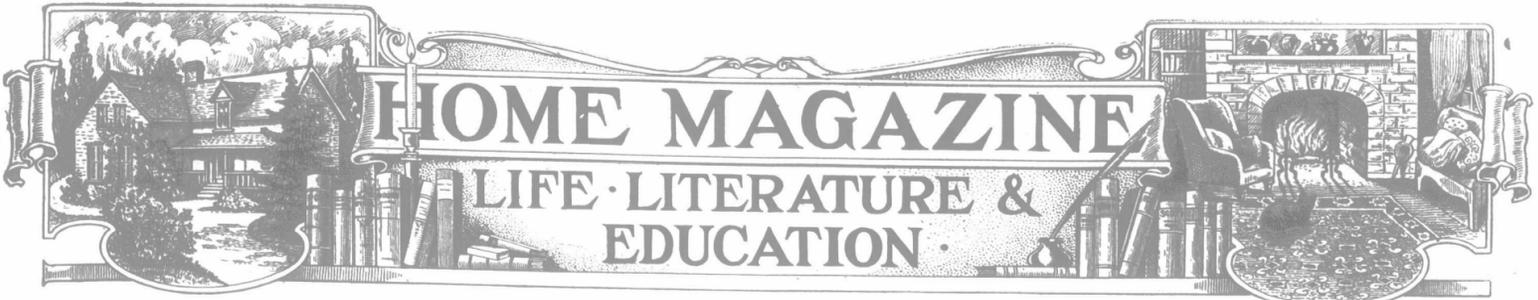
Two Irishmen bought tickets to Boonton, N.J. By mistake, they boarded a train for Montclair. The conductor, on collecting the tickets, explained the mistake, and told them to get off at the next station and wait for the Boonton train.

Thinking that the next train that came along was the one they wanted, they boarded it, and were again told that they were on the wrong train, and were forced to get off at the next station and wait for the Boonton train.

By this time the men were quite worked up over their experience, and were using some bad language when they entered the next train which was bound for Boonton. A clergyman, who was sitting in the seat in front of them, heard the awful language and turning in his seat, said:

"Young men, do you know that you are on the road to hell?"

"Begorry, Mike," cried Pat, "if we're not on the wrong train again!"



**Nursing in Whooping Cough, Measles, and Mumps.**

(By Elizabeth Robinson Scovil, author of *The Care of Children, Preparation for Motherhood, etc.*)

**MEASLES.**

The first object in all nursing is the recovery of the sick person. In infectious diseases there is another, scarcely less important one, preventing the spread of the infection.

If in each case it could be confined to the one sick room and not be carried to another person, diseases of this class would soon be stamped out.

Measles, unfortunately, is especially infectious before the rash appears, and the victim may have distributed the contagion liberally before anyone has recognized the necessity for care and isolation. The first symptoms are usually those of a severe cold in the head, the eyes being especially affected. There may be a dry cough, which is rather painful. This stage lasts for a few days before the rash comes out. It generally comes first on the forehead, near the hair; at least that is where it is first noticed. It is said to appear first in the mouth, the rash showing through the thinner mucous membrane sooner than it does on the skin.

It is tiny red dots in the beginning, feeling rough and hard, like very small shot. In a short time these run together into patches, sometimes inclining to a half-moon shape, and these spread over the whole body. They are of a darker red than the rash in scarlet fever. Rubeola, the old medical name for measles, is derived from a Latin word, which means red, blushing.

There is always more or less fever; sometimes it runs very high, and the patient may be delirious. Unless there are complications it is not a dangerous disease, and with good care recovery is certain.

**DANGER POINTS.**

The danger points are the eyes and the chest. The light in the room should be subdued by blinds or shutters, while at the same time free ventilation should be secured. Even during convalescence the patient should not be permitted to use the eyes in reading, writing, or doing needlework. Anything that is likely to strain them should be carefully avoided.

**PRECAUTIONS.**

A chill is to be especially guarded against. This does not mean that fresh air is to be shut out, but that the body should be kept warm in bed. If the night dress is thin a light flannel jacket may be worn over it. This is better than putting on an under flannel, which is uncomfortable if the rash is irritating and more difficult to change when necessary.

The patient should not be allowed to leave bed for any purpose whatever. Appliances can be procured, or improvised, which render this unnecessary. It is almost impossible for a person to get up out of bed without some exposure, and a sudden chilling of the surface might greatly increase the severity of the disease. Bronchitis is a very common complication of measles, and in any disease of the chest exposure should be avoided.

**ITCHING.**

The irritation of the skin is not as great as in scarlet fever, but it may be severe enough to be very annoying for a time.

Soothe the surface with cornstarch, or a pure toilet powder, to exclude the air. It will give relief in mild cases. If not successful, bathing the skin with a solution of baking soda, a heaping teaspoonful to a pint of water, or rub-

bing it with carbolized oil may help to allay the irritation.

**BATHING.**

The patient may be sponged with tepid water under a blanket, a folded blanket being placed underneath to protect the bed. If there is much fever the sponging is very soothing and helps to reduce the temperature.

There need be no fear of driving in the rash. In some severe cases there is very little rash, or the rash disappears suddenly. Doctors think that this is owing to some complication that has arisen, and is not the cause of the dangerous symptoms, whatever they may be.

**VENTILATION.**

Plenty of fresh air should be admitted, by keeping the windows open in the hall, or in an adjoining room. When this cannot be done, even in cold weather the window in the sick room farthest from the bed can be opened, preferably from the top, and a strip of cheese cloth tacked across the opening to prevent a draft. If the room is a small one and the window opens directly on the bed, it cannot be kept open all the time. The patient must be covered with an extra blanket, the head also being protected, and the window opened widely several times a day, thoroughly changing the air in the room. The extra covering should be left on until the chill is off the air. It is sudden changes of temperature that are likely to be injurious.

**FEEDING.**

When there is fever the diet should be light. If there is loss of appetite, as there usually is, food need not be pressed on the patient. It is nature's indication that for the time being the system cannot assimilate nourishment, and for a few days the machine can be kept going without much fuel. Liquids are most easily taken—milk, gruels, broths and raw eggs, beaten with a little milk, or shaken with water. Meat should not be given until the temperature is normal. Bread and butter, toast, blanc mange, curds, any kind of porridge, eggs lightly cooked, and ice cream, made at home, are all suitable articles of diet as soon as improvement begins. There is a good deal of waste to be repaired, and nourishing food is a necessity.

**DISINFECTION.**

This, in all contagious diseases, is one of the most important duties of the mother, or the nurse in charge.

Some doctors have the patient rubbed with pure eucalyptus oil from the crown of the head to the soles of the feet as soon as possible, and continued once a day until the tenth day of the disease. The tonsils and back of the mouth are swabbed every two hours for the first 24 hours, with a cotton swab dipped in carbolized oil, one part carbolic to ten of oil. They claim that if this treatment is commenced early the infection is confined to the patient and cannot be carried to anyone else.

If this cannot be done the patient should be isolated as far as possible, and the person who takes care of him should wear a cotton wrapper, which can be slipped off on leaving the sick room to mix with the family.

The discharges should be disinfected. Covering them with quick lime is effective and cheap.

The dishes used by the patient should be put in a separate pan and have boiling water poured on them. The clothing should be boiled when it is washed.

After recovery the child should be thoroughly bathed, have the hair washed, and be dressed in clean clothing before seeing other people.

The room should be disinfected with formaldehyde, and well scrubbed and cleaned.

**DURATION.**

Measles usually lasts about three weeks. If a child who has been exposed to it does not develop the symptoms in from seven to twenty-one days he has probably escaped. Babies under six months old rarely take it.

**MUMPS.**

Although very seldom dangerous to life, mumps is a most disagreeable and painful malady. It is a swelling of the glands under the lower jaw, and usually begins with the one at the angle of the jaw, under the ear.

Sometimes both sides are affected, sometimes only one. A person may have mumps on one side and recover from it without the other side having been involved. If exposed to the infection again, perhaps years later, the side that escaped the first time may contract the disease.

It comes on in from ten to eighteen days after exposure, and usually begins with a chill, or feeling of chilliness, and stiffness of the jaw. As the swelling increases it becomes very difficult to open the mouth. The food must be liquids, or very soft solids, like milk toast, porridge, or curds. Chewing is out of the question, as the slightest movement of the jaws causes great pain. In the early stages, before the swelling has announced that the disease is really mumps, if a little vinegar is taken in the mouth the acid sends a sharp, shooting pain through the gland, which leaves no doubt that it is not in its usual condition.

If the swelling is large and hard, some relief may be had by bathing it with warm oil, either camphorated or plain sweet oil, and wrapping the part in flannel. The oil helps to relieve the tension of the skin, and the warmth is comforting.

A gentle laxative may be necessary, and the patient should not be exposed to drafts or cold air. This is the chief danger, as cold sometimes causes glands in other parts of the body to become involved, possibly with serious consequences.

In four or five days the swelling should begin to subside and the pain and soreness to diminish. They may, however, last for two weeks.

A person who has once had mumps on both sides does not take it again. Some persons escape even when exposed to the contagion. If a child who has been in contact with a case shows no symptoms in two weeks, or at the very latest in three, he may be considered absolutely safe.

**WHOOPIING COUGH.**

It is stated that whooping cough ranks first among the infectious diseases in its mortality in children under seven years old. It is extremely infectious, and a child suffering from it should not be taken where there are other children, nor allowed to travel in railway or street cars. It is not fair to expose others to the possibility of taking the disease.

It begins like a bad cold, and there is no positive certainty as to its presence until the characteristic whoop is heard. This is caused by the long breath which is drawn in to fill the lungs after a paroxysm of coughing, during which it has seemed as if the child must suffocate. Sometimes there is vomiting, or bleeding from the nose. If the blood is swallowed it may appear later as a black mass in the movements, but this need not cause alarm. If the blood is from the lungs it is bright red when it is spit out; this should be reported to the doctor.

**TREATMENT.**

Some doctors give oxygen in severe cases. It is inhaled through a special apparatus from a large cylinder. A mixture of syrup of squill and syrup of

cocillana has been highly recommended. Physicians of experience have their own favorite remedies which they have found to be of use. A spray containing carbolic acid may be prescribed, or if this cannot be obtained thirty drops of pure carbolic acid can be dropped into two and a half pints of boiling water and the child allowed to inhale the steam three or four times a day. The chest is one of the danger points, and should be rubbed back and front with warm oil, morning and evening, and protected with an extra fold of flannel.

**FOOD.**

The food should be nourishing. If the child is old enough to take solid food it is more likely to be retained than liquids when there is vomiting. Cornstarch, blanc mange, curds, beef juice, jelly, lightly poached eggs, soda biscuit soaked in milk will be relished. Food should be given as soon as the vomiting is over, that it may be retained as long as possible.

**FRESH AIR.**

Fresh air is absolutely necessary, though chilling the body must be avoided. When the weather permits the child should go out of doors every day, and sleep in an airy room at night, cool but without drafts.

**DURATION.**

The disease usually lasts about six weeks. The child is capable of spreading infection as long as the cough remains, and it may be communicated to another child by clothes he has been in contact with or toys he has played with. Great care is necessary.

**Young Women and the Twentieth Century.**

(An address given by Miss E. J. Guest, M.A., Belleville, Ont., at the Women's Institute Convention, Toronto, November 15th, 1911.)

This is an epoch-making convention. For the first time a minister of the Crown, the Minister of Power, presents the work of his department before the home-makers of Ontario. This is a distinct recognition of the changed status of the twentieth century young woman, of the 20,000 members of the Women's Institute (itself a twentieth-century movement), of the keen, critical intelligence of the delegates, who are noticeably young women, and of the rural home-makers' broad interest in public matters.

A glance at the programme, and one is struck by the comprehensive and fundamental character of the interests of the Institutes: child study, pure water, business methods, community improvement, first aid to the injured, immigration, the school, supervised playgrounds, wholesome amusement for factory young people—in short, the scientific study of the needs and welfare of the human being, a linking of the home with the school, the school with the community, and the community with the state at large.

This is the New Woman, here at last—that dreadful person we used to be warned of in the 19th century. What are her aims? How do we like her? What has brought the change?

And the answer comes briefly—co-education, and that mysterious, irresistible Spirit of the Times, which is after all the Spirit of the Divine.

Fifty years ago we found her in her father's home, carrying on there the manufactures of rural Ontario: spinning, weaving, cooking, tailoring, dressmaking, sugar and candle making, carpet-weaving; her one occupation, house-work; her one

career, marriage; her one profession, motherhood. No High Schools, no Universities, no other professions open to her.

To-day we see her gone to the factory, to the business and commercial world, in all the professions. It has not been entirely of her own volition. She has been pushed out by the changing conditions of the times. Her former work has left the home—she had to live—she has followed it. She has had to face great odds, conquer difficulties, become self-supporting. She has won her footing, and the result is she has grown self-reliant, independent, self-appreciative and full of initiative.

One young woman, with only a business education, opened a millinery shop, made money, invested in Toronto real estate, and is now worth \$75,000.

"Women have keener business perceptions than the average man," says this young woman coolly.

It is interesting to note, however, that in the professions the lines that appeal most strongly are those that appeal to the womanly in her. Teaching and nursing come first, medicine next, and law last, preaching scarcely at all. Of some ten thousand public and high school teachers who are directing the education of the half million pupils of Ontario, about eight thousand are women. That is, the real nation-building of this Province is in the hands of its educated young women; and this is not the deplorable thing some of our excitable newspaper friends would have us believe. Women's ideals of life make for civilization more than men's. The woman stands for peace, not war, for moral purity, for temperance, for cleanliness, for industry, for religious faith. Is this a weak or low national ideal of life?

Are there dangers in the new order of things—in this out-of-the-home movement? There are indeed. Physical dangers to the young workers from too long hours of work, unsanitary surroundings, badly-heated and badly-ventilated rooms; moral dangers, arising from the inequality of pay given to men and women for the same work, and from the loneliness of one cut off from home ties. A firm advertised this summer in an Ontario city: "Girls wanted; liberal wages; \$4 to \$6 per week." Anyone who has tried to live in one of our larger cities on that knows what a severe strain is being put upon the moral resistance of these young fun-loving, beauty-loving girls, surrounded as they are by temptations, at first sight innocent enough to the unwary, but inevitably leading to downfall and ruin.

Another danger is from city boarding-houses, with no common parlor, where the girl has to receive all her friends in her own room. Rapid growth of populous centres brings its penalties, but this is a serious menace to the self-respect and modesty of the unchaperoned business girl, and it is a work for government-authorized boards of women to see that boarding-houses for young city girls are safe and desirable, however plain.

The same causes, loneliness and poor pay, give the White Slaver his opportunity. The awful traffic no longer belongs to other countries, but is preying on the girls of our own Province, especially our country girls, who go to the cities, often lured there by false advertisements.

No girl should go to a city without being sure of the character of the firm she is to work for, and of a safe boarding-place. The laws should also be amended, so as to mete out severer punishment to what is worse than murder.

The dangers that beset the better educated young women are said to be a lack of domestication and an aversion to marriage. These are more apparent than real. Few women really like the monotony of long-continued housework, but as they are used to conquering difficulties and have learned the relative values of things that make up life, this dislike will result, as it has with men, in the invention of labor-saving devices, such as we have seen illustrated along electrical lines to-night.

As to marriage, one notes with interest the situation. "Our finest girls don't marry," complains one man. "When I was young, a man married whom he liked; now he marries whom he can get," growles another.

One man took his daughter out of High School as she was about to write for a second-class certificate and sent her

to be a milliner. "They won't marry if they get to be teachers," he said.

A mother hesitated long before yielding to her daughter's desire 'to go to University, 'because University women don't marry, they say.'

Meanwhile, what are the girls thinking? Contrary to what is usually said of them. They are not averse to marriage, and they demand not so much money as brains and character. They value the ability to make a living more than inherited wealth. They demand an equal moral standard, a square deal in marriage as in business. They marry, but they marry later in life, and with a sense of the fundamental values of life, of comradeship, of sympathy, of courage, of love. The girl has gone out into the world, and comes back to her home with an appreciation of her own value, of her husband's difficulties and weariness, of the value of the home, its divinity, its necessity, its relation to life and to the state.

What sort of mother does she make? Here she must stand or fall as making a success or failure of twentieth century life. She has successfully competed with men in business, in school, in the Universities. She has made a success of mathematics, science, classics, medicine, law, but in all this she has done no more than men. There is one specialty all her own. What does our trained young woman think of it?

This: That it is still her greatest contribution to the race to be the mother, spiritually as well as physically, of all that live. With all her training nothing need be feared. You cannot educate the mother-heart out of women. You just make it bigger, deeper, tenderer, more scientific. If she is not the physical mother of her own children, she is the spiritual and intellectual mother of all, old and young, who need her. Some of the divinest mothering in Ontario is being done by women who are not physical mothers. And our young woman brings a new tone to her work—all the training, business, professional, moral, she brings to bear on her problem—she elevates it to a profession. She believes in science in mothering as in engineering, or as in medicine or any of the professions; she demands scientific child culture from governments as well as scientific agriculture. And it is for this she values the franchise—for the thinking young woman wants to vote—she sees that only to a limited extent is the home her sphere, the child, wherever its needs may take her, is her larger sphere. This feeling it is, this perception of the fact that if she is going to safeguard her own child she must help to safeguard all children, which is leading the young women of rural Ontario to be interested actively in the school, the community, city conditions, the liquor traffic, white slavery, the cigarette, infant mortality, and finally legislation. Seriously, quietly, practically, she looks upon the vote not as a "Right," but as a "Duty"; not as wanting to do men's work in government, but her own, which has been too long neglected; not as complaining of but as proud of her splendid "men of the north," who are building "a nation in a day." She wants to do her part in the nation-building, to give motherhood its true status in national life, to be worthy of the trust reposed in her. She wants the vote that she may more effectively fight Ontario's battle against disease, against ignorance, against crime, against intemperance, against white slavery. She wants it that she may make the home, the education of parents, child welfare a state department of the National Government. So far from making her neglect her home, this broader outlook intensifies her intelligent devotion to it. She feels it is a case of, "These ought ye to have done and not to have left the other undone," and accepts national motherhood as a sacred trust for "Home and Country."

#### Among the Books.

"Susanna and Sue"—This book has been issued by Houghton, Mifflin & Co., New York, in an especially attractive form, on heavy, coated paper, with excellent type, and illustrations of exquisite daintiness. The story itself is a delightful one, unravelling, with Kate Douglas Wiggin's well-known literary skill, the fortunes of the little sister Susanna, who, with her little daughter

Sue, runs away from an unkind and unappreciative husband to take refuge in a Shaker settlement. Not the least interesting feature of the book is the insight given into the lives and ideals of the Shakers as revealed by quaint Brother Ansel, and the saintly Eldress Abby and Elder Gray, and others; yet it seems that "all's well that ends well," when Susanna returns to her forsaken husband, who, in the meantime, has developed into the man he was intended to be. The price of the book is \$1.50 net.

"The Love That Lives" (The MacMillan Company, of Canada, Ltd., Toronto. Price, \$1.25). Mabel Osgood Wright has written but one "Commuter's Wife," yet there is much that is charming in this new book from her pen. Her love of nature and dogs again appears in many a dainty and characteristic touch, her quiet humor in the pictures she has drawn of the problems of a minister's family, and the ready sayings of the witty Pan; but it is with deeper things that Mrs. Wright has concerned herself in this book. In Christopher Curwen is shown forth the true satisfaction that come to a godly life,—in his son Martin the truth that not all men are called to the ministry, and that there are other ways of service as necessary; through the daughter Athene is presented the argument that sound business capacity in a woman is not incompatible with her being a lady in every sense of the term, also that a woman of the highest type demands that her mental growth shall go on after marriage as rapidly as before. Needless to say, two or three pretty love affairs run through the story.

#### The Poor Voter on Election Day.

The proudest now is but my peer,  
The highest not more high;  
To-day, of all the weary year,  
A king of men am I.  
To-day, alike are great and small,  
The nameless and the known;  
My palace is the people's hall,  
The ballot-box my throne!

Who serves to-day upon the list  
Beside the served shall stand;  
Alike the brown and wrinkled fist,  
The gloved and dainty hand!  
The rich is level with the poor,  
The weak is strong to-day;  
And sleekest broadcloth counts no more  
Than homespun frock of gray.

To-day let pomp and vain pretence  
My stubborn right abide;  
I set a plain man's common sense  
Against the pedant's pride.  
To-day shall simple manhood try  
The strength of gold and land;  
The wide world has not wealth to buy  
The power in my right hand.

While there's a grief to seek redress,  
Or balance to adjust,  
Where weighs our living manhood less  
Than Mammon's vilest dust,—  
While there's a right to need my vote,  
A wrong to sweep away,  
Up! clouted knee and ragged coat!  
A man's a man to-day.

#### The Popularity of "Ben-Hur."

President Garfield ventured the prediction that Gen. Lew Wallace's "Ben Hur" would "take a permanent and high place in literature." His prophecy, extravagant as it then seemed, has already been justified. It is true that General Wallace's novel has won a popular rather than a critical success; but a novel that can grip the hearts of a whole people becomes, by that very fact, a literary portent of the first order. With the single exception of "Uncle Tom's Cabin," no American book has equalled "Ben Hur" in popularity. It has been published in fourteen editions, aggregating 1,000,000 copies. It has been translated into German, French, Swedish, Bohemian, Turkish, Italian, Spanish, Portuguese and Arabic, and has been printed in raised characters for the blind. In its dramatic version it has been witnessed by tens of thousands of people in all our great cities.—[Current Literature.

## Hope's Quiet Hour.

### Helping Together by Prayer.

Ye also helping together by prayer (for us.—2 Cor. i: 11.

"The weary ones had rest, the sad had joy  
That day, and wondered 'how?'  
A ploughman singing at his work had prayed,  
'Lord, help them now.'  
Away in foreign lands, they wondered 'how'  
Their simple word had power?  
At home, the gleaners, two or three,  
Had met  
To pray an hour.  
Yes, we are always wondering 'how?'  
Because we do not see  
Some one, unknown perhaps, and far away,  
On bended knee!"

Life is a great romance, and, if we keep our eyes open, we shall find it intensely interesting. Consider the cases mentioned above, for instance. A man was ploughing—a very commonplace task—but his soul reached up until it touched the hand of God, and then reached out to carry the gift of joy and peace which God had pressed into his hand to sad and weary hearts. No wonder he sang as he trudged along behind the plough. Then consider the other case. A little mission-band had met together, not for work (in the ordinary meaning of the word), but for that highest work which anyone can do—prayer. Where the two or three were gathered together, the Master Himself was standing in the midst of them. In His hand they laid their request for a blessing on the work of the missionaries in a distant country. Swifter than the lightning their helpful prayer went out to do its silent but mighty work. How full of joy they would have been if they had seen the result of their far-reaching prayer—"Blessed are they that have not seen, and yet have believed," have not seen the Risen, Living Lord in their midst, and yet have known, by spiritual vision and spiritual touch, that He was really there, able to do mighty works through their prayers. Think of the wonderful battle which was fought in Rephidim, when Joshua was able to prevail against the fierce foes of Israel as long as Moses stood on the top of the hill holding high the rod of God. When Moses held up his hand, Israel prevailed, and when he let down his hand Amalek prevailed. To those in the thick of the fight it must have seemed as though Moses were doing nothing to help them, and yet he was doing more than Joshua and all his picked warriors put together. And those who are in the thick of the battle against evil now, may fall back or go forward according as their friends help them in prayer. None of us can estimate how much we owe to the prayers with which our best friends hold us continually close to the Heart of God. We are so apt to forget that there is a real connection between prayer and its results, and perhaps those who are poor in this world's goods may feel disheartened because they have nothing to give. "Nothing to give?" Why, the great treasure of God is flung open to all His loyal servants, and His angels stand always ready to carry answers to prayer anywhere. Do you remember how the veil that hides the angels was lifted when Daniel was praying for his people? The angel Gabriel was caused to "fly swiftly," that he might bring to the man pleading for sinners the great promise of the coming Saviour.

The important thing for each of us to remember is, that prayer to God is not like the useless petition which the priests of Baal poured out, in vain repetition, to a god who could not hear nor help. The value of prayer rests entirely on the Presence of the All-mighty, All-loving God.

This week I saw a marvellous confirmation of the truth of the Christian religion. I am writing this in Christmas week, and this is what I saw: The streets were filled with eager people, either hurrying to buy tokens of goodwill or hurrying home with their arms full of parcels. The stores were crowd-

ed, and it was scarcely possible to push one's way into the elevators at Eaton's. The station was packed with holiday-makers, and the postman exchanged his usual small bag for a wagon loaded with letters and packages. At the hospital service, which I had the pleasure of attending on, Christmas Eve, the room was beautifully decorated with wreaths and real flowers—roses and lilies, while both hospital workers and patients wore carnations, though I was told by someone who wanted to buy flowers, that roses were \$6 a dozen, and carnations \$4. In one hospital a nurse told me that everyone who was able to take solid food at all had turkey on Christmas Day—and turkeys are costly luxuries in a city. I only saw a little edge of the great excitement of Christmas, which turns the world upside down, and takes hold of people more and more each year. Are you asking why I call it a marvellous thing? Why, because all the millions of dollars poured out unstintedly, all the gifts and letters and cards, all the smiles and handshakings, are inspired by the birth of a Child in a stable nearly two thousand years ago. If a child were born anywhere in the world to-day, would you not say it was incredible to suppose that, nineteen hundred years from now, even one person would take the trouble to enthusiastically celebrate his birth. But the celebration of this Birth is not confined to one country only—as the Americans may keep Washington's birthday—but it has captured the whole civilized world. We do not have such a tremendous result without a mighty Cause. Unless that Birth stands alone in the history of the world, then there is no explanation of its power to stir the hearts of men. Let those who doubt or deny the Divinity of Christ explain—if they can—why His Birthday is kept as no other birthday has ever been kept since the world began.

Why did I plunge into this description of Christmas in the middle of a talk on Prayer, do you think? Why, because I want you to realize that JESUS is GOD, and that He is very near those who seek His Face. Because I want your prayers to be real and personal, laid before One who knows the best kind of answer to give. I want you to expect an answer, and to thank Him for it, without waiting until you can understand the answer, or until you hear that it has been sent. A great singer used to pray that certain of her songs might give spiritual help to those who heard her, and once a man came and told her that he was inspired to devote his life to Christ by hearing her sing one of these songs. What if he had never told her? Would not her prayer have helped him, just the same? Only God knows how many others were inspired by her singing to live nobler lives.

What about our prayers? Have we really helped others by our earnest, untiring, trustful way of holding up their lives to God? Or have we "said our prayers" carelessly and hurriedly—when not too tired or too busy—leaving the mighty power for good which God has trusted in our hands to lie idle? How much good our friends have missed which God intended us to give them.

The celebration of the great festival of Goodwill—just past—is a proof that we enjoy giving, and in prayer we can give far more than we know or imagine. The Great High Priest ever liveth to make intercession for us all, and we are told that the angel who offers the prayers of all saints on the golden altar before the throne, has given to him "much incense" to add to these prayers. The "much incense" must be our Lord's own prayers, without which ours would be powerless. I don't know what yours are like; but, if they are of as poor quality as mine, you will be glad to know that the angel who offers them to God always adds to them the glorious intercession of the Great High Priest. They are cast into the purifying fire of His Love, until they are fit to be offered.

Have you prayed, and then grown discouraged because you could see no answer to your prayer? Think, then, how our Leader Himself prayed for those who should afterwards learn to believe on Him, prayed for you and for me nineteen hundred years before we were born. This was His earnest petition for those who, after years, should believe on Him:

"That they all may be one . . . that the world may believe." He has patiently waited nearly two thousand years while the people who believe in Him have wasted their strength in quarrelling with each other, and the missionaries have found that the world will not believe because Christians are not "one" with each other. But the great prayer cannot fall to the ground, and at last the desire to be "one" has been awakened in Christian hearts. The Protestant Episcopal Church of the United States resolved, more than a year ago, to try and arrange a Conference of representatives from the various Christian bodies, "with the definite hope that it may help to prepare the way for the outward and visible reunion of all who confess our Lord JESUS CHRIST as GOD and SAVIOUR, and for the fulfilment of our Lord's prayer, 'That they all may be one.'"

the petitions that we desired of Him." Your help is needed—and needed NOW.

"The simple duty that awaits the hand Is God's voice uttering a Divine command."

DORA FARNCOMB.

## The Beaver Circle.

### Our Senior Beavers.

[For all pupils from Senior Third to Continuation Classes, inclusive.]

### Result, "Home Work" Competition.

Dear Beavers,—I don't think we have ever had a competition that aroused

is published. Any reader of the Beaver Circle may thus act as judge. Address, Beaver Circle, "The Farmer's Advocate," London, Ont.

The Honor Roll (a few of the letters not published were good enough to entitle their writers to a place on the Honor List) will be reserved until the prizewinners have been decided upon.

### Letters on the Home Work Competition. Series I.

It is a true saying that "The teaching profession is a noble occupation." The school teacher plays an important part in the moulding of the character and ideals of the nation. The method, therefore, with which that teacher leads his pupils along the paths of knowledge is a question of no mean importance, and it embraces the theme of our competition, "Should Home-work be Abolished?"

When a boy or girl enters upon his or her public school curriculum at a tender age, home-work seems, and I think is generally conceded, harmful to their mental capacity, but the total abolition of home-work would be, I should imagine, detrimental to a pupil's welfare. What could be more helpful to the development of the mind of a youth than to give it some hidden treasure to pry open, some mathematical problem, or the prying into the meaning of some masterpiece of prose or poetry where the concentration of the whole mental faculty is implied? This, in moderation, would, I believe, be more helpful to mental development than the closing it up, as it were, to school subjects between the sessions of school. I cannot conceive that the mind should be in any way brighter in the absence of moderate home-work.

Then, again, the moral aspect must not be completely shunned. If a child is given a reasonable amount of home-work to do, it is natural that he should feel it his duty to accomplish it, while if he did not have that restriction, he would feel more inclined to spend his spare time learning mischief.

Then, again, I think pupils will make much more rapid progress at school when given home-work than without it. In the quiet moments of reflection laid out by the teacher, the mind will become better acquainted with the lessons.

The school is the place for instruction, but at home is the place for study.

JOSEPH W. THOMPSON  
(Age 16, left school.)

Marmion, Ont.



"How many are eight times nine?"

It is certainly time that the Church—the Bride of Christ—should bestir herself to do her part towards the fulfilment of her Beloved's dying desire. Can you and I do anything worth considering? Just think what we can do? I saw, in a recent number of "The Farmer's Advocate," that its circulation was greater than ever before. Of course, there are many "Advocate" readers who never glance at this column, but if all who read the Quiet Hour will be "one" in their earnest daily prayer for the unity of Christendom, the power of their united petition will help forward mightily the "commission appointed to arrange for a world conference on faith and order." As Mordecai said to Queen Esther: "If thou altogether holdest thy peace at this time, then shall there enlargement and deliverance arise . . . from another place . . . and who knoweth whether thou art come to the kingdom for such a time as this." Our Lord's prayer for the unity of His disciples will most certainly rise triumphant over the obstacles which seem now to be almost insurmountable. If your prayer be joined to the great cloud of prayers for Unity, now going up from many thousands of hearts, then you will have your share in the Victory which is absolutely certain. No prayer inspired by love can fall to the ground, least of all the Prayer of our Master, the "KING OF KINGS, AND LORD OF LORDS."

Many of our prayers are foolish or selfish, but we can make no mistake when we pray our Lord's great prayer after Him. St. John's statement is a truism: "This is the confidence that we have in Him, that, if we ask anything according to His will, He heareth us: And if we know that He hear us, whatsoever we ask, we know that we have

more interest than this one, "Should Home-work be Abolished?" Perhaps some of you will be a little surprised at the verdict of the Beavers—fifty-nine per cent. of the total number who wrote, decided that Home-work should be retained; forty-one per cent. that it should be abolished. By force of numbers, then, you see that the debate has been decided—that Home-work should not be abolished. It is only fair, however, to state that almost all of the letters upheld just a "moderate" amount of home-work, leaving time for recreation and "chores." We felt inclined to sympathize rather strongly with one little girl who said that she thought "if boys and girls played in school, they should be given plenty of home-work, but that if they worked hard in school, they should not be asked to work again at night."

Now, as to the winner of the first prize—the writer of the best letter—we have not decided, and for this reason: We are going to let YOU decide this time; you may secure the help of your teacher and parents if you choose.

We are going to print all the best letters in TWO issues of "The Farmer's Advocate." Do not write your decision until you have read both of the papers, then send us a letter or post card as follows:

"I think the prizes should be awarded thus:

- First Prize.—.....
- Second Prize.—.....
- Third Prize.—.....

Then sign your name and address. All of these judging letters and post cards must be here within two weeks of the date upon which the last series of letters

There are a great many reasons both for and against home-work, but I think the best are against it. The greatest argument against it is that it does not leave children time for the exercise they need. If they do not get plenty of exercise, they cannot develop into strong, healthy men and women. Pupils are in school from five and one-half to six hours a day, which is half, or nearly half, of their waking hours. When are they going to get enough exercise if they have to spend most of the other half doing home-work? If there were no other reasons for abolishing home-work, I think this one would be sufficient.

Then, home-work and home-study help pupils to pass examinations at an earlier age. This is not the wisest thing, and especially if it is at the expense of their growth and development in other ways. We see a great many children at the age of twelve years who have passed the Entrance and are staying home. They do not intend to go on to High School, and in a short time forget a greater part of what they have learned, because they "crammed" a lot of it. Would it not be better if they had not passed the examinations so soon? They would then go to school longer and learn the lessons more thoroughly.

Everywhere we hear parents complaining that children have so much home-work to do that they have no time for anything else. A person who is well educated is one who is fitted to be a good citizen. Book education is good in its place, but it is not the only thing needed. A person educated in nothing else becomes a "book-worm," and we all know what useless people they are. If children did not have so much home-work, they would have time to learn

these other things which would be useful to them.

Pupils are apt to leave their home-work till the last thing, and then do it very carelessly, or get parents to help them. The parents' ways of doing it are different from the teacher's, and the child, who perhaps did not understand it any too well before, gets his ideas confused, and the teacher finds it harder to explain again than if the pupil never heard of it before.

Home-work makes school a drudgery instead of the pleasure it should be. Often we hear pupils say they would like their school-work if it were not for the home-work they have to do. This is especially so in the High Schools where pupils have three and four hours' home-work.

Of course, much can be said in favor of home-work, but I think most of those who go to school will agree with me when I say we could do far more work in school hours if we did not have it.

CALLA DOLBEAR

(Age 15, Form II., High School).  
Walnut, Ont.

Dear Beavers,—I saw in the Circle some time ago that the next competition would be on, "Should Home-work be Abolished?" As this is a question I am interested in, I will try and give you some of my "theories."

I think it should be "abolished," at least a great deal more than it is at present. Of course, a little home-work at intervals when there is a "rush" on, will not hurt anyone, but when it comes down to home-work that keeps you up till ten or eleven o'clock, and makes your head ache and your brains get into a "whirl-wind," I think it is time to stop!

Another reason why I think home-work should be abolished is that one has not the same chance to do school-work at home as he has at school, for the simple reason that he cannot get his thoughts settled down to his work when everyone is talking, and if he goes off in some room by himself, he very soon becomes lonesome, and thinks of what the famous old poet says, "The path of glory leads but to the grave."

No doubt some will say, "I got home-work when I went to school, and it won't hurt anyone now any more than it did then." However, I don't consider that goes very far, as people think as long as they got over it that others can do the same, and as they have not got to do any more, never stop to give it any serious thought.

Perhaps some will think that because some of us do not like home-work (and I never saw anyone that did), that we are lazy. I will deny this charge, for it is not always the case, though it might be in a very few instances.

In concluding, I may as well say that I don't expect all the Beavers to agree with me on this subject. However, these are my views, and I hope you will not criticise them too severely. Wishing the Circle every success, I remain, yours truly,

JOSEPH HODGSON

(Age 16, Class Jr. IV.)

Mindemoya, Manitoulin Island.

Dear Puck and Beavers,—I am going to try my best with the competition and tell what I think about it. "Home-work"—Do half the children going to school know what it means to the teachers and to themselves just to do a little studying at home? The pupils think they do enough studying in the daytime, without having any home-work to do after school. Does every boy and girl who goes to school do nothing but sit and study all day long? No; they are gazing at something part of the time, or something like that, but not at hard study all the time.

What I think home-work is for, is just to have your lessons prepared for the next day. It is proper, for, see what time you would waste in school hours to prepare your lessons, and if the children do not pass their examinations, then they say it is the teacher's fault. It would be because the child is too lazy to study.

EVELYN ADAMS

(Age 15, Form II., H. S.A.)  
Newcastle, Ont.

Dear Puck,—So we are to express our opinions on home-work this time? Per-

haps, with that little clause "left school" under my name, you will think that I am not entitled to a place in this competition. Well, if not actually attending school, I am very much interested in it, and all phases of school life yet, and would like to say what I think about this part of it.

"Should Home-work be Abolished?" So far as public school is concerned, I say it should. If necessary, make longer hours, but do away with the home-work.

In the first place, it is so indefinite. The teacher may give one an hour, or two or three hours' work at night, which must be accomplished, unless one would fall behind; no matter how tired he may be, this must be done. Make the school term longer; take more time to get through if necessary, but when we are out of school, let us have it entirely out of our minds till another morning comes.

The very idea of it is disagreeable! The average boy or girl is generally tired enough after school is out—tired of study anyway; the whole evening should be devoted to recreation and play, rather than the necessity of again bringing out books and spending a weary



A "Snow" Tree.

hour by lamp-light. One is tired of books for one day, and the whole mind rebels at the thought of more of them.

Another point in favor of doing away with home-work is in the power of concentration of thought. When the brain is fresh and clear, it is an easy matter to attack the lessons singly, and make short work of them. All the faculties are directed on each subject in turn, until by night the brain is tired, and, with a mass of work before one, the pupil does not know where to begin; whereas at school the work is planned by the teacher; that at least is saved by the pupil. No; the day's end should be spent in sports, more especially the younger the person. The home-work is the sort of echo, the reminder of the labor gone through with, and it is not pleasant to think of doing more in the evening. In the morning before school, few of us have any time to spare.

If there must be extra work, let there be an extra half-hour or so added to the school period, and when all the pupils are under the teacher's eye, it would be done. It would also be much easier to do it then when it would be compulsory, but when it is left to one's self in the evenings, it is very easy to put it off. Such a method could be worked like the "spare periods" which are generally found on the time-tables of the High Schools.

This plan is more adapted to country schools than those in the city. Indeed, I have been writing more from the viewpoint of the country boy or girl, as that is where I live, and am not so well acquainted with the conditions of our city cousins. Wishing the Circle every success, yours sincerely,

FAWCETT EATON (left school).  
Cardiac, Ont.

Dear Puck,—I don't know, I want to know a person in the class with a good opinion.

Bob answered the question, "What do you think of home-work?" "I don't know," he said. "Tell me, what do you think of it?"

## Reminiscences of Christmas in the "Old Country."

(By an English girl.)

It is a beautiful starlit night of Christmas Eve, with a crisp, frosty air. The day has been a very busy one for the grown-up folk. There was the final packing and sending away of presents and greetings, then the finishing touches to put to the Christmas tree, the holly and evergreen decorating to be done, and of course the indispensable bough of mistletoe to be hung, and later on all the mysteries of Santa Claus to be got through.

Very few of these good people are asleep at midnight, and just as they are dozing off the strains of the old familiar hymn reach their ears across the stillness of the night. "Hark, the Herald Angels Sing, Glory to the new-born King!" Can anyone hear that carol sung well at such a time and not feel greatly impressed? It almost takes one in fancy back to the first Christmas night, when the Angels heralded the birth of Christ, the Saviour of the world.

With the Angels' message of Peace and Goodwill sounding in their ears, the tired parents fall asleep, and wake the next morning to find that Christmas has come at last, the day that had taken so much of time and thought to prepare for; the day that the little ones had looked forward to for so long. Let us now take a peep into the children's room. Are they awake? Of course they are! The stockings hung up the previous evening were found filled, but are empty now. What an array on the bed—toys, games, and all sorts of toothsome dainties for them to indulge in! Santa Claus has indeed been good; he seemed to know just what each one wanted, and, oh, how eager these dear mites are to show you their treasures. There are further surprises at the breakfast table; everyone, even mother and father, has some sort of a present on his or her plate. How anxiously everyone watches for the postman, who happens to be very late on this particular day. After breakfast the family disperses; those who wish go to church, the music being of a special character;



A Winter Luncheon.

others go for a walk in the country, which is delightful on a clear frosty day. Of course mother stays at home to cook the dinner and to receive the coming guests, Christmas being the time for family reunion.

Everyone is at home again, and meet to enjoy a good dinner, and all the fun to follow, in pulling the crackers and reading the mottoes they contain, and so on.

The afternoon is spent in pleasant chat, around the fire, roasting chestnuts, perhaps telling fortunes, and having a little seasonable music at intervals. After a refreshing cup of tea the real fun of the day commences. There are games, such as "Prayer-books," "The Magic Wand," "Postman's Knock," and of course "Buddha's Ban" for the children's benefit. The redeeming of forfeits causes great fun and excitement, especially when a lady is requested to repeat Nelson's motto while standing under the mistletoe, viz., "England expects every man to do his duty." If a gentleman is told to howl like a wolf, he goes to the postman and kiss

the one he loves best." What a pleasure to see a Christmas party where all are thoroughly enjoying themselves.

Just when everyone is getting a little tired with the lively games, supper is announced, and comes as a welcome diversion. Oh, what a merry time it is, with all the funny jokes and speeches, everyone is in the humour, from the oldest to the youngest.

After supper the remainder of the evening is devoted to music and some good old-fashioned songs, which somehow always seem fresh again at Christmas time.

The time now comes all too soon to say "Good night." Another Christmas day is over, another milestone in life passed, and as each retires for the night the older folk wonder how many will meet again next Christmas, and their thoughts go out to those who have left Old England and gone across the ocean to make new homes in Canada.

P. Q.

EMMA N. EADES.

## A Foreword.

(Specially intended for mountain-climbers visiting Scotland, who may desire to make their tongues as nimble as their legs.)

A mountain's a mountain in England,  
but when  
A climber's in Scotland, it may be a  
Beinn,  
A Creag, or a Meall, a Spidean, a Sgor,  
A Carn, or a Monadh, a Stae, or a Torr.

For he goes up Beinn Dothaidh  
On the ice and the snothaidh,  
And nothing will staim  
From climbing Sgor Mhaim;  
If he's long in the leagaidh  
May tackle Creag Meagaidh  
Or, job that is hardhoire,  
The "Posts" of Corr' Ard Dhoire  
He strolls up Beinn Eithe  
By the easiest weighe,  
If he's wise; but Sgurr Dubh  
Will make him look blubb.  
Very grand is the vuidhe  
Will get from Meall Buidhe,  
But more will he sithe  
From Bruach na Frithe.  
Then for sport that is raoghal  
He lies to Beinn Laoghal,  
And surely will straidheimh  
To ascend Beinn a' Chlaidheimh  
And gaze, from afar,  
On Beinn Airdh a' Charr.  
To get up Stob Gabhar  
Takes more than an abhar,  
But considerably leas  
The ascent of Carn Eas.  
Now one cannot conciol  
That the slopes of Beinn Sgriol  
Are hardly as sheur  
As the crags of Carn Bheur;  
Nor can one mainteadhoin  
That the view from Beinn Mendhoin  
Surpasses the vaoigh  
Observed from Beinn Laoigh.  
—L. W. H., in the Scottish Mountaineering Journal.

## If You Want to Keep Young.

Hold young thoughts persistently. Avoid fear in all its varied forms of expression.

Simply refuse to grow old by counting your years or anticipating old age.

Don't allow yourself to think, on your birthday, that you are a year older.

Refrain from all kinds of stimulants and sedatives; they will shorten your life.

Keep in the sunlight; nothing beautiful or sweet grows or ripens in the darkness.

Nature is the great rejuvenator, her spirit is ever young. Live with her, study her; love her.

Avoid excesses of all kinds; they are injurious. The long life must be a temperate, regular life.

Keep mental cobwebs, dust, and brain ashes brushed off by frequent trips to the country, or by travel.

Never look on the dark side, take sunny views of everything, a sunny spirit drives away the shadows.

Cultivate the spirit of contentment; all discontent and dissatisfaction bring age-furrows prematurely to the face.

Think beautiful thoughts—harmony thoughts, truth thoughts, thoughts of innocence, of youth, of love and kindness.

## The Ingle Nook.

[Rules for correspondents 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.]

### Making Soft Soap.

There is so much grease on hand after the winter butchering on the farm that many people embrace the opportunity to make, at that time, a barrel of soft-soap, than which nothing is better for cleaning and washing rough things.

The first step is, to make a leach. This is done by placing a strong barrel from which both ends have been taken, on a close platform, slanting towards the front, somewhat, to catch the drip, and raised enough that a pail may stand beneath to catch the lye as it runs off. Prop the barrel up just a little at this side, so that a small space may be left for the escape of the lye.

Next, cover the bottom of the barrel with clean straw, and throw in a peck of slaked lime, then fill with good, sound hardwood ashes, which have been kept under cover. As each layer of ashes is put in, pound it down hard so that the water when poured in will be compelled to percolate through slowly.

When the barrel is full, scoop out a hole in the top large enough to hold about two quarts of water. Fill this with water, and as it soaks away add more. In a day or so, the lye will begin to run. Watch it, and if it is not strong enough, pour it back into the leach again. When you have two large pailfuls, strong enough to hold up a potato, pour it into the boiling kettle and add the soap-grease, which may be made up of all sorts of odds and ends of fat, meat-rinds, etc. It is not necessary that this fat be rendered, as the lye will "eat up" every vestige almost, that is of use.

Stir the mass well a few times, and leave it in the kettle a day or two before boiling. During this time save the weaker lye from the leach also.

Now, on some nice day, as, no doubt, you will want to do the boiling out of doors, set the fire going under the kettle, and boil it until the grease is all dissolved. If grease rises to the top after an hour or two of boiling, skim it off and save it for another time. Test the soap from time to time by putting a teaspoonful of it in a saucer and adding weak lye to it, a spoonful at a time, until it thickens nicely. Remember the proportion as you do this.

Now strain the soap through a big bag of mosquito-netting, if you wish to have it very nice and clear, measuring it carefully, and add the required amount of lye, by the pailful, stirring well before adding a new supply. If you have not quite enough weak lye, add rain-water, until the right consistency is secured.

Keep the soap in a very strong keg, as it is very sharp, and likely to eat through a weak one. Also remember not to use it until it has mellowed somewhat, as at first it is so strong that it is sure to be hard on the hands, and to take the color out of any cotton materials that may be washed with it. As remarked before, however, soft soap should never be used for washing anything but old or coarse things. It does very nicely for kitchen-towels, flour-bags, men's overalls, etc.

### Re Pumpkin Pie—Grape Nut Cake—Lemon Biscuits.

Dear Ingle Nook,—This is the first time I have picked up courage to write to your interesting Ingle Nook, but as I saw a question asked by "A Farmer's Wife," I thought I might be able to give her my experience with crust falling from pumpkin pies, and that is by not leaving them on the pie dish until they are cold. If you have not done this, try it the next time, and see if it makes any difference. Also, I come in distress, as I have looked over all our "Farmer's Advocate" and cannot find the lemon biscuits which have been printed previously as "Amelia" spoke of. Now, this is quite lengthy for my first attempt,

but I will now conclude with one of my favorite recipes.

**Grape Nut Cake.**—Two eggs, 1 cup of brown sugar, 1 cup of grape nut (cereal), 1 cup of raisins, 1 cup of currants, 1 cup of sour milk, 12 walnuts chopped, 1 teaspoon soda, 1 cup of butter, 2 cups flour.

Aliston, Ont.  
This is probably the recipe for lemon biscuits referred to: Three cups white sugar, 1 cup melted butter, 1 pint sweet milk, 2 eggs, 5 cents' worth oil of lemon, 1 ounce baking ammonia, pinch salt, flour to make a dough. Mix the ammonia (buy this at a drug-store; do not use ordinary household ammonia) with the milk. Roll the biscuits thin.

### Knitted Shawl—Crocheted Skirt.

Dear Dame Durden,—I see by "The Farmer's Advocate" that one of the Nookers wishes for a knitted shawl pattern. We made one this fall that is very nice. It is the "popcorn" stitch. Here it is: Use large bone or wooden needles, cast on 100 stitches.

First row.—Knit across plain.  
Second row.—Purl.  
Third row.—Knit 2 together.  
Fourth row.—Knit 1, thread over, knit 1, etc., to the end. Then repeat from 1st row.

Another reader wished for a crocheted skirt pattern. I made one over twenty years ago, and it is a lovely skirt yet. They are very warm for driving, and in very cold weather. Mine is crocheted in points, which makes the colors look nicer than a plain pattern. To begin one, make a chain about five yards long. On this chain are made the 38 points.

Second row.—Single crochet in first 7 stitches of chain, skip 2, 7 more single crochets on chain, in the 8th stitch put 3 s. c., then repeat until there are 38 points. That is all the pattern. If for a tall person, when about 25 inches deep, narrow the points to 6 stitches, make 3 or 4 more inches, and then narrow points to 5 stitches, after a few inches more are made to 4 stitches. When the opening is reached, instead of making it round, crochet back and forth. The points have disappeared in plain work, narrowed off.

Mine took 36 knots of factory yarn, and has four colors. Hope I've made the patterns plain enough to follow.

If any of the readers are troubled with constipation, instead of taking medicine, try eating whole wheat. Get new wheat if possible, not more than a year or two old. Take one cup of the wheat, soak

in water 24 hours, then cook 3 hours. Eat with milk, sugar, or a little butter melted and poured over it. This has relieved obstinate cases of constipation, by using for breakfast and tea. The longer some people use it the better they like it.

What shall I do with my olive oil that has become rancid?  
Can you give recipe for Brooklin Biscuit? Have lost ours.

BLUE BONNET.

I have searched through all my note-books and "Scientific American," also have made inquiries, but can find no trace of a method for sweetening rancid olive oil. I found, however, the following treatment for lard or dripping that has not become too rancid. You might try it on the olive oil. Pare a large white potato and divide it into three or four pieces of about equal size. Put the fat into an iron pot, or kettle, with the potato, and let it not only melt, but gradually come to a boil. Continue until the potato is quite brown, then remove it, and let the fat cool.

Can anyone send a recipe for Brooklin biscuit?  
Many thanks, Blue Bonnet, for your trouble in writing out the fancy-work directions. You are surely an Ingle Nook friend.

### Cards—Plum Pudding—Removing Paint.

Dear Dame Durden,—Would you kindly answer the following questions for me: In returning a call, should you always leave your card, or are there times when you should not do so?

Before we came here, someone painted the hard-wood floor of our dining-room an orange color. How can I remove the paint without injury to the floor? Thanking you in advance.

**Plum Pudding.**—One lb. bread crumbs, 2 tablespoons flour,  $\frac{1}{2}$  lb. suet,  $\frac{1}{2}$  lb. sugar, 3 tablespoons treacle, 6 or 8 eggs, 1 lb. raisins, 1 lb. currants,  $\frac{1}{2}$  lb. peel, 2 teaspoons mixed spice,  $\frac{1}{2}$  nutmeg grated. Mix dry ingredients well. Warm treacle and mix in. Let it stand in a warm place for a few hours. Beat yolks of eggs and mix them in next; lastly, the whites whipped stiff. Boil eight hours.

QUEENIE.

Ontario Co., Ont.

In regard to your question on calling, we quote from Emily Holt, an authority, in her Encyclopædia of Etiquette: "The majority of calls between women are exchanged on their appointed days at home, and then the cards are usually left by

the caller on the tray in the hall, on her way to the dining-room. If the call is the first she has paid that season in that house, she puts into the tray one card of her own and two of her husband's. Thereafter, during the season, she need not again leave her own card, if her subsequent calls are made on the friend's day at home. She still leaves two of her husband's cards, however, if her call is made in return for any entertainment to which he has been asked, and if her hostess is a married woman. If her hostess' unmarried daughters receive with their mother, the caller need not leave any cards for them, even though they are in society. She would, however, leave one of her own cards on retiring from the house, if she found a married daughter or a friend receiving with the hostess.

"A feminine caller never designs any of her own cards for the masculine members of a household on which she calls. A great many women now follow the rule, when calling on a friend's day at home, of leaving their own cards along with those of their husbands, even though it is not the first call of the season, if it is a call paid especially in return for some recent hospitality enjoyed under the roof of the lady receiving. If the visit is merely a friendly one, without any important significance, then no cards of any sort are absolutely requisite.

"A somewhat different disposition of cards is required when a call is made without any previous assurance of finding the person called upon at home. The caller usually takes the requisite number of cards from her case before ringing the door-bell. If she is a married woman, who has invited her recently to a dance or dinner, she takes two of her husband's cards from her case with two of her own. Her two cards are enough if she asks to see the ladies, implying thereby the hostess and one or more daughters. If the hostess is entertaining a sister, friend, her mother or a married daughter at the time, the lady calling then takes out three of her own cards. . . . Should the ladies be 'not at home,' she leaves the cards and goes on."

You see, there is quite a deal of ceremony about the use of cards, yet not nearly so much as there used to be. It seems to me that the use of cards is all right for towns and cities where the calling list may run into the hundreds, but I hate to see such ceremoniousness creeping into country places, and shoving back the simplicity that ought to be



Making Soap

our social salvation and our rural dignity. What do you think about it, Queenie, and the rest of you?

Scientific American gives the following method of removing paint from floors: Take 1 lb. American pearlsh, 3 lbs. quick-stone lime; slake the lime in water, then add the pearlsh and make the whole about the consistency of paint. Lay the mixture over the whole body of the work which is to be cleaned with an old brush. Let stand 12 or 14 hours, when the paint can be easily scraped off.

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## The Scarlet Pimpernel.

A STORY OF ADVENTURE.

By Baroness Orczy.

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(Continued from last week.)

### CHAPTER III.

#### The Refugees.

Feeling in every part of England certainly ran very high at this time against the French and their doings. Smugglers and legitimate traders between the French and English coasts brought snatches of news from over the water, which made every honest Englishman's blood boil, and made him long to have "a good go" at those murderers, who had imprisoned their king and all his family, subjected the queen and the royal children to every species of indignity, and were even now loudly demanding the blood of the whole Bourbon family, and of every one of its adherents.

The execution of the Princesse de Lamballe, Marie Antoinette's young and charming friend, had filled every one in England with unspeakable horror, the daily execution of scores of royalists of good family, whose only sin was their aristocratic name, seemed to cry for vengeance to the whole of civilized Europe.

Yet, with all that, no one dared to interfere. Burke had exhausted all his eloquence in trying to induce the British Government to fight the revolutionary government of France, but Mr. Pitt, with characteristic prudence, did not feel that this country was fit yet to embark on another arduous and costly war. It was for Austria to take the initiative; Austria, whose fairest daughter was even now a dethroned queen, imprisoned and insulted by a howling mob; and surely 'twas not—so argued Mr. Fox—for the whole of England to take up arms because one set of Frenchmen chose to murder another.

As for Mr. Jellyband and his fellow John Bulls, though they looked upon all foreigners with withering contempt, they were royalist and anti-revolutionists to a man, and at this present moment were furious with Pitt for his caution and moderation, although they naturally understood nothing of the diplomatic reasons which guided that great man's policy.

But now Sally came running back, very excited and very eager. The joyous company in the coffee-room had heard nothing of the noise outside, but she had spied a dripping horse and rider who had stopped at the door of "The Fisherman's Rest," and while the stable boy ran forward to take charge of the horse, pretty Miss Sally went to the front door to greet the welcome visitor.

"I think I see'd my Lord Antony's horse out in the yard, father," she said, as she ran across the coffee-room.

But already the door had been thrown open from outside, and the next moment an arm, covered in drab cloth and dripping with the heavy rain, was round pretty Sally's waist, while a hearty voice echoed along the polished rafters of the coffee-room.

"Aye, and bless your brown eyes for being so sharp, my pretty Sally," said the man who had just entered, whilst worthy Mr. Jellyband came bustling forward, eager, alert and fussy, as became the advent of one of the most favoured guests of his hostel.

"Lud, I protest, Sally," added Lord Antony, as he deposited a kiss on Miss Sally's blooming cheeks, "but you are growing prettier and prettier every time I see you—and my honest friend, Jellyband here, must have hard work to keep the fellows off that slim waist of yours. What say you, Mr. Waite?"

Mr. Waite—torn between his respect for my lord and his dislike of that particular type of joke—only replied with a doubtful grunt.

Lord Antony Dewhurst, one of the sons of the Duke of Exeter, was in those days a very perfect type of a young English gentleman—tall, well set-up, broad of shoulders and merry of face, his laughter rang loudly wherever he went.

A good sportsman, a lively companion, a courteous, well-bred man of the world, with not too much brains to spoil his temper, he was a universal favourite in London drawing-rooms, or in the coffee-rooms of village inns. At "The Fisherman's Rest" everyone knew him—for he was fond of a trip across to France, and always spent a night under worthy Mr. Jellyband's roof on his way there or back.

He nodded to Waite, Pitkin and the others as he at last released Sally's waist, and crossed over to the hearth to warm and dry himself: as he did so, he cast a quick, somewhat suspicious glance at the two strangers, who had quietly resumed their game of dominoes, and for a moment a look of deep earnestness, even of anxiety, clouded his jovial young face.

But only for a moment; the next he had turned to Mr. Hempseed, who was respectfully touching his forehead.

"Well, Mr. Hempseed, and how is the fruit?"

"Badly, my lord, badly," replied Mr. Hempseed, dolefully, "but what can you expect with this 'ere government favourin' them rascals over in France, who would murder their king and all their nobility."

"Odd's life!" retorted Lord Antony; "so they would, honest Hempseed,—at least those they can get hold of, worse luck! But we have got some friends coming here to-night, who at anyrate have evaded their clutches."

It almost seemed, when the young man said these words, as if he threw a defiant look towards the quiet strangers in the corner.

"Thanks to you, my lord, and to your friends, so I've heard it said," said Mr. Jellyband.

But in a moment Lord Antony's hand fell warningly on mine host's arm.

"Hush!" he said peremptorily, and instinctively once again looked towards the strangers.

"Oh! Lud love you, they are all right, my lord," retorted Jellyband; "don't you be afraid. I wouldn't have spoken, only I knew we were among friends. That gentleman over there is as true and loyal a subject of King George as you are yourself, my lord, saving your presence. He is but lately arrived in Dover, and is settling down in business in these parts."

"In business? Faith, then, it must be as an undertaker, for I vow I never beheld a more rueful countenance."

"Nay, my lord, I believe that the gentleman is a widower, which no doubt would account for the melancholy of his bearing—but he is a friend, nevertheless, I'll vouch for that—and you will own, my lord, that who should judge of a face better than the landlord of a popular inn—"

"Oh, that's all right, then, if we are among friends," said Lord Antony, who evidently did not care to discuss the subject with his host. "But, tell me, you have no one else staying here, have you?"

"No one, my lord, and no one coming, either, leastways—"

"Leastways?"

"No one your lordship would object to, I know."

"Who is it?"

"Well, my lord, Sir Percy Blakeney and his lady will be here presently, but they ain't a-goin' to stay—"

"Lady Blakeney?" queried Lord Antony, in some astonishment.

"Aye, my lord. Sir Percy's skipper was here just now. He says that my lady's brother is crossing over to France to-day in the Day Dream, which is Sir Percy's yacht, and Sir Percy and my lady will come with him as far as here to see the last of him. It don't put you out, do it, my lord?"

"No no, it doesn't put me out, friend; nothing will put me out, unless that supper is not the very best which Miss Sally can cook, and which has ever been served in 'The Fisherman's Rest.'"

"You need have no fear of that, my lord," said Sally, who all this while had been busy setting the table for supper. And very gay and inviting it looked, with a large bunch of brilliantly colored dahlias in the center, and the bright pewter goblets and blue china about.

"How many shall I lay for, my lord?"

"Five places, pretty Sally, but let the supper be enough for ten at least—our



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friends will be tired, and, I hope, hungry. As for me, I vow I could demolish a baron of beef to-night."

"Here they are, I do believe," said Sally, excitedly, as a distant clatter of horses and wheels could now be distinctly heard, drawing rapidly nearer.

There was general commotion in the coffee-room. Everyone was curious to see my Lord Antony's swell friends from over the water. Miss Sally cast one or two quick glances at the little bit of mirror which hung on the wall, and worthy Mr. Jellyband bustled out in order to give the first welcome himself to his distinguished guests. Only the two strangers in the corner did not participate in the general excitement. They were calmly finishing their game of dominoes, and did not even look towards the door.

"Straight ahead, Comtesse, the door on your right," said a pleasant voice outside.

"Aye! there they are, all right enough," said Lord Antony, joyfully; "off with you, my pretty Sally, and see how quickly you can dish up the soup."

The door was thrown wide open, and, preceded by Mr. Jellyband, who was profuse in his bows and welcomes, a party of four—two ladies and two gentlemen—entered the coffee-room.

"Welcome! Welcome to old England!" said Lord Antony, effusively, as he came eagerly forward with both hands outstretched towards the newcomers.

"Ah, you are Lord Antony Dewhurst, I think," said one of the ladies, speaking with a strong foreign accent.

"At your service, Madame," he replied, as he ceremoniously kissed the hands of both the ladies, then turned to the men and shook them both warmly by the hand.

Sally was already helping the ladies to take off their travelling cloaks, and

both turned, with a shiver, towards the brightly-blazing hearth.

There was a general movement among the company in the coffee-room. Sally had hustled off to her kitchen, whilst Jellyband, still profuse with his respectful salutations, arranged one or two chairs around the fire. Mr. Hempseed, touching his forelock, was quietly vacating the seat in the hearth. Everyone was staring curiously, yet deferentially, at the foreigners.

"Ah, Messieurs! what can I say?" said the elder of the two ladies, as she stretched a pair of fine, aristocratic hands to the warmth of the blaze, and looked with unspeakable gratitude first at Lord Antony, then at one of the young men who had accompanied her party, and who was busy divesting himself of his heavy, caped coat.

"Only that you are glad to be in England, Comtesse," replied Lord Antony,

"and that you have not suffered too much from your trying voyage."

"Indeed, indeed, we are glad to be in England," she said, while her eyes filled with tears, "and we have already forgotten all that we have suffered."

Her voice was musical and low, and there was a great deal of calm dignity and of many sufferings nobly endured marked in the handsome, aristocratic face, with its wealth of snow-white hair dressed high above the forehead, after the fashion of the times.

"I hope my friend, Sir Andrew Ffoulkes, proved an entertaining travelling companion, madame?"

"Ah, indeed, Sir Andrew was kindness itself. How could my children and I ever show enough gratitude to you all, Messieurs?"

Her companion, a dainty, girlish figure, childlike and pathetic in its look of fatigue and of sorrow, had said nothing as yet, but her eyes, large, brown, and

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full of tears, looked up from the fire and sought those of Sir Andrew Ffoulkes, who had drawn near to the hearth and to her; then, as they met his, which were fixed with unconcealed admiration upon the sweet face before him, a thought of warmer colour rushed up to her pale cheeks.

"So this is England," she said, as she looked round with childlike curiosity at the great open hearth, the oak rafters, and the yokels with their elaborate smocks and jovial, rubicund, British countenances.

"A bit of it, Mademoiselle," replied Sir Andrew, smiling, "but all of it, at your service."

The young girl blushed again, but this time a bright smile, fleet and sweet, illumined her dainty face. She said nothing, and Sir Andrew too was silent, yet those two young people understood one another, as young people have a way of doing all the world over, and have done since the world began.

"But, I say, supper!" here broke in Lord Antony's jovial voice, "supper, honest Jellyband. Where is that pretty wench of yours and the dish of soup? Zooks, man, while you stand there gaping at the ladies, they will faint with hunger."

"One moment! one moment, my lord," said Jellyband, as he threw open the door that led to the kitchen and shouted lustily: "Sally! Hey, Sally, there, are ye ready, my girl?"

Sally was ready, and the next moment she appeared in the doorway carrying a gigantic tureen, from which rose a cloud of steam and an abundance of savoury odour.

"Odd's my life, supper at last!" ejaculated Lord Antony, merrily, as he gallantly offered his arm to the Comtesse.

"May I have the honour?" he added ceremoniously, as he led her towards the supper table.

There was general bustle in the coffee-room: Mr. Hempseed and most of the yokels and fisher-folk had gone to make way for "the quality," and to finish smoking their pipes elsewhere. Only the two strangers stayed on, quietly and unconcernedly playing their game of dominoes and sipping their wine; whilst at another table Harry Waite, who was fast losing his temper, watched pretty Sally bustling round the table.

She looked a very dainty picture of English rural life, and no wonder that the susceptible young Frenchman could scarce take his eyes off her pretty face. The Vicomte de Tournay was scarce nineteen, a beardless boy, on whom the terrible tragedies which were being enacted in his own country had made but little impression. He was elegantly, and even foppishly dressed, and once safely landed in England he was evidently ready to forget the horrors of the Revolution in the delights of English life.

"Pardi, if zis is England," he said, as he continued to ogle Sally with marked satisfaction, "I am of it satisfied."

It would be impossible at this point to record the exact exclamation which escaped through Mr. Harry Waite's clenched teeth. Only respect for "the quality," and notably for his Lord Antony, kept his marked disapproval of the young foreigner in check.

"Nay, but this is England, you abandoned young reprobate," interposed Lord Antony with a laugh, "and do not I pray, bring your loose foreign ways into this most moral country."

Lord Antony had already sat down at the head of the table with the Comtesse on his right. Jellyband was bustling round, filling glasses and putting chairs straight. Sally waited, ready to hand round the soup. Mr. Harry Waite's friends had at last succeeded in taking him out of the room, for his temper was growing more and more violent under the Vicomte's obvious admiration for Sally.

"Suzanne," came in stern, commanding accents from the rigid Comtesse.

Suzanne blushed again, she had lost count of time and of place, whilst she had stood beside the fire, allowing the handsome young Englishman's eyes to dwell upon her sweet face, and his hand, as if unconsciously, to rest upon hers. Her mother's voice brought her back to reality once more, and with a submissive "Yes, Madam," she too took her place at the supper table.

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## DON'T FREEZE YOUR FACE



If it is advisable to clothe your back, glove your hands, and cover your head, then why freeze your face? No matter where you live above the 30th parallel you need this face protector. It will enable you to face even an arctic temperature in a blizzard. Thousands in use by doctors, ministers, farmers, liverymen, railroad employees, automobile drivers, or anyone who is called to face severe weather. Write for one this minute.

Price - \$1.00

Send name and address for my catalogue.  
Agents wanted.

MARTINIUS DYSTHE  
Winnipeg, Canada

## 84-acre farm for sale

FARM FOR SALE—84-acre farm, clay loam, belonging to the estate of the late William Farmer, 1/2 mile from the Village of Ancaster, 7 miles from Hamilton; school, churches and electric railway at Ancaster. This farm is in a high state of cultivation; hay, straw and grain, excepting wheat, being fed back to the land, with 10 acres of summer-fallow for the past 25 years; well drained and watered, hydraulic ram supplying both house and barns, 10 acres fall wheat, 10 acres plowed, 20 acres hardwood bush and 8 acres of orchard. The barns are in first-class shape, and consist of large barn, 84 ft., horse stable, cow stable, sheep pen, implement barn, root cellar, hen-house and pigpen, with accommodation for 80 to 100 pigs, cement floor. The house is a 7-roomed stone cottage, with good cellar, hard and soft water, telephone, woodshed or workshop, all under one roof. Price, \$10,000. This is a good farm, and worth all we are asking. Apply to

THOS. W. FARMER, Ancaster, Ontario

## Did you Invest in Saskatoon Ten Years ago and clean up a Fortune?

Right now you have the same opportunity in

## EDSON

which is the distributing point for thousands of square miles of new territory. EDSON is already the wholesale center for the Peace River district into which settlers are pouring. It is a

### Divisional Point

on the main line of two transcontinental railroads, and has tributary to it, coal, iron, lumber and magnificent farm land. The population has grown in one year from nothing to about twelve hundred. We offer lots inside the town limits for a short time longer at \$30 00 each, on easy terms. Full particulars from

THE EDSON POINT COMPANY  
608 McIatrye Block, Winnipeg.

A Cincinnati lawyer recently remarked that the jurymen who toward the end of a very long trial wished to know what the terms "plaintiff" and "defendant" signified, is not alone in his ignorance. The lawyer mentioned tells of a man whose coat had been stolen. He had charged a suspicious-looking person with the theft.

"You say that this man stole your coat?" asked the magistrate. "Do I understand that you prefer charges against him?"

"Well, no, your honor," responded the plaintiff. "I prefer the coat, if it's all the same to you."



# Old Dutch Cleanser

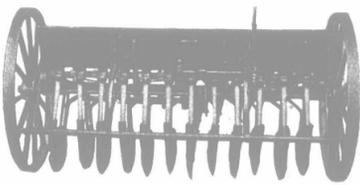
The best all-round cleanser in all the country round

Cleans mechanically not chemically and is therefore the safest cleanser for food utensils. Quickly removes "grease and burn" from pots and pans; safely and hygienically cleanses milk pails, cream separators, and everything about the dairy. Glassware, cutlery, floors, woodwork, bathtubs, painted walls, metal surfaces, etc., become clean and shiny in a jiffy—a cleaner house with less labor.

Many other uses and Full Directions on Large Sifter—can 10¢



## IMPERIAL HORSE - LIFT DISC DRILL



Write for catalogue and prices.  
**The W. I. KEMP CO., Ltd.**  
Stratford, Ontario  
Manufacturers of The Kemp Manure Spreader

### GETTING CIVILIZED.

In answer to the question, "What are the five great races of mankind?" a Chinese student replied, "The 100 yards, the hurdles, the quarter-mile, the mile, and the three miles."

Client—Before we decide on the house, my husband asked me to inquire if the district is at all unhealthy.

House Agent—Er—What is your husband's profession, madam?

Client—He is a physician.

House Agent—Hum—or—well, I'm afraid that compels me to admit that the district is not too healthy!

## POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at two cents per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisement inserted for less than 30 cents.

**A FEW** pure-bred Columbian Wyandottes for sale for breeding purposes. Cockerels, \$1.50; pullets, \$1.00 to \$1.50. Hugh McKellar, Tavistock, Ontario.

**BRONZE TURKEYS**—Choice young birds for sale. My strain have won "championship" at Guelph Winter Fair the past nine years. W. J. Bell, Angus, Ontario.

**CHOICE WHITE WYANDOTTES** and Rose-comb Rhode Island Reds from prizewinning strains. Satisfaction guaranteed. Alex. McTavish, Chesley, Ont.

**FOR SALE**—Toulouse Geese, two-fifty each; Bronze Turkeys, three dollars each. Emerson Tufts, Welland, Ontario.

**FOR SALE**—Cocks and cockerels, Single-comb White Leghorns, Rose-comb Brown Leghorns, White Wyandottes, Silver-laced Wyandottes, Barred Plymouth Rocks. All from heavy-laying strains. Prices \$1.50 to \$3.00 for any. W. H. Furber, Dunganon Poultry Farm, Cobourg, Ontario.

**FOR SALE**—Pure-bred Mammoth Bronze turkeys, fine heavy birds; bred from first-prize-winning stock. Also choice Partridge Wyandotte cockerels. R. G. Rose, Glanworth, Ontario.

**MAMMOTH BRONZE TURKEYS**—Large, vigorous birds for sale. Apply to Roy Hammond, Port Dover, Ontario.

**PURE-BRED** Bronze Turkeys, heavy toms and hens. Prices reasonable. O. A. Powell, Arva, Ontario.

**ROSE-COMB BROWN LEGHORNS**—Prices reasonable. Write me your wants. W. M. Sproule, Westbrooke, Ontario.

**S. C. WHITE LEGHORNS**—Big vigorous cockerels cheap, from heavy winter layers. B. W. Linscott, Branford.

**WHITE ROCK COCKERELS**, \$1.50 each. Albert H. Myers, 266 Huron St., Stratford, Ontario.

**WANTED**—At the De'hi Tannery, Custom Robes and Fur Tanning. Horse and cattle hides make best Robes and Coats when properly tanned and made up right. Send them to me and have them dressed right, and you will be well satisfied. B. F. BELL, Delhi, Ont.

## News of the Week.

Local option by-laws were carried in 19 places in Ontario, received a majority, although not three-fifths of the total vote, in 19 more, and were defeated in 28.

Toronto has opened a free dispensary at 345 King Street West, for the treatment of consumptives.

Madame Curie is ill in Paris.

Alfred Tennyson Dickens, eldest surviving son of Charles Dickens, died suddenly at the Astoria Hotel, New York, last week, at the age of 67 years. He had come to America to lecture on the life and works of his father.

In consequence of the refusal of Yuan Shi Kai and the Imperial Court to recognize the new Republic, hostilities have again broken out in China, the city of Cheng-Tu has fallen into the hands of the Imperial troops, and the Imperialists have suffered defeat, with a loss of 700 killed at Hankow. The Republicans are now hurrying preparations for a march on Peking.

An appeal is again being made by India for funds to relieve the famine-sufferers.

My summer girl is fair to see,  
In snowy white she pleases me—  
She looks so cool, so light and free.  
My summer girl.

My winter girl has such a charm,  
She looks so breezy, yet so warm,  
Her ruddy cheeks the gales disarm.  
My winter girl.

Which do I like the very best?  
Which holds the first place in my breast?  
No need to put me to the test—  
They're both the same.

## Three Trees.

By Charles H. Crandall.

The pine tree grew in the wood,  
Tapering, straight, and high;  
Stately and proud it stood,  
Black-green against the sky.  
Crowded so close, it sought the blue,  
And ever upward it reached and grew.

The oak-tree stood in the field,  
Beneath it dozed the herds;  
It gave to the mower a shield,  
It gave a home to the birds.  
Sturdy and broad, it guarded the farms,  
With its brawny trunk and knotted arms.

The apple tree grew by the wall,  
Ugly and crooked and black;  
But it knew the gardener's call,  
And the children rode on its back.  
It scattered its blossoms upon the air,  
It covered the ground with fruitage fair.

"Now, hey," said the pine, "for the wood!  
Come, live with the forest band.  
Our comrades will do you good,  
And tall and straight you will stand."  
And he swung his boughs to a witching sound.

And flung his cones like coins around.  
"Oho!" laughed the sturdy oak;  
"The life of the field for me.  
I weather the lightning-stroke;  
My branches are broad and free.  
Grow straight and slim in the wood if you will,  
Give me the sun and the wind-swept hill."

And the apple tree murmured low:  
"I am neither straight nor strong;  
Crooked my back doth grow  
With bearing my burdens long."  
And it dropped its fruit as it dropped a tear,  
And reddened the ground with fragrant cheer.

And the Lord of the Harvest heard,  
And He said: "I have use for all;  
For the bough that shelters a bird,  
For the beam that pillars a hall;  
And grow they tall, or grow they ill,  
They grow but to wait their Master's will."

So a ship of the oak was sent  
Far over the ocean blue,  
And the pine was the mast that bent  
As over the waves it flew,  
And the ruddy fruit of the apple tree  
Was borne to a starving isle of the sea.

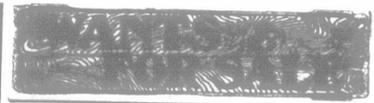
Now the farmer grows like the oak,  
And the townsman is proud and tall,  
And city and field are full of folk—  
But the Lord has need of all,  
And who will be like the apple tree  
That fed the starving over the sea?

## GOSSIP.

### DUN COLOR IN HORSES.

At a recent scientific meeting of the Royal Dublin Society, Professor James Wilson, M.A., D.Sc., submitted a communication upon "The Inheritance of the Dun Coat Color in Horses." In a previous paper (1910), Professor Wilson had shown that the colors of horses, from the inheritance point of view, fitted into each other like a nest of Chinese boxes. In that paper, the data concerning dun horses were few, and now, with 500 or 600 cases to work upon, he published his present paper. It was not known when the idea that duns were reversions—liable to be produced from every color—originated. Probably it was about the time Lord Morton made his famous experiments in crossing horses with a quagga. Some of the foals Lord Morton wrote about he described as having a "dun tint." Darwin afterwards wrote about as "partially dun," and some writers had gone so far as to call them dun altogether! The snowball grew with rolling, and we have the "dun reversion" a common belief. The present paper showed that there was no dun reversion; in fact, that dun could only be got by dun parents, and occasionally by grays. No other colors bred duns.

"Now that you are famous, Mr. Rimer, we propose to place a tablet on your former home." "Well?" "What would you wish us to say?" "You might say that I was ejected for non-payment of rent," replied the somewhat embittered bard.



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

**AGENTS WANTED**—We have an unusual premium proposition; every person will be interested. No outlay necessary. Apply: B. C. I. Co., Ltd., 223 Albert St., Ottawa, Ont.

**BELTING FOR SALE**—Over 1,000,000 feet in rubber, canvas, etc.; all sizes and lengths, at 25 to 50% less than regular prices; also large quantities of iron pipe, fencing, etc. Catalogues sent on request. The Imperial Waste & Metal Co., 20 Queen St., Montreal.

**CREAM WANTED** at the Guelph Creamery. Business run on the co-operative plan. Write for particulars, or call and see us. Stratton & Taylor.

**CEMENT CONTRACTOR**—The applicant, who has had some experience in cement work, is prepared to take up a situation under some first-class man. Address: Geo. W. Burnett, Kohler, Ontario.

**FARMS FOR SALE**—30 farms for sale, all sizes, Halton, Peel and Wellington Counties. Write for catalogue. J. A. Willoughby, Real Estate, Georgetown.

**FARMER'S SON** seeks situation as working foreman on up-to-date farm; life experience, abstainer; good references. Apply: R. A. Fletcher, Sandhurst, Ontario.

**FOR SALE**—100 acres, North Dorchester Township, 1/2 mile from Hamilton Gravel Road, 2 1/2 miles from Dorchester Station, and 9 miles from London. Good dwelling house, bank barn 132x44, milk house and implement shed. Also 125 acres opposite on side line, with two dwelling houses, bank barn 60x40, driving barn and hopen; good sugar bush on farm; soil on both farms clay loam, and both have been fully stocked for many years. For further information apply on the premises to David Gilmour, Nilestown.

**IF YOU ARE SEEKING** to better your financial condition, life insurance offers much greater return for the effort made than mercantile or farm life—provided you have a fair education, a good address and plenty of backbone and ambition. The New York Life has over fifty millions of insurance in force in Canada, and has over five hundred millions more of regular insurance in force than any other company in the world. When you realize we write a most liberal policy for the insured, giving him insurance at cost, and that our agents get a contract, providing an income for life, besides the first year's commission, you can readily see the reason for our wonderful growth. If living in Ontario, write for an agency, outlining your previous business experience. Manager, care "Farmer's Advocate," Toronto.

**FOR SALE**—Riverdale Stock Farm, 175 acres, including fifty acres permanent pasture, never-failing spring. For further particulars apply: Box 101, Drumbo.

**WANTED**—Cash paid for Military Land Grants in Northern Ontario. Please state price and location. Box 88, Brantford.

**WANTED**—Farmer's daughter, to assist with housework in family of four. Good home and salary. References required. Box P. "Farmer's Advocate," London.

**WANTED**—First-class farm hand. One capable of taking full charge. Married man with no incumbrance preferred. Duties to commence March first. Address: Box 279, Cookstown.

**WANTED**—Bright young man or woman as correspondent in each town. \$5 to \$50 paid for single item of information. Mercantile Assurance Association, Box 317, Halifax, N.S.

**800 ACRE FARM**—For sale or rent, at Swan River, Manitoba; 400 acres cultivated. No one but a first-class man with means need apply. Mrs. N. Gable, 181 Canora St., Winnipeg.

## Cheer Up.

Don't you be discouraged  
'Cause de clouds is black;  
Sunshine is a-waitin'.  
Foh to travel back.  
I's seen rain a-plenty;  
Thought 'twould never quit  
Thunderin' an' lightnin'—  
But I

ain'  
drowned  
yit.

When de snowstorm's threatenin',  
Don't you be afraid;  
Spring will come as usual,  
Smilin', undismayed;  
When de rose is bloomin'  
You won't mind it a bit.  
I's seen a lot o' winter,  
An' I

ain'  
froze  
yit.

—Washington Star.

## Thousands Now Use This Low-Cost Cough Syrup

A Family Supply for 50c, Saving You \$2—  
The Quickest, Best Thing You Ever  
Used, or Money Refunded.

The prompt and positive results given by this inexpensive cough medicine have caused it to be used in more homes in the U. S. and Canada than any other cough remedy. It gives instant relief, and will usually wipe out the most obstinate, deep-seated cough inside of 24 hours. It quickly succeeds, even in whooping cough and croup.

A 50-cent bottle of Pinex, when mixed with home-made sugar syrup, makes 16 ounces—a family supply—of the most pleasant and effective cough remedy that money could buy, at a saving of \$2. Easily prepared in five minutes—full directions in package.

Children take Pinex Cough Syrup willingly, because it tastes good. It stimulates the appetite, and is slightly laxative—both excellent features. Splendid for hoarseness, throat tickle, bronchitis, etc., and a prompt, successful remedy for incipient lung trouble.

Pinex is a special and highly concentrated compound of imported Norway White Pine extract and is rich in guaicol and other natural healing pine elements. Simply mix it with sugar syrup or strained honey, in a 16-oz. bottle, and it is ready for use.

Pinex has often been imitated, but never successfully, for nothing else will produce the same results. The genuine is guaranteed to give absolute satisfaction or money refunded. Certificate of guarantee is wrapped in each package. Your druggist has Pinex or will gladly get it for you. If not, send to The Pinex Co., Toronto, Ont.

### Mechanically Superior The SHARPLES Tubular Cream Separators

The world's greatest mechanical men use Tubulars, thus endorsing and guaranteeing their superiority.

The Canadian Pacific Irrigation and Colonization Co., St. Paul, Minn., one of largest of its kind in world; Mr. Barlow Cumberland, Port Hope, Ont., well known steamship man; Mr. W. F. McLean, Donlands, Ont., editor Toronto World; Mr. A. S. Mathias, Marquette, Man., Pres. Winnipeg Street Railway Men's Union, and hundreds of others, the most competent and successful business managers, use and endorse the world's most perfect cream separator.

Follow their lead, for they want simple, durable, powerful separators and so they select and use Dairy Tubulars, which have no disks or complications, are mechanically far superior, and have double skimming force.

Write for catalogue 193.  
  
THE SHARPLES SEPARATOR CO.  
Toronto, Ont. Winnipeg, Man.

## FARMS FOR SALE

Choice stock, grain and fruit farms for sale. We specialize in high-class properties, and aim at offering good value only. We have a special department devoted to listing and selling Ontario farms. Write for list.

UNION TRUST CO., LTD.  
Real-estate Department,  
201 Temple Building, Toronto.

### Plank Barn Frames

as designed by me are cheapest and strongest in existence. Expert advice on all kinds of farm buildings, ventilation, etc. When in doubt write:

ALF. A. GILMORE, The Farmer's Architect,  
Box 183, Huntingdon Que.

**Farms Wanted**—We have direct buyers. Don't pay commissions. Write describing property, naming lowest price. We help buyers locate desirable property free. American Investment Association, 29 Palace Bldg., Minneapolis, Minn.

**\$25 TO \$100 A WEEK**  
**PAID TO GRADUATE STUDENTS**  
Course Endorsed by Benj. Briscoe,  
Pres. of United States Motor Co.  
We teach you at home in ten simple lessons to earn big money and help you to get a fine job. Write for FREE prospectus, testimonials of graduates and endorsements of ten leading auto makers. Small Payment Starts You. Money Back! Not Satisfied, Free Model of Auto to each student. Write us today—Now.  
The Practical Auto School, 66T Beaver St., New York.

### GOSSIP.

#### A GREAT SHEEP SALE COMING.

At Burford, Ont., January 25th, as advertised in this issue, will take place an important auction sale of 200 pure-bred registered sheep, of four prominent breeds, consigned by 21 breeders. The sheep are to be judged in a stated classification at 10 a. m. on day of sale, by expert judges, for premiums and championships, and the sale is to commence at 2 p. m. This sale will furnish a rare opportunity to secure good breeding stock. For catalogue containing pedigrees, terms, and full particulars, write J. G. Hammer, Burford, Ont.

#### STOCK SALE DATES CLAIMED.

January 17th.—John Racey, Lennoxville, Que.; Shorthorns and Berkshires.

January 19th.—At Ottawa Live-stock Show; pure-bred beef and dairy cattle.

January 25th.—At Burford, Ont.; pure-bred registered sheep.

February 7th and 8th.—At Union Stockyards, Toronto; consignment sale of Shorthorns.

February 9th.—James Russell, Richmond Hill, Ont.; Shorthorns, dispersion.

Day after annual meeting of Holstein-breeders' Association.—At Eglinton, Ont., on Yonge street, north of Toronto; consignment sale of Holsteins.

March 6th.—Provincial pure-bred cattle sale, in Winter Fair Building, Guelph, Ont.

April 3rd.—Holstein-breeders' Club; second annual consignment sale, Belleville, Ont.

March 7th.—B. Hoskin, The Gully, Ont.; Holsteins and Tamworths.

George Gier & Son, Grand Valley, Ont., write: Our Shorthorns are doing well in their winter quarters. The calves from the old bull, Mildred Royal, are coming big, strong and lusty, as usual, and, by the way, the old bull looks as well as ever, and is active and sure. We have seventeen heifers by him, two years and under, a lot of them just coming up to the age they should be bred, but not having another bull, we are obliged to sell them, so any person wanting heifers should come and see them. Among them are Toronto winners, and others equally as good. The bull we sold the Messrs. McCamus, of Baillieboro, Ont. (while we were at Toronto show last fall), is doing fine. This calf cannot fail to turn out well, as on his dam's side he is a Matchless, and the four top crosses on his pedigree are Mildred's Royal, Scottish Beau, Royal Sailor and Barnpton Hero, without a doubt a combination of sires hard to duplicate in this country.

J. Watt & Son, Salem, Ont., the well-known and widely-known breeders of Shorthorn cattle, report the following recent sales from their noted herd: To Griffith Roberts, Elora, Ont., a right good breeding cow, a Kinellar Mina, sired by Imp. Marquis of Zenda. She has a nice heifer calf at foot, and is safe in calf again to the present stock bull. A good roan bull to Smillie Bros., Bluevale, Ont. This calf is sired by Imp. Pride of Scotland, and out of an imported cow. He is a low-set, thick fellow, and is sure to be heard of again. To Wm. Hill & Son, Benmiller, Ont., a thick calf, with a double cross of Imp. Pride of Scotland right on top, and out of one of our best heifers of the Marr Red or Roan Lady family. This is bound to do good in the section he has gone to. To John McIsaac, Drayton, Ont., a yearling bull of the low-set kind, from imported sire and dam, and is sure to do well for his purchasers. Messrs. Watt write: "We have two good bulls left that are both from Imp. Pride of Scotland, and whose breeding is of the very best on their dam's side. We are pricing them away down, and anyone needing a good bull will find it to their advantage to see this pair. We have a lot of extra nice calves coming this winter from our present stock bull. He is out of a Brawith Red cow, and is one of the best sons of the Dutch-bred Imp. Blood Royal. We are pricing some females, either bred to him or with calves at foot by him, that are well worth the money we are asking for them."

# A HORSE BLANKET

WITH OUR

## Bias Attachment

COSTS NO MORE



than one made in the old way and used with two surcingles, but one of our horse blankets with the BIAS attachment will give you more satisfaction than two ordinary blankets used in the old way. The average price of a horse blanket with the BIAS attachment is \$3.50 each; you can get them for less and you can pay more; you use your own good judgment when selecting the quality you want. What we want to impress on your mind is this, "if you can invest say \$3.50, the average price of a good horse blanket with our BIAS attachment, that will give you as much satisfaction as two \$3.00 investments in horse blankets used in the old way with surcingles, is it not a good policy to pay the extra 50 cents in the start, and save the \$2.50 which you would. But, when the initial cost is no more than you pay for the old kind, you save \$3.50 instead of \$2.50—simple isn't it. Send us your name, and we will tell you who will gladly show you a good line of these goods.

## THE ADAMS BROS.' Harness Manuf'g Co., Ltd.

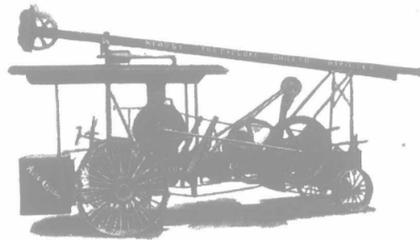
FROM COAST TO COAST

Toronto, Ont. Winnipeg, Man. Edmonton, Alta. Saskatoon, Sask.

Write the branch nearest you.

# TYPHOID

Is frequently caused by impure water. Has it ever occurred to you that you are taking a long chance by drinking surface water? Why not secure pure water at depth with a



## CYCLONE

WELL DRILL

and protect  
your health?

WRITE FOR CATALOGUE F.A. 60 TO

## MUSSENS, LIMITED

Montreal Toronto Cobalt Winnipeg Calgary Vancouver



### IMPORTED CLYDESDALES

I have for sale mares and fillies, from foals up to 5 years of age; richly bred and big in size; a number of them in foal; matched pairs, the kind to make you money. They will be sold at prices that defy competition.  
L.-D. phone.

ALEX. F. McNIVAN, St. Thomas, Ont.

#### OFF FOR SCOTLAND.

On Saturday, January 6th, Thos. Graham, of Graham Bros., Clarendon, Ont., sailed for Scotland, for a selection of Clydesdale stallions and fillies. Mr. Graham assured us that we might look

for a shipment of toppers on his return, and wished to announce to the many friends and patrons of Graham Bros., that they will surely be in a position to supply the best the breed produces for the spring trade. Look out for notice of his arrival in these columns.

GOSSIP.

COMING EVENTS.

Western Ontario Dairymen's Convention, Ingersoll, Jan. 10-11, 1912.

Eastern Ontario Live-stock, Dairy, and Poultry Show, Ottawa, Jan. 16-19, 1912.

Nova Scotia Farmers' Convention, Yarmouth, N. S., January 23-25.

Dominion Shorthorn Breeders' Association annual meeting, Toronto, Feb. 6th, 1912.

IMPORTED CLYDESDALE STALLIONS AND FILLIES.

A. F. McNivan, of St. Thomas, Ont., is just now showing something good in Clydesdale stallions and fillies. He has brought out to this country many high-class Clydesdales, and we do not remember in the many times we have had the pleasure of a look over his importations, of seeing so much of the true draft idealty as are in this lot. There are mares well up towards the ton in weight, in moderate condition, and fillies that will go fully to a ton in weight when full grown and developed, and with this big size is the best blood of the breed, with four and five registered dams, and with the faultless kind of sloping pasterns, big, wide feet, and strong, flat bone. There are only two stallions, but they are the kind that sire the big money-making geldings. Mimulus [10681] is a bay four-year-old horse, by the noted prizewinner and sire of champions, Marmion, dam by the no less noted prizewinner, Mount Royal, granddam by Golden Treasure. With such renowned breeding on his sire's side, he has four registered dams, and is one of the biggest horses in the country, with strength in his every line, from the ground up, and, withal, has a stylish, toppy carriage. British Lion [10682] is a brown three-year-old, by the big prize horse, British Chief, dam by the invincible champion, Hiawatha. This is a thick, smooth, close-coupled horse, of big size and draft character, strong, flat bone, and particularly good lower down. He should breed extra well. Prominent among the mares and fillies is the big, thick, heavy-quartered and nice-legged mare, White Rose (imp.) [23026], a bay ten-year-old, a winner herself and the dam of winners, sired by the H. & A. S. first-prize horse, Moncreiffe Marquis, dam by The Sultan. She, now in very moderate condition, weighs close to 1,800 lbs., and could be put up to the ton, or very close to it. Dales Winnifred [21280] is a bay four-year-old, by the renowned Marmion, dam by the Cawdor Cup champion, Prince of Kyle. She has five registered dams, and is a big, thick, smooth mare, on the best of underpinning. She will be a mortgage-lifter for somebody, as her splendid horse foal, by Keir Democrat, testifies. Another four-year-old is the bay mare, Ella 26696, by Montrave Marquis, dam by Moncreiffe Marquis. She is just what might be expected from her great breeding, a smooth, very thick, heavy-quartered mare, with style, vim, quality, and wonderful action. Two of the others are three-year-olds, Ruby Clatt 27283, by Baron Clatt (imp.), and Mayflower 3rd 21471, by the Glasgow champion, Casabianca. Here are a big, thick, smooth pair of fillies, the former heavy in foal to Mimulus (imp.), and the latter with five registered dams. In two-year-olds there are such big, well-bred ones as Ann Macgregor 26694, by the famous prizewinner, Edward Barnley, and Kate Middleton. In yearlings there is only one, Jean Reid 26697, a brown, by Bit of Fashion, one of the most successful prizewinning sons of the Cawdor Cup champion, Revelanta, and dam by the big, good breeding horse, King Haro. This is one of the good yearlings brought out last year. She won second at Stirling in a big class, and is a show filly all over. Besides those mentioned, there are several others of just as good breeding and high-class individuality; also horse and filly foals. All are for sale, at living prices. Get in touch with Mr. McNivan if in want of a filly.

Feed Molasses Meal for a month. The results will warrant using it regularly

Four to six weeks constitutes a fair trial of Molasses Meal. By that time you will have an object lesson of its great feeding and therapeutic value. The results will warrant you using it regularly.

The Omibus Company of Paris, France, feed Molasses Meal regularly to 12,000 horses. Since starting this feed they have reduced the mortality from colic and pneumonia from 5.42 to 1.68 per cent.

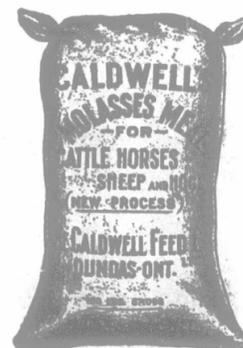
One of the large collieries in Germany has reduced the mortality among its horses from digestive diseases by over 40 per cent.

Astonishing results have also been reported by stockmen, horse fanciers, hog and sheep raisers, both at home and abroad. We've a booklet showing results Molasses Meal has given prominent live stock men in Canada. Ask for a copy.

Caldwell's Molasses Meal

for cattle, horses, sheep, hogs, poultry

So largely is Molasses Meal now being used by many engaged in the live stock industry that we fill their orders direct from the mill. We stand ready to do the same for you. Fill in, clip out and mail the coupon for further particulars.



A Booklet worth having

is the one we issue, containing full information of the scientific feeding of Molasses Meal.

It gives complete instructions for feeding it to work horses, show horses, race horses; brood mares, colts, milch cows, calves, steers, sheep, lambs, hogs and poultry.

It explains the superiority and economy of the meal over raw molasses. It gives profitable facts on feeding you'll be glad to know and to tell your friends about.

Ask for a copy. We like to send this booklet to progressive men.

Caldwell Feed Co., Ltd. Dundas, Ontario

CUT ALONG HERE

Please send me your booklet and full particulars about buying Molasses Meal at wholesale, as advertised in "Farmer's Advocate."

Name

Post Office

County

Province

TO LET IN WINNIPEG, MAN.

Office, Warehouse or Manufacturing Space.

The Farmer's Advocate of Winnipeg, Limited, purpose erecting a large fireproof building on Notre Dame St., Winnipeg, this spring. Flats 40 x 122 also 35 x 90 feet; splendidly lighted, steam heated, use of elevator, desirable location. Can be laid out to suit tenants if application is made at once. Apply:

The William Weld Co., Ltd., London, Ont.

SEED GRAIN

If you can sell good clean Oats that will test 35 lbs. or more, send 1/2 lb sample. State quantity and we shall submit our best offer, f.o.b. your nearest station, and supply bags.

GEO. KEITH & SONS 124 King Street E. TORONTO, ONT.

Advertisement for MENDETS, featuring an image of the product and text: "Don't Throw It Away... USE MENDETS... They mend all leaks in all utensils—tin, brass, copper, granite ware, hot water bags, etc. No solder, cement or rivet. Anyone can use them; fit any surface, two million in use. Send for sample pkg., 10c. COMPLETE PACKAGE ASSORTED SIZES, 50c. POSTPAID. Agents wanted. Collette Mfg. Co., Dept. K Collingwood, Ont."

"Good as Gold"

ARE THE POLICIES OF THE

LONDON LIFE Insurance Company

Head Office: LONDON, CANADA

Maturing 20-Year Endowments in the ordinary Branch show returns of \$140 per \$100 paid in premiums.

Full Insurance Protection in addition.

Ask for samples of Actual Results.

Griggs—"A critic says that if Poe were living to-day, no editor would print his strange, weird stories." Briggs—"Oh, well, he could make a living designing women's hats."



# FARMING

has become a specialized  
business

It's no longer a "hit-or-miss" occupation, where "any old way" is good enough. Farmers are buying pianos and automobiles as never before. They're *living* as well as *working*.

The farmer has learned that it *pays* to employ progressive methods. That's why he is ever ready to receive helpful suggestions for improving his crops, his land and his home. It's also the reason that more than fifty thousand Canadian farmers are enthusiastic about our handsome book,

## "What the Farmer Can Do With Concrete"

It isn't a catalogue, nor an argument for you to buy something. It is clearly written, interesting, profusely illustrated. It describes the various uses to which concrete can be put on the farm. Not theories, but facts, based on the *actual experience* of farmers all over the continent. It is the most complete book on the subject ever published, fulfilling the pur-

pose behind it, which is to help the farmer take advantage of concrete's possibilities. The list of subjects covers every conceivable use for concrete on the farm. The book's actual value to you will far exceed the list price of fifty cents, but if you will send us your name and address at once, we'll be glad to

**Send it to You Absolutely Free**

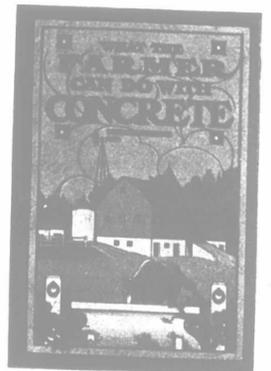
*Send a post card for it—do it to-day. The book will be sent by return mail.*

# Canada Cement Company

LIMITED

National Bank Building

**MONTREAL**



## The Steel Combine to Control Prices of Wire Fence

### The Sarnia Fence Co.'s Plan to Prevent It.

The London Free Press, on December 28th, published an announcement to the effect that Hamilton is to be the Steel centre for Canada, that the Steel Corporation of Canada, which is composed of iron manufacturers who recently merged their interests under the above name, and who are endeavoring to control prices for Canada on all steel and iron products. This gigantic combine is rushing to completion at Hamilton, new buildings and plant, and spending millions of dollars on their equipment. We are told that the Steel Corporation of Canada have assurances from the Borden Government at Ottawa, that they will be afforded protection either in the form of a duty, or a bounty on steel and iron products. We cannot believe that this is so, particularly in view of the fact that free fence wire was given, as a concession to the farmers, and in spite of the protests of the iron manufacturers, but if by any possibility such a change should be made, you may rest assured that you will have the privilege of paying the duty or bounty, as the case may be.

One of the items which is of very great importance to the farmers of Canada, is wire fence. For a great many years, the sizes of wire used in the manufacture of this farm necessity, have been admitted free of duty, but a duty of 15 per cent. was retained on finished fence. The Canadian fence manufacturers formed a combine of their own in order to pocket for themselves the full protection of this 15 per cent. In fact, they came to look upon this 15 per cent. protection as a legitimate addition to their ordinary profits.

Three years ago the SARNIA FENCE CO. opened a plant at Sarnia, and in compiling their prices, they based their profits upon a reasonable return for their money invested, leaving out of their consideration the matter of duty or protection. The result was a very decided difference in the prices of the fence combine, and those of the Sarnia Fence Co. Needless to say that many threats were made by the combine, and methods fair and otherwise were resorted to in order to prevent the Sarnia Fence Co. placing their fence on the market. After practically three years' fight, the Sarnia Fence Co. came out on top, with the largest and most modern fence plant in Canada, and 25,000 Canadian farmer customers at their backs. Now that we, with the assistance of the farmer, have made the existence of a fence combine in Canada impossible, shall the present Government hand over to the Steel Corporation of Canada a weapon in the form of protection on the fence wire which undoubtedly would be used as a club to knock more dollars out of the farmer. By the placing of a duty, or by the giving of a bounty on wire rods, or fence wire, we will be deprived of the right to purchase in the open market, which assures us of a fair price on wire. We will have to look to the Steel Corporation of Canada, who will not permit us to purchase wire at a price which will be any competition to them in the finished fence. They ask the Government for protection, in order that they may be able to control the market, and compel the consumer (which in this instance is the farmer exclusively), to pay the highest possible price.

Are you, the farmers of Canada, going to stand for this? Let every farmer write his member, or call upon him personally, and protest against the giving of either a bounty or the placing of a duty on fence wire. This means dollars taken directly from your pocket, and is worthy of your most vigorous protests. You are a voter, and if the farmers stand together, they can head off such an outrage. We, the Sarnia Fence Co., ask for no protection. We can stand on our own footing, and will undertake to protect the Farmers of Canada against a fence combine, providing the Govern-

ment will not yield to any such unfair demands from the iron and steel interests, and refuse the Steel Corporation of Canada an unfair advantage in the Canadian market at the expense of the farmers of the Dominion.

The Sarnia Fence Company, will, from time to time, keep the farmer posted on the action of the Government in this matter, and we ask your assistance and support.

Yours very truly,  
THE SARNIA FENCE CO., LTD.  
Advt.

### GOSSIP.

February 7th and 8th are the dates for the annual consignment sale of high-class Shorthorns at Union Stock-yards, Toronto. In our last week's issue, the dates were inadvertently given as January 7th and 8th. The sale takes place on the two days following the annual meeting of the Dominion Shorthorn Association, and the animals to be sold are said to be superior in character and breeding. For catalogue, apply to Robert Miller, Stouffville, Ont., manager of the sale.

The noted Shorthorn bull, Evander (95106), bred by the late King Edward, has recently been purchased from the Royal Farms by R. O. Lamb, of Cumberland. Evander is a roan, six years old this month, sired by the Clipper bull, Royal Chieftain, which was also the sire of the champion heifer, Marjorie, while his dam, Eliza 21st, by Prince of Sanguhar, is still one of the favorite matrons in the Windsor herd. He was also the sire of the white steers, Marmaduke and Stanley, exhibited at the recent shows at Birmingham and Smithfield, Marmaduke gaining the junior championship over all breeds, while Stanley was awarded second prize at each show.

### THE GREAT CANADIAN SALE OF SHORTHORNS.

Fast coming to be recognized throughout the Shorthorn kingdom, is the annual sale of Shorthorns held in Toronto in the beginning of February. For years, some of the best breeders in Canada have been selling their choicest animals, that could be spared from the herds, each year they have been good, and every year there has been improvement. The interest of the breeders in the United States and in Canada has been strengthened, until it is the most important event concerning Shorthorns that occurs during the winter season. This coming sale will mark progress in the herds interested, for the whole number of animals will show improvement over those of former years, and the choicest of them are fit to rank with the best that the breed has ever produced. There are bulls fit for any breeder to buy, young and full of promise, with the form that shows what they will be, and backed by breeding that will make for success in any herd if it is adhered to and insisted on in the sires. The cows and heifers are such that it takes a number of the strongest herds in any country to furnish them in such numbers. They are of the short-legged, thick, straight and smooth kind in every instance, their heads, horns, backs and finish, go to show that the breeders have an ideal, and that they are coming as near reaching it as any body of men may expect. No catalogue issued shows the unbroken line of good Cruickshank, Marr, Duthie Bruce and Campbell breeding that this one does. The consignors believe that the best can be found full of the bluest blood, and that when they are sent into other herds the results are so marked, always for good, that there is but one course to pursue, and they are going to hew to the line marked out by them many years ago. The men concerned are breeders, and propose to be. In every case but one, their whole interests are tied up with the production of better and better cattle, and other domestic animals. The beautifully illustrated catalogue will be sent to those asking for it. Those that got it last year are still in the mailing list. See page 75 for advertisement.

# THERE IS ONLY ONE BOVRIL

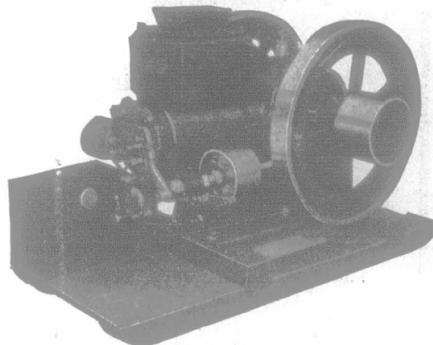
You need the valuable strength-giving power of BOVRIL. Do not accept a poor substitute, for there is no other preparation of beef possessing equal nutritive value and appetising qualities.

## THE BARRIE ENGINES

S. DYMENT, Pres.  
E. J. GRAVES, Mgr.

Stationary and Portables, 3 to 100 horsepower for gasoline, distillate, natural gas and producer gas. Either make and break or jump spark ignition. Reliable, economical, guaranteed to give entire satisfaction.

The Barrie 3 Horsepower



AGENTS WANTED

Our Distributors:  
JAMES FAE,  
Medicine Hat, Alta.

McCUSKER IMP. CO.  
Regina, Sask.

McCONNELL IRON WORKS  
Brandon, Man.

The CANADA PRODUCER & GAS ENGINE CO., Ltd.  
BARRIE, ONTARIO, CANADA

## EASTERN ONTARIO Live Stock & Poultry Show

WILL BE HELD AT

Ottawa, Jan. 16th to 19th, 1912

EXHIBITS CONSIST OF

HORSES. DAIRY AND BEEF CATTLE. SHEEP. SWINE. SEEDS AND POULTRY.

\$11,000.00 in Prizes

PRACTICAL LECTURES will be given on subjects relating to the various classes of live stock; also to seeds, poultry and alfalfa. Single fare rates on the railways. For programme of judging and lectures, apply to the Secretary

On Friday afternoon, Jan. 19, 1912, there will be held an Auction Sale of 50 Pure-bred Beef and Dairy Cattle

PETER WHITE, Pres., Pembroke D. T. ELDERKIN, Sec'y, Ottawa.

## POLES OF STERLING QUALITY

Michigan White Cedar Telephone Poles

W. C. STERLING & SON COMPANY

Oldest Cedar Pole Firm in Business

Producers for 31 Years

MONROE, MICHIGAN

1850

1911

## FREE-FARM ACCOUNT BOOK

### Know How Much You Make This Year

No one shall pay a cent for Bickmore's Farm Account Book. It will be sent free to any farmer who will be good enough to tell who and where he is. The cost of a crop never demanded closer attention. Business farming puts money in the bank. This book is arranged to keep all accounts in simple form—more simple, and certainly more practical, than trying to remember them; shows what to charge against crop production; has a laborer's time record; and section for personal accounts. 64 pages; for ink or pencil. Not a cheap affair. It is meant for business. Its quality is in keeping with



BICKMORE'S FARM ACCOUNT BOOK

Published by BICKMORE GALL CURE CO. OLD TOWN, MAINE, U. S. A.

### BICKMORE'S GALL CURE

a remedy that cures, and the horse works all the time. Users keep it in their stables the year round—they believe in it. It is always ready for Harness or Saddle Galls, Chafe, Rope Burns, Cuts, Scratches, Grease Heel, etc. In cows use it for Sore Teats. Don't buy a substitute. Insist on getting Bickmore's Gall Cure—for the sake of your horse's health. But write now for Bickmore's Farm Account Book—it is ready for you. No cost. No obligation. Send your name and address—that's all.

WINGATE CHEMICAL CO., Canadian Dist'r: 800 Notre Dame St. W., Montreal, Can.

Send Your Name on This Coupon or on a Postal Card

Name \_\_\_\_\_  
P. O. \_\_\_\_\_  
State \_\_\_\_\_  
Send me a Free Copy of Bickmore's "Farm Account Book," as advertised in "The Farmer's Advocate."

# Get at it



# with the Scales!

**Don't guess at your crops. Get at them with the scales as this man did, and see how our fertilizers pay you good dividends.**

"I will write you my experience with Homestead Fertilizer on Oats. The yield was 70 bushels per acre of oats that weigh 40 pounds to the bushel, struck measure, on land I call very much run down.

There were 12 acres in the field. It was in beans last year and the ground was fall-plowed late for oats, and was well fitted in the spring with a spring tooth harrow and the oats drilled in at  $2\frac{1}{2}$  bushels to the acre.

I commenced on one side of the field by drilling 100 pounds of Fertilizer to the acre. I increased the Fertilizer at intervals at the rate of 50 pounds each time until I got up to 400 pounds per acre, leaving a drill row at each increase unfertilized. The parts that were fertilized with 100 pounds and 150 pounds each per acre were not as good as that which was fertilized with 200 pounds and over. The unfertilized strips were sorrowful looking oats by the side of the rest and attracted a great deal of attention. These strips were examined by good judges who laid their yield at from 30 to 40 bushels per acre—the yield of the whole field had no Fertilizer been used. That being the case, from 30 to 35 bushels per acre were added by using the

### HOMESTEAD FERTILIZER

We pulled up equal distances of rows that grew only seven inches apart, side by side, and took the dirt from the roots and weighed them and found that the fertilized row weighed over two and a half times as much as the unfertilized row. The fertilized oats stood a foot higher than the others and were much stiffer and larger, with over three times as much root as the other.

It pays well to use Fertilizer. It will add 20 to 40 bushels per acre, besides giving you double the straw and ripening your crops from a week to ten days earlier." (Name given on application.)

**Our soils in the Middle States will produce good crops if the farmer goes at it in the right way. There is no chance to make any money at all out of a poor crop.**

Some Fertilizers are better than others. That is a well known fact. There are farmers who are satisfied with ordinary crops grown with inferior Fertilizers, because they have never used the best. While the farmer is obliged to take some chances on things beyond his control, he should not take any chances as to the Fertilizer he applies, for that is something he can control.

### HOMESTEAD FERTILIZERS

are made not only to contain the full percentage of plant food according to guaranteed analysis, but—we go further than that. The agricultural value of our Fertilizers is given first consideration, because we look to the future. We want every farmer who uses our Fertilizer to get good results and increase his orders each season. That is why we are doing a tremendous business. Our factories never shut down.

It is a simple matter to apply our Fertilizer, because it is finely ground. You can sow it with a grain drill before planting. But, if you have no drill, scatter the fertilizer by hand from the wagon and go over the field with a harrow.

Write for further information and agency proposition.

Every farmer should read an article by John A. Wiltsoe, Ph. D., printed in our pamphlet—How to fight drought with fertility and why the richness of soil makes up for lack of moisture.

**The American Agricultural Chemical Company,**  
MICHIGAN CARBON WORKS, DETROIT, MICH.

Largest manufacturers of high grade fertilizers in the world.

### GOSSIP.

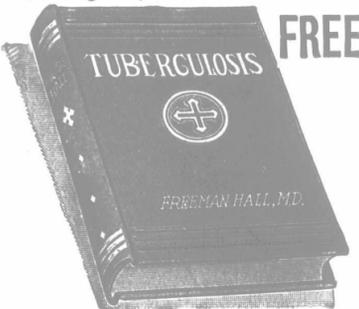
Attention is invited to the new advertisement in this issue of Lew W. Cochrane, of Crawfordsville, Indiana, importer and breeder of Percheron, Belgian, Shire and Hackney horses, who has been long in the business, and has made three importations in the past few months, and will have another large importation soon. Mr. Cochrane reports a fine trade in Canada, more especially in the Western Provinces, and has a fine lot of American-bred stallions and mares, as well as his importations.

### SOME BIG TOPPERS IN CLYDESDALES.

Messrs. Crawford & McLachlan, of Thedford, Ont., are again to the front with an exceptionally nice selection of Clydesdale stallions, personally selected by the members of the firm from several of the leading breeders in Scotland. Messrs. Crawford & McLachlan are no novices in the business of selecting and importing Clydesdales, they have made many importations, are well known as capable judges, and their selections have found ready sale. In this lot they have gilt-edged breeding, several with four and five registered dams, a remarkable uniformity of smoothness, size and quality, with true draft character. Among them are winners of first and second prizes and reserve for championships at shows in Scotland. The oldest is the remarkably smooth, good breeding horse, Harviestoun [8009], a bay six-year-old, sired by the popular breeding horse, Balmedie Queen's Guard, dam by the great Royal Favorite, and grandam by the Highland and Glasgow first-prize horse, Fashwood. He is one of the true cart-horse type, very thick, heavily muscled, and is a proven sire of prizewinners. Theodore [11688] is a bay three-year-old, by the noted Kilmarnock champion, Royal Edward, dam by Fashwood Prince, grandam by MacDougal. This is one of the smooth, powerfully-built horses of flashy quality of underpinning; the kind that Canadians like, but don't get every day. Scottish Gem [2560] is a brown two-year-old, by the famous Scotland's Choice, dam by Fashwood's Prince, and grandam by Mains of Keir. This colt has won many prizes in Scotland, including reserve for championship. He is remarkably well put up, of ideal character, and flashy on his bottom. A right good colt that will surely be a moneymaker. Woodend Favorite is another two-year-old that has many winnings to his credit. A colt of superb quality, smooth to a turn, and with it all is up to a big size, sired by the great sire of champions, Royal Favorite, dam by the H. & A. S. first-prize horse, Gallant Poteath, grandam by Clotaire, by Darnley's Hero, dam by Prince of Wales. An exceptionally big two-year-old of great character and strength of bone is Lord Shaw [12557], sired by the unbeaten Baron Solway, dam by the Royal first-prize horse, Montrave Kenneth, and grandam by the £700 horse, Brooklyn. This colt will easily go to the ton. Other two-year-olds are Major Muir [12559], by the well-known prize horse, Scott's Hero, dam by Baron's Pride, and grandam by Prince Romeo, by Prince of Wales. Gilt-edged breeding this, and a big, right good colt. Cooper's Burgie [12554] is the other two-year-old, by Baron Burgie, dam by Thirdpart Sentinel, grandam by Look Again, a grandson of the renowned Baron of Buchlyvie. This colt shows the superior type and quality of his illustrious breeding, and will make a high-class horse for somebody. King's Courtier [12556] is a big, upstanding and topky yearling, by the great Everlasting, dam by the renowned Up-to-Time, and grandam by the H. & A. S. champion, King of the Roses. His excellent breeding, coupled with his high-class individuality, make him one of the most desirable yearlings in the country. A right proper, good Canadian-bred yearling, is the black, Black Diamond [11327], by Imp. Dunglass, dam Imp. Gossie, by Balmedie Queen's Guard. All these horses are for sale, the whole making a selection for intending purchasers seldom met with. Thedford is on the Toronto-to-Sarnia line of the G. T. R., west of Stratford. The farm is connected with long-distance 'phone from Thedford.

**When Writing Please Mention The Advocate.**

**Metallic Roofing Co.**  
**METALLIC SIDING FOR HOUSES**  
 Metallic Rock Faced Stone or Brick Siding will give your home the appearance of a genuine stone or brick dwelling. It is easily and cheaply applied and absolutely fire and weather-proof.  
**Galvanized Corrugated Steel Siding**  
 For Implement Sheds, Barns and Granaries  
 insures the safety of your grain and implements. It may be applied direct to the studs—no sheathing is required.  
 Write us for full information. Our suggestions will save you money.  
 Phone Park. 800.  
 "Metallic saves you money all around. Why look how it will reduce your insurance rates."—*The Philosopher of Metal Town.*  
**MANUFACTURERS 1748**

**Consumption**  
 Its Diagnosis, Treatment and Cure  
**FREE**  
  
**NEW TREATISE ON TUBERCULOSIS**  
 By FREEMAN HALL, M.D.  
 This valuable medical book tells in plain, simple language how Consumption can be cured in your own home. If you know of anyone suffering from Consumption, Catarrh, Bronchitis, Asthma or any throat or lung trouble, or are yourself afflicted, this book will help you. Even if you are in the advanced stage of the disease and feel there is no hope, it will instruct you how others, with its aid, cured themselves after all remedies tried had failed, and they believed their case hopeless.  
 Write at once to The Yonkerman Co., 1690 Rose St., Kalamazoo, Mich., and they will gladly send you the book by return mail Free and also a generous supply of the New Treatment absolutely Free, for they want you to have this wonderful remedy before it is too late. Don't wait—write to-day. It may mean the saving of your life.

He is a real charmer. A little of his mane is an any winning of superb with it by the Favorite, size horse, Clotaire, prince of two-year-length of sired by a by the five Ken-0 horse, y go to ere Major own prize Baron's Romeo, breeding d colt. he other dam by y Look d Baron the su- strious high-class Courtier d tippy ng, dam d gran- on, King breeding, iduality, desirable right rling, is 27], by ssie, by e horses a selec- lom met onto-to- west of ed with rd.

**Does Your Maple Grove Pay?**  
 What's the use of working hard, wasting time and fuel every spring, and using out-of-date boiling contrivances that make poor syrup? Invest in a  
**"Champion Evaporator."**  
 Take a little comfort and make a better syrup that will bring you the best returns. Made in 22 different sizes. We have one for you. Write for our catalogue.  
**THE GRIMM MFG. CO'Y**  
 Limited  
 58 Wellington Street  
 MONTREAL, QUE.  


**QUESTIONS AND ANSWERS.**  
 Miscellaneous.

**CYCLONE FRAME.**

Can you inform me where I can get a scale for cyclone frame for a barn? We have been burned out, and wish to build on this plan.

AN OLD SUBSCRIBER.

[Note.—Any reader who can describe what our inquirer may be referring to by the name "cyclone frame," will greatly oblige.—Editor.]

**THRUSH.**

Horse subject to thrush in feet. Please give cause and treatment.

H. W. B. C.

Ans.—The cause of thrush is the more or less continued presence of irritant material in the cleft of the frog. The frog cracks, decays, and has an offensive smell. Clean the cleft of the frog out throughout, and keep it clean. Remove all partially detached or decayed horn, and syringe or douse daily with a solution of one part liquid formaldehyde in five or six parts water, then put a little batting in to keep dirt out. Formaldehyde can be had from any druggist. A little turpentine applied about the cleft of the frog tends to harden it and check thrush.

**COWS CHEW BONES, WOOD, ETC.**

What can be done for cows that have a craving appetite for chewing bones, sticks, and old boots. I have a herd of eleven cows; am feeding corn silage; it was put in silo rather green, without being frozen. My cows are not eating it very freely. Feed them about one-third chaff with the silage, but there seems to be something they need. I give a little salt every day. Am feeding gluten meal twice a day, and one feed of ground oats and wheat, about one-quarter wheat.  
 A. S.

Ans.—The chewing of bones, wood, etc., is a depraved appetite, supposed to be induced by a lack of phosphates in the food. Give all the salt they will take, and give one ounce of phosphate of lime in a pint of cold water as a drench night and morning, or give it in a little bran or chop. A small handful of sifted wood ashes in meal once or twice a week is believed to be beneficial. A little bran added to the ration might improve it.

**DISLOCATION OF PATELLA.**

I have a colt two years old last May. While in the pasture last October, I noticed his stifle out of place, but with the next step it slipped back in place. This was not seen again until about three weeks ago. Since that time it has been out of joint quite often, but by the colt drawing his leg forward, it is forced back into place without any apparent suffering. Will he outgrow this trouble, or should he be treated? If so, will you please prescribe?  
 J. P.

Ans.—Treatment will probably effect a partial cure, but it is doubtful whether or not the colt will ever be quite right, although he will likely make a useful horse. Blister the front and inside of the stifle joint with the following: Take 2 drams each of biniodide of mercury and cantharides and mix with 2 ounces of vaseline. Clip the hair off the parts, and tie so he cannot bite them. Rub well with the blister daily for two days. On the third day wash off and apply sweet oil. Turn in a box stall and oil every day. Repeat the blister every month if necessary. Allow him to run loose in a box stall until cured.

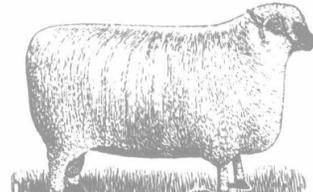
**TRADE TOPIC.**

Plank-frame barns in this era of high-priced timber are steadily gaining in favor as an economical style of building, which is said to be giving general satisfaction. Alf. A. Gilmore, of Huntingdon, Quebec, in an advertisement in this paper, claims to be an expert on all kinds of farm buildings, ventilation, etc., and invites correspondence.

**A "365" Day Liniment**  
**YOU ARE SAYING TO YOURSELF—**  
 "If I only knew of something to stop that Backache—help my Rheumatism—cure my Neuralgia, I would send and get it at once."  
**Get It.** Gombault's Caustic Balsam will give you immediate Relief. A Marvelous Human Flesh Healer and a never failing remedy for every known pain that can be relieved or cured by external applications. Thousands testify to the wonderful healing and curing powers of this great French Remedy. A Liniment that will soothe, heal and cure your every day pains, wounds and bruises.  
**Gombault's Caustic Balsam**  
 The Great French Remedy  
 Will Do It  
*It Helps Nature to Heal and Cure.* Penetrates, acts quickly, yet is perfectly harmless. Kills all Germs and prevents Blood Poison. Nothing so good known as an application for Sores, Wounds, Felons, Exterior Cancers, Burns, Carbuncles and Swellings.  
 "I had a bad hand with four running sores on it. The more I doctored the worse it got. I used Caustic Balsam and never needed a doctor after that."  
 —Ed. Rosenberg, St. Ansgat, Ia.  
*Mrs. James McKenzie, Edina, Mo., says:* "Just ten applications of Caustic Balsam relieved me of gonorrhea. My husband also cured eczema with it, and we use it for corns, bunions, colds, sore throat and pain in the chest."  
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**SHROPSHIRE, SOUTH DOWNS, OXFORDS & COTSWOLDS**  
 Will be held in the Agricultural Hall in the Agricultural Park, BURFORD, ONT., on  
**Thursday, January 25th, 1912, at 2 o'clock p.m.**

**200 sheep** of the different breeds will be sold by public auction, without reserve: contributed by the following breeders: Shropshires, H. N. Gibson, Delaware; Oak Park Stock Farm Co., Brantford; J. Lloyd Jones, Brantford; T. A. Cox, Brantford; J. D. Ferguson, St. Thomas; Mine Bros., Green River; S. Wilson & Son, Mt. Vernon; F. M. Lewis, Burford; Geo. Libbeck, Mt. Vernon; Robert Marshall, Elora; J. P. Bosomworth, Elora; Messrs. Schuyler & Son, Brantford; C. Hodgson, Brantford, and J. G. Hamner, Burford, South-downs, Geo. Baker, Simcoe; C. Hodgson, Brantford; E. E. Martin, Canning, Cotswolds. E. Parks, Burford; Geo. Allen, Burford; T. A. Cox, Brantford, Oxford, A. Jull, Burford. At 10 o'clock a.m. on day of sale the 200 sheep will be judged by expert judges, in the following classification:  
 1. Pen of six ewes over one year, five premiums.  
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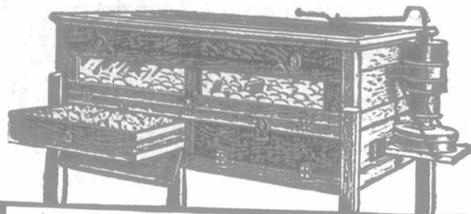
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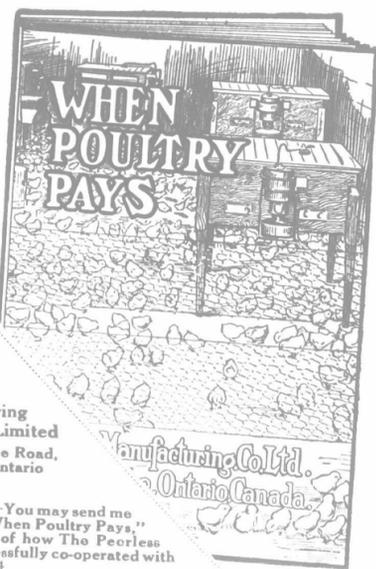


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**T. B. MACAULAY, Prop. ED. WATSON, Manager.**

### QUESTIONS AND ANSWERS. Miscellaneous.

#### SALE OF BULL.

A has an auction sale, and sells a bull 12 months old. The auctioneer, in selling, states bull is eligible. B buys bull and asks A for necessary papers to have bull registered. A cannot or will not furnish same, and after considerable argument B agrees to take bull at a slightly reduced price on condition A will not ask for more at any time, and will have no hard feelings. A promises, and B takes bull. Now A threatens suit to recover balance. If A loses suit, do you think B can compel A to take back bull, as B would not have bought if he knew animal would not register, but took it for convenience to A after. Auctioneer, when consulted, stated B should pay full amount, as if B had not bought bull, someone else would.

Ontario. **F. H.**

Ans.—No.

#### FEEDING ADVANTAGES—WATER ANALYSIS—TEMPERATURE OF STABLE.

1. What are the advantages and disadvantages in feeding cattle twice a day?

2. Where can water be sent to be analyzed, or can a person do it himself, and how?

3. At what temperature should the cattle stable be kept? **H. P.**

Ans.—1. As to whether cattle should be fed twice or three times per day there is great difference of opinion. Some feeders claim, better results from three meals per day, but provided they are fed a corresponding amount, and fed regularly, they should do just as well by being fed twice a day. Time was when feeders fed four and five times a day, but just as good animals are now produced with feeding the same quantity of feed at fewer feeds. Of course, where cattle are watered outside, a little feed would be necessary to keep them quiet while tying them in. The fewer the feeds, the greater the saving of labor, but it would not be wise to limit feeding to once a day.

2. There are a few simple tests for contamination in water. Three of them are here given: (a) Pour a half pint of water into a wide-mouthed bottle or decanter, close it with the palm of the hand; or, better, with glass stopper, and shake violently up and down. If an effervescence is then perceived, the water is probably contaminated with some form of sewage gas, and probably with other sewage constituents. (b) Add to a little water a drop or two of sulphuric acid and enough potassium permanganate to tinge it to a faint rose color. Cover the vessel. If a pink tinge is still visible after a quarter of an hour, the water may be considered wholesome. (c) Pour a little solution of silver nitrate into a carefully-cleaned glass, and notice that it remains transparent. Then pour in some water to be treated. Should a strong milkiness appear that is not cleared up upon adding a little dilute nitric acid, the water probably contains sodium chloride, which always exists in sewage water, but very seldom in wholesome water in any considerable amounts unless near the sea coast. If a minute analysis is required, get your local medical health officer to send a sample to an analyst.

3. Stockmen are becoming more and more convinced that fresh air is more essential to the animals' health than warm air. Unless artificial heat is supplied, thorough ventilation means comparatively cool temperature. To state the best temperature is impossible, as cattle are known to do exceedingly well in sheds, where they are sheltered from storm and wind, but where the temperature falls quite low. Dairy cows usually do better in fairly warm quarters, but they, too, must have fresh air, and where they are accustomed to a cool stable, do very well. Perhaps the best temperature for a cattle stable where beef cattle are kept, is one a little above freezing, but as long as the ventilation is good, and well arranged, and drafts are avoided, the animals, provided they are used to it, will show no bad effects of lower temperatures which often occur in winter.

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### Nineteen Imported Clydesdale Stallions For Sale

My importation of November, 1911, are nearly all two or three-year-olds. They are ideal in draft character, with faultless quality of underpinning. They represent the best blood of the breed, being descendants of such horses as Baron's Pride, Hiawatha, Marcellus, Hiawatha Godolphin, etc. They will be priced right and on terms to suit. Farm two miles from end of street car line. Long-distance phone. Call me up and I will meet you in Guelph.

O. SORBY,

GUELPH, ONT.

### QUESTIONS AND ANSWERS. Veterinary.

#### FATALITY IN HORSE.

Horse went very lame in off hind leg two weeks ago. In a few days the other leg gave out. The joints of both legs were swollen. In about a week he was unable to rise. He was helped up, but was down again next morning, and when lifted could not stand. He was placed in slings for a time, and in a day or two was able to rise. Yesterday he could not rise; had no power of hind quarters. When put in slings, he threw his head around and just hung limp. He now refused to eat. He was raised again this morning, but had no power in hind legs. Both ankle joints were puffed. The near one had broken some time ago, and the off one broke this morning and discharged blood and matter. He had been given no medicine, but legs and back were rubbed with liniment. He was dead at four o'clock.

E. V. C.

Ans.—The symptoms indicate inflammation of the fetlock joints, followed by blood poisoning. If hot poultices had been kept to the joints from the first symptoms, and internal antiseptics as 50 drops carbolic acid three times daily, or 8 drams calcium sulphide every four hours, it would probably have saved him. I infer from your letter that no professional attention was given. V.

#### Miscellaneous.

#### SHEEP-BREEDING QUERIES.

1. What breed of sheep would give the most profits in meat and wool, and are they healthy animals? If possible, illustrate them.

2. If starting with 25 ewes, and always keeping the young ewes with the old ones, about how many ewes would a man have in five years, and also about how many rams would he have sold during that term? J. P. B.

Ans.—1. Any of the standard breeds of sheep would likely give satisfactory results. The long-wool breeds would yield a little more wool than the short- or medium-wool breeds, but as a mutton sheep, some of the short-wool breeds seem to have a slight advantage over the long-wool breeds, so that there is little to choose between them. In point of hardiness, the Down breeds excel the long wools to some extent, but both have given good results in Ontario, and we believe that there is no "best" breed. Shropshires, Southdowns, Oxfords, Hampshires and Dorsets, are the popular short-wooled breeds, while Cotswolds, Leicesters and Lincolns, are the most widely bred long-wool breeds in Ontario. Illustrations of good individuals of the various breeds appear in these columns from time to time. Would suggest, however, that you become familiar with the different breeds before purchasing. Better results generally follow if sheep of the particular breed you fancy are purchased, provided the breed is a good utility breed, as all of those mentioned are. See several flocks of each breed before buying, and then commence on a small scale.

2. Twenty-five ewes would be rather a large start. For the average beginner, a dozen would be better, and, as experience is gained, the flock could be increased. With twenty-five ewes to begin with, and assuming that the ewes averaged  $1\frac{1}{2}$  lambs each per year, which is a fair average, and if each year the ewe lambs were added to the flock, but not bred until they were yearlings, at the end of five years the flock, if none were lost, would consist of 118 breeding ewes and 51 ewe lambs, provided the lambs were half males and half females. The number of rams sold during the five years would be 144, including the lambs of the last year. Of the 118 ewes, 36 would be yearlings, 25 two-year-olds, 16 three-year-olds, 16 four-year-olds, and the 25 of which the flock consisted in the beginning. This is only an estimate, but for an experienced flockmaster, under favorable conditions, it would not be too high. A beginner might not get such good returns.

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Pratt Food Co. of Canada, Ltd. Dept. 62 Toronto

## Aberdeen - Angus

Now is the time to buy a bull; eleven for sale; also females any age or price. WALTER HALL, Drumbo station. Washington, Ont.

Aberdeen-Angus Cattle—For Sale: A (15 mos.) of richest quality and breeding; also females.

Glengore Stock Farm, GEO. DAVIS & SONS, Props. Aiton, Ont.

Balmiedie Aberdeen-Angus lam offering for sale young bulls and heifers of the highest types of the breed. Show stock in show condition a specialty. Bred on the most popular lines. THOS. B. Broadfoot, Fergus Sta. Wellington Co., Ont.

## "The Manor" Scotch Shorthorns

Present offering: 1 choice yearling bull, an "Undine," g. dam imp. Young cows in calf. Yearling heifers: Clippers, Minas, Wimples, Julias, etc. Inspector solicited. Prices moderate. Phone connection.

J. T. GIBSON, DENFIELD, ONTARIO

## MAPLE LODGE STOCK FARM

1854 - 1911

Am offering a splendid lot of young Shorthorn bulls for sale now; good colors and choice individuals; several of them from high-class milkers. A few select Leicesters for sale yet.

A. W. SMITH, Maple Lodge, Ontario  
Lucan Crossing, G. T. Ry., one mile.

## Shorthorns of Show Calibre

Only one bull for sale now, but 13 grand heifers by Mildred's Royal must be sold, as we have no bull to breed them to. Come and see them, or write.

GEO. GIER & SON, Grand Valley, Ont.

The sign in front of a Harlem restaurant attracted the eye of a farmer, and he went in.

He had a raw, a fry, a stew, a pan roast, a broil, and a steam on toast. When he got through he laid a quarter on the cashier's desk, only to be told that he was shy a dollar and a quarter. "No, by jing," said the farmer. "A quarter's right. Doesn't your sign say, 'Oysters in every style for 25 cents?'" —Winnipeg Saturday Post.

## THE BEST WAY TO KEEP THE HANDS CLEAN.

Women have to do dirty work on the farm as well as the men. Cleaning lamps, blacking stoves, paring potatoes, scrubbing floors and milking, are all hard on the hands.

The thousands who are using SNAP find it exactly what women need, and would not be without a can.

It is a wonderful hand cleaner, instantly removes dirt, stains and odor without much rubbing, and keeps the hands smooth and free of chaps. It is healing and antiseptic. 15c. a can. 114

# The Great Toronto Sale of Pure Scotch Shorthorns



WILL BE HELD AT THE  
**UNION STOCK YARDS, TORONTO,** on

**WEDNESDAY**  
and  
**THURSDAY, February 7th and 8th, 1912**

**W. C. Edwards & Co., Rockland, Ont.; The Millers (four herds);  
J. A. Watt, Salem, Ontario, and Capt. Robson, London, Ont.,**

Have reserved all or the best of their product for this sale, and the offering will consist of 25 young bulls—better than ever went in a sale ring in Canada—and 75 young cows and heifers, with as good tops and with more merit all round than has ever been offered before. The breeding is absolutely beyond criticism from the viewpoint of those that want pure Scotch Shorthorns, and the animals, without exception, are of the thick, smooth, shortlegged type, so uniform that the best herd on the continent

could be selected from them. There are Missies, Lavenders, Brawith Buds, Rosemarys, Butterflies, Blythesomes, Nonpareils, Lancasters, Goldies, Secrets, Emmas, Glosters, Matchlesses, Jilts, Roan Ladys, Rosewoods, Lady Madges, Villages, Lovelys, Rosa Hopes, Mildreds, Crimson Flowers, Bessies, Kilblean Beauties, Ramsdens, Buckingham and Victorias. Not a plain bred one, not many good families but are represented. They are by the greatest sires in the land, many of them served with the best bulls of the breed. Write for catalogue to:

**ROBERT MILLER, Manager of Sale, Stouffville, Ontario**

## IMPORTED ABERDEEN-ANGUS CATTLE

We have a large selection of IMPORTED ANGUS BULL CALVES and YEARLINGS for sale. Also a few heifers and cows. These cattle represent the most desirable blood lines and families of this breed in Scotland, and are an exceptional lot of fine individuals.

### Prices Reasonable

This is an opportunity to introduce the best imported blood in your herd. Angus sires are noted for their prepotency, and thus are extremely desirable for improving and building up herds of grade cattle. You are cordially invited to inspect our herds and stock.

**Breeder and Importer**  
Clydesdale Horses  
Jersey Cattle  
Aberdeen-Angus Cattle  
Shropshire Sheep  
Berkshire and Yorkshire Swine

**LARKIN FARMS**  
Queenston, Ont.  
Canada  
**J. D. LARKIN, - Owner**  
Buffalo, N. Y.



**ORCHARD GROVE HEREFORDS**  
Champions of 1911 shows, winning both senior and junior herds at Winnipeg, Brandon, Regina, Edmonton, Toronto and London; also fifteen championships.  
Young stock, both sexes, for sale at reasonable prices.  
Long-distance 'Phone **L. O. CLIFFORD Oshawa, Ont.**

**Shorthorn Bulls—Special offering:** Scotch breeding, full of flesh and quality, with plenty of scale and from good milking dams.  
**H. SMITH, Hay P.O., Huron County, Ontario.**  
Exeter Station, G. T. R., ½ mile.

**Shorthorn Bulls**—12 to 16 months, reds and roans, Strathallans. A very choice lot of five, considering breeding and extra quality. We offer them at a bargain. The best bunch ever bred at Fairview.  
**J. & D. J. CAMPBELL, Fairview Farm, WOODVILLE, ONT.**

**Shorthorns and Clydesdales**—We are offering 10 choice young bulls, serviceable age, sired by His Grace (Imp.) =69740=; also for sale or exchange, two stallions rising 3 and 4 years old; big quality horses, from imported sires and dams; also cows and heifers, mares and fillies. Write us, or come and see them.  
**A. B. & T. W. DOUGLAS, Strathroy, Ont.** Farm one mile north of town

### QUESTIONS AND ANSWERS. Miscellaneous.

#### ALFALFA — POTATO FERTILIZING—MOLDY SILAGE.

1. I have a piece of ground on a hillside. It is somewhat springy, but no water stands on it. Would it be wise to seed it with alfalfa? If not, what would be most suitable for it?
2. Does it pay to buy fertilizers for potatoes?
3. My silo has about six inches of moldy corn all around the wall as far as I have gone. Will that continue to the bottom, and is it fit for feed?

J. A. H.

Ans.—1. It is somewhat doubtful whether a good catch of alfalfa would result on springy soil. If it had a system of underdrains put in, the result would likely be more satisfactory.

2. Frequently, yes.
3. Moldy silage is not suitable for feed. It is not likely that it will be moldy all the way down, but it may be. This condition is due to the access of air. The silage is not so well packed around the outer edge of the silo. Further down it will likely be more solid.

#### GOSSIP.

The Clydesdale Horse Society of Great Britain, at its annual meeting last month, decided to renew all their gold medal grants to Canadian Shows for 1912. The membership of the Society now numbers just over 2,000, and closed the year in an eminently satisfactory fashion.

The aviator's wife was taking her first trip with her husband in his airship. "Wait a minute, George," she said. "I'm afraid we will have to go down again." "What's wrong," asked the husband. "I believe I have dropped one of the pearl buttons off my jacket. I think I can see it glistening on the ground." "Keep your seat, my dear," said the aviator. "That's Lake Erie."—Winnipeg Saturday Post.



Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the blemish came.  
**Fleming's Spavin Cure (Liquid)** is a special remedy for soft and semi-solid blemishes—Boog Spavin, Thoroughpin, Splint, Curb, Capped Hock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be imitated. Easy to use, only a little required, and your money back if it ever fails.  
**Fleming's Vest-Pocket Veterinary Adviser** describes and illustrates all kinds of blemishes and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.  
**FLEMING BROS., Chemists**  
76 Church St., Toronto, Ontario

### AUCTION SALE OF 16 PURE-BRED Shorthorn Cattle

Also a number of **BERKSHIRE SOWS**  
**Wednesday, January 17th, 1912**  
At **Glenburn Stock Farm, Lennoxville, Que.**  
Consisting of eight choice young bulls and eight heifers from a good milking strain of Shorthorns. The sows are bred to farrow in April. Sale at one o'clock. Catalogue on application to:

**Edwin Howe, Auctioneer, Lennoxville, Que.**  
**JOHN RACEY, Lennoxville, Que.**

### WILLOW BANK STOCK FARM Shorthorns and Leicesters

Herd established 1855, flock 1848, have a special good lot of Shorthorns of either sex to offer of various ages; also a grand lot of Leicester sheep of either sex—a few imported ones to offer.  
**JAMES DOUGLAS, Caledonia, Ontario.**

**Shorthorns and Swine**—Am now offering a very choice lot of cows and heifers, safe in calf, and some choice young bulls for the fall trade; also Berkshire and Yorkshire pigs; showyard material.  
**ISRAEL GROFF, Fimra, Ont.**

**Shorthorns, Shropshires and Berkshires**—For sale: I have young bulls and heifers, bred for milk production. High-class flock-heads, winners, and covered to the ground. Berkshires, both sexes of breeding age, show stock  
**W. Wilson, Brickley P.O., Hastings Sta., G. T. R.**

## Trusses Like These Are A Crime



If you want RELIEF from all pain—a CURE instead of constant danger—strength instead of weakness—if you want to be rid of the old, unscientific and uncomfortable Leg-strap appliance and Spring Trusses—send to-day for our FREE Book of Advice. It took us 40 years to learn the facts it contains, and tells you just how the Cluthe Self-Massaging Pad STRENGTHENS the weakened muscles, HOLDS with ease and CURES Rupture. Waterproof, durable, hygienic; sent under Guarantee Trial. Remember—NO body-spring, NO plaster, NO leg-strap. Write NOW for this free Rupture Book and 4000 Public Endorsements. Just address:—

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Lump Rock Salt, \$8.00 for ton lots. f.o.b., Toronto  
Toronto Salt Works, 128 Adelaide St. E.,  
G. J. CLIFF, MANAGER. Toronto, Ont.

**OAKLAND SHORTHORNS** We have another lot of young bulls ready for fall and winter trade, out of good breeding dual purpose dams and sired by our herd header, Scotch Grey, 72692, one of the best bulls in Ontario; good cattle and no big prices. Will also sell a few cows and heifers; about \$0 to select from.  
**JOHN ELDER & SON, HENSALL, ONTARIO**

**Fletcher's Shorthorns and Yorkshires**

Stock bull "Spectator" (imp.) =50094— for sale or exchange; also choice heifers. I also offer my (imp.) Yorkshire boar for sale or exchange.  
**GEO. D. FLETCHER, Binkham, Ont.**  
Erin station, C. P. R.

"I suppose you find living less expensive since you took to gathering your own mushrooms?"

"A little," replied Mr. Growcher. "We don't save anything on the mushrooms, but all our friends have quit accepting invitations to dinner."

A clergyman in Keokuk, Iowa, while waiting for a train at a railway station, was accosted by a couple, who requested him to marry them. He saw his train approaching, and he married the couple in the following brief manner: "Do you want one another?" Both replied, "Yes." "Well, then, have one another."

## HAD VERY BAD COUGH

And Tickling Sensation in Throat.

Dr. Wood's Norway Pine Syrup Cured It.

Miss C. Danielson, Bowsman River, Man., writes:—"Last fall I had a very bad cough and a tickling sensation in my throat. It was so bad I could not sleep at night, so I went to a druggist and told him I wanted something for my cold, and he advised me to try Dr. Wood's Norway Pine Syrup which I did, and after taking one bottle I was completely cured. Let me recommend Dr. Wood's Norway Pine Syrup to anyone who suffers from a cough or throat irritation."

Dr. Wood's Norway Pine Syrup is without a doubt one of the greatest cough and cold remedies on the market to-day, and so great has been its success there are numerous preparations put up to imitate it. Do not be imposed upon by taking one of these substitutes, but insist on being given "Dr. Wood's" when you ask for it. Price, 25 cents a bottle; put up in a yellow wrapper; three pine trees the trade mark; manufactured only by The T. Milburn Co., Limited, Toronto, Ont.

## QUESTIONS AND ANSWERS.

Miscellaneous.

### APIARY QUERIES.

1. Would it be wise to go and work in an apiary before starting in apiculture for one's self?
  2. Could one get a job in an apiary so as to learn beekeeping, and about what wages could be expected?
  3. Could you give me a couple addresses of men who keep a good apiary in Ontario?
  4. Where could I get bee books and journals, and what price?
- Ans.—1. There is no better method of becoming familiar with the business.
2. We think so. Wages would be small, but what you would learn would likely pay you for your trouble.
3. Write Morley Pettit, Provincial Apiarist, O. A. C., Guelph.
4. Books on beekeeping may be obtained through this office. Langstroth, on the Honey Bee, at \$1.60, postpaid, and A B C of Bee Culture, \$1.75, postpaid. The Canadian Bee Journal is devoted solely to apiculture, and is published monthly by the Hurley Printing Co., Brantford.

### PUFFS FOLLOWING DISTEMPER

I have a standard-bred colt which will be three years old next spring. This colt was absolutely clean about her hock joints until she took distemper at about nine months of age. With the distemper came quite large puffs, where a bog spavin comes. The puffs have remained until now. They never made her lame. I am driving her some now, and she goes perfectly sound. The puffs go down a great deal with exercise, and get very soft. I would like to have them removed, as they decrease the value of the young mare, and do not look nice. Would you advise trying to remove them? If so, please advise me as to the best treatment.

L. M.

Ans.—Blistering will probably reduce this. Take 2 drams each of biniodide of mercury and cantharides and mix with 2 ounces of vaseline. Rub well once a day for two days after clipping the hair off the parts and tying so she cannot bite them. On the third day apply sweet oil and turn in a loose box stall. Oil daily. As soon as the scale comes off, repeat the blister. It is scarcely likely that the puffs were caused by distemper.

### MUD FEVER—GROWING CORN.

1. In October, while plowing, young mare's legs would swell at nights, and when worked a while the swelling would go down. After a time they broke out in sores, and are not yet healed. While plowing, she was fed a gallon of oats and all the alfalfa hay she would eat, but since the first of November she has been fed mostly straw. Please give cause and cure.

2. Would you advise growing corn for two years in succession on light land, if well manured both years? This field grew a good crop of corn last year.

FARMER'S SON.

Ans.—1. The symptoms indicate mud fever. This may be due to various causes. Some animals are predisposed to the trouble. It sometimes results from some constitutional ailment. Cold and heat operating alternately on the skin, wet or mud on the parts, friction, or dirt, may cause it. Give her a purgative of from eight to ten drams aloes and two drams ginger. Follow up with 1½ ounces of Fowler's Solution of Arsenic twice daily for a week, after which give one dram of iodide of potassium twice daily. Dress the legs three times daily with a lotion made of one ounce each of acetate of lead and sulphate of zinc to a pint of water. Keep the legs dry. If they get wet, rub or brush dry. Feed more liberally, and give good shelter and exercise.

2. If the land is as stated, well manured, another good crop of corn would likely result, but better returns are possible if crops are rotated. It would be perhaps better practice to grow one of the commoner cereal grains on this land, and place the corn on another field which needs fertilizing and hoeing.

## Planet Jr.

Two million workers the world over testify to the durability, economy, labor and time saving advantages of all Planet Jr. tools. They bring

Lighter work—  
Heavier Pocket-book

Wherever you are, whatever you grow, Planet Jrs are scientific aids to bigger profits. Made by a practical farmer and manufacturer; every tool guaranteed.

No. 25 Planet Jr. Combined Hill and Drill Seeder, Double Wheel Hoe, Cultivator, and Plow, capital for large-scale gardening especially, has automatic feed-stopper, seed index, and complete cultivating attachments. Indestructible steel frame.

No. 16 Planet Jr. Single Wheel Hoe, Cultivator, Rake, and Plow is light, handy, and adapted to almost every garden use. Has leaf guard for close work and lasting steel frame.

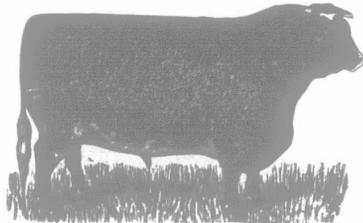
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It's brimful of valuable farm and garden hints, besides showing 55 tools for all kinds of cultivation. Send postal for it today!

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WRITE FOR THE NAME OF OUR NEAREST AGENCY.



**ARTHUR J. HOWDEN & CO.**

ARE OFFERING

**15 High-class Scotch Shorthorn Heifers**

At moderate prices, including Cruickshank Nonpareils, Cruickshank Villages, Marr Emmas, Cruickshank Duches of Glosters, Bridesmaids, Bruce Fames, Kinellars, Claretts, Crimson Flowers, and other equally desirable Scotch families, together with a member of the grand old milking Atha tribe, which have also been famous in the showing.

Arthur J. Howden & Co., Columbus, Ont.

## SHORTHORNS

Have now a choice lot of young bulls to offer; also with something nice in heifers. Catalogue of herd and list of young animals on application.

**H. CARGILL & SON, Proprietors, Cargill, Ont., Bruce Co.**  
JOHN CLANCY, Manager



## Shorthorn Bulls and Clydesdale Mares

If you are in the market for a young bull, write us for particulars, or, better still, come and see them. We have 13 young bulls, from 8 to 14 months old, of good breeding and quality. We also have four imported Clydesdale mares, safe in foal.

**W. G. PETTIT & SONS, Freeman, Ontario**

Bell 'phone. Burlington Jct. Sta., G. T. R., ½ mile from farm

THIS IS A GOOD TIME, AND I HAVE A GOOD PLACE, TO GET A HIGH-CLASS SCOTCH SHORTHORN BULL CALF by my great Whitehall Sultan sire, or a young cow in calf to him, to start a herd that will be gilt-edged. SHROPSHIRE RAMS AND EWES, too, at low prices. CHILDREN'S PONIES, A CLYDESDALE FILLY, such as I can send you, is one of the best things any man can buy. Just write me and say as nearly as possible what you want, and I will surprise you with prices on goods that are genuine.  
**ROBERT MILLER, STOUFFVILLE, ONTARIO**

**SALEM SHORTHORNS** Headed by (Imp.) Gainford Marquis, undefeated in Britain as a calf and yearling, and winner of junior championship honors at Toronto, 1911. Have on hand two yearlings and a number of bulls under a year for sale at reasonable prices.  
**J. A. WATT, Salem, Ont. Elora Sta, G. T. R. and C. P. R.**

**Scotch Shorthorn Females for sale** I am offering at very reasonable prices, females from one year to five years of age. The youngsters are by my grand old stock bull, Scottish Hero (imp.) =55042= (90065), and the older ones have calves at foot by him or are well gone in calf to him. Their breeding is unexcelled, and there are show animals amongst them. A EDWARD MEYER, Box 378, GUELPH, ONT.

**Scotch Shorthorns** FOR SALE: 14 blocky, low-down bull calves, from 6 to 11 months old, all from imported stock. 20 yearling and two-year-old heifers of best Scotch breeding; also one imported bull, an extra sire. Farm ¼ mile from Burlington Jct. Sta.  
**Mitchell Bros., Burlington, Ont.**

**ELMHURST SHORTHORNS & BERKSHIRES** I have now a particularly choice lot of young Berkshires; over 50 to select from; bred from imported stock. Strictly high class, from breeding age down. Also choice young Scotch Shorthorns. H. M. VANDERLIP, Cainsville P.O., Langford Sta., on Electric Road, between Hamilton and Brantford.

**Pleasant Valley Farms Shorthorns**—For Sale: 7 good young Scotch bulls high-class bulls; also cows and heifers. Correspondence solicited. Inspection invited.  
**GEO. AMOS & SONS, Moffat, Ont.**  
Farm 11 miles east of Guelph on C. P. R., ½ mile from station.

### SPRING VALLEY SHORTHORNS

Herd headed by the two imported bulls, Newton Ringleader, =73783=, and Scottish Pride, =36106=. The females are of the best Scotch families. Young stock of both sexes for sale at reasonable prices. Telephone connection.  
**KYLE BROS., - - Ayr, Ontario**

### Shorthorns

Choice selections of bulls and heifers at all times for sale at very reasonable prices. **Robert Nichol & Sons, Hagersville, Ont.**

### Brampton Jerseys

Production and quality.

### Don Jersey Herd

Offers young bulls and heifers for sale; heifers bred to Eminent Royal Fern.  
**D. Duncan, Don, Ont., Duncan Stn., C.N.R.**  
Phone Long-distance Agincourt.

### High Grove Jerseys & Yorkshires

No better blood in Canada. Present offerings: Choice young sows due to farrow in March. Heifers, all ages, both sexes.  
**Arthur H. Tufts, P. O. Box III, Tweed, Ont.**

Bulls fit for service are getting scarce. Just a few left. Yearling heifers in calf are in great demand; 6 for sale; 6 now being bred. Brampton Stockwell the sire. A few good cows and some calves for sale.  
**B. H. BULL & SON, BRAMPTON, ONT.**



## Had Palpitation of the Heart Weakness and Choking Spells.

When the heart begins to beat irregularly, palpitate and throb, beats fast for a time, then so slow as to seem almost to stop, it causes great anxiety and alarm. When the heart does this many people are kept in a state of morbid fear of death, and become weak, worn and miserable.

To all such sufferers Milburn's Heart and Nerve Pills will give prompt and permanent relief.

Mrs. John J. Downey, New Glasgow, N.S., writes:—"Just a few lines to let you know what your Milburn's Heart and Nerve Pills have done for me. I was troubled with weakness and palpitation of the heart, would have severe choking spells, and could scarcely lie down at all. I tried many remedies, but got none to answer my case like your Pills. I can recommend them highly to all having heart or nerve troubles."

Price 50 cents per box, or 3 boxes for \$1.25. For sale at all dealers or will be mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

## LINCOLN LONG-WOOL SHEEP And Shorthorn Cattle.

The Riby Grove Flock and Herd, owned by

MR. HENRY DUDDING,

Is the source to which practically all the leading export buyers have resorted from time to time to obtain stud sires and dams, and rams and ewes of unrivalled merit and quality. The record of its showery success is unequalled, and so are its sale averages. Selections of Sheep and Cattle always for sale.

Apply: THE OWNER, RIBY GROVE,  
STALLINGBOROUGH, GRIMSBY, ENGLAND

## Shropshire and Cotswold Ewes

At bargain prices, shearing ewes and a few aged imported ewes, bred to a first-class ram. In Cotswolds, shearing and two shear ewes, bred to the best rams of the breed; also ewe lambs, both breeds.

JOHN MILLER, Brougham, Ont.  
Claremont Stn., C. P. R.

## Cattle and Sheep Labels



Metal ear labels with owner's name, address and any numbers required. They are inexpensive, simple and practical. The greatest thing for stock. Do not neglect to send for free circular and sample. Send your name and address to-day.

F. G. JAMES, Bowmanville, Ont.

The New York City Fire Department has prepared and is distributing cards containing these timely "Don'ts" for housekeepers. We reproduce some:

Don't allow children to play with matches.

Don't use matches or candles in dark closets or cellars.

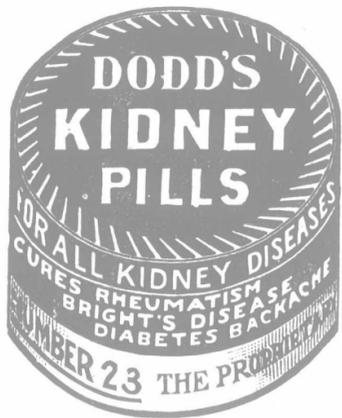
Don't keep matches except in a tin box with cover attached.

Don't toss away a match unless completely extinguished, and then toss it into a metal or porcelain receptacle.

Don't fill lamps or oil stoves while lighted.

Don't use kerosene oil in lighting fires.

Don't use naphtha or gasoline for cleaning purposes where there are open lights or fires.



## QUESTIONS AND ANSWERS. Miscellaneous.

### RATION FOR COLT.

Give a good ration for a young colt, just weaned. I would like to rush him along, as he is pure-bred, and is likely to make a good stallion. He is five months old. A. F.

Ans.—Give him all the good, clean, well-cured hay he will eat, but do not keep more in his manger than he will eat up clean at each feeding. There is no better grain for horses of any age than oats. It is impossible to state a given quantity, as some colts will eat more than others. Good oats and bran, equal parts, and as much as he will clean up at each meal, should keep the colt in good condition, or chopped oats, with a small handful of ground oil cake and a little bran added, will make a good grain ration. From two to three quarts of sweet skim milk two or three times a day will aid in keeping him growing.

### RAILWAY CROSSINGS FOR FARMERS.

The C. P. Company does not give farmers a good crossing over the rails of its track by putting in plank to cross with heavy loads. If I would write the Railway Commissioners, could they compel the company to give a suitable crossing? What would be their address? I am a railway man, but always ask for "The Farmer's Advocate" when I get home, as it is better to my idea than any other paper I have yet seen on farming. R. M.

Ans.—Under the Railway Act (Sections 252 and 253) every farmer has a right to a farm crossing, and in a case where the railway company has not supplied one, the Board of Railway Commissioners, Ottawa, has power to order one put in. We reproduce the gist of General Order No. 9325, issued January 17th, 1910, and laying down standard regulations for the future construction of farm crossings by railway companies:

"1. Gates—Farm-crossing gates shall be of such a width as to give a clear space between the posts of not less than—

"(a) Sixteen feet in the Province of Manitoba, Saskatchewan, Alberta and British Columbia.

"(b) Fifteen feet in the Province of Ontario.

"(c) Fourteen feet in Quebec and the Maritime Provinces.

"2. Planking and Approaches to Crossing.—The planking or other approved filling between the steel rails, and for a width of at least eight inches on the outer sides thereof, and the roadways between the gates and the track or tracks, shall each furnish a road surface of not less than—

"(a) Fourteen feet wide in the Provinces of Manitoba, Saskatchewan, Alberta and British Columbia.

"(b) Twelve feet wide in the other Provinces of the Dominion.

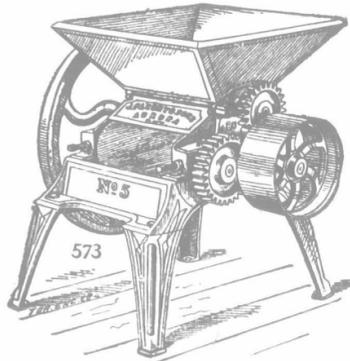
"3. For any cut or fill up to five feet, the grade shall not be steeper than 10 per cent.; and for each foot, or fraction exceeding one-half foot, of cut or fill in excess of five feet, the percentage of grade shall (except where, and to the extent that, the slope of the ground makes it impossible) be decreased by  $\frac{1}{2}$  of 1 per cent. until a depth or height of eleven feet is reached.

"4. When a cut or fill at any farm crossing exceeds eleven feet, the matter shall be referred to the Board to decide as to the advisability of requiring the Railway Company to construct a bridge or undercrossing, unless the Company, in consultation with the owner of the farm affected, voluntarily constructs a suitable bridge or undercrossing. The width of bridges and undercrossings to be the same as the width of the gates in the different Provinces, and the height of undercrossings to be determined by the requirements in each case.

"5. In special cases, it may, upon application, be ordered that any existing farm crossings be reconstructed to conform to the foregoing standards."

(Signed) J. P. MABEE,  
Chief Commissioner,  
Board of Railway Commissioners for  
Canada.

## IF YOU SAVE 10 TO 20%



of your feed grain—and your horses THRIVE EVEN BETTER—how soon would you PAY FOR a

### ROLLER CRUSHER?

These machines may be run by 2 to 25 horsepower. They are made to CRUSH, or, if preferred, fitted for ROLLING or CRIMPING only.

Will run FOR YEARS without any expense for renewals or repairs. If you feed ONLY A FEW HEAD of stock, it will pay you well to have one of these machines.

J. FLEURY'S SONS, AURORA, ONTARIO

Medals and Diplomas: World's Fairs, Chicago and Paris

## BLAIRGOWRIE STILL TO THE FRONT

Present offering: Shropshire and Cotswold ewes bred to high-class rams; also ewe lambs. In Clydesdales I have choice young mares and filly foals. In Shorthorns are several young bulls of serviceable age. Herd headers of quality.

Myrtle, C. P. R. Stn. L.-D. Phone. JOHN MILLER, JR., Ashburn, P. O.

Shropshire Sheep, Shire Horses and very many winners in Shropshires, and never had a better lot of both sexes for sale. Order early. Also a big quality shire filly and White Wyandotte poultry. W. B. MONKMAN Bond Head, Ont. Phone connection.

When writing please mention this paper

Southdown Ewes A few good shearlings, and two-shear ewes in lamb to my Toronto champion ram.

Angus Cattle—Buy an Angus bull to produce steers that feed easily and top the market

Colliers that win at the shows and make excellent workers.

ROBT. McEWEN, Byron, Ont.

## Maple Grove Yorkshires

ARE EQUAL TO THE BEST.

Present offering: Twenty-five sows bred to farrow from Aug. to Oct. All first-class, bred to No. 1 quality boars. All pig, roomy, growing stock, and ranging from six months to two years old. Eight young boars fit for use; choice long fellows of excellent breeding, and younger pigs of various ages. Pairs not related. Our prices will suit the average farmer, but are consistent with the quality. Stock shipped C. O. D. and on approval. Correspondence and personal inspection invited. Long-distance phone via St. Thomas.

H. S. McDIARMID, FINGAL, ONTARIO.  
Shedden Station, P. M. and M. C. R.

## Hilton Stock Farm Holsteins and Tamworths.

Present offering: 6 yearling heifers and several younger ones. All very choice. Of Tamworths, pigs of all ages and both sexes; pairs not akin. R. O. MORROW & SON, HILTON, Ont. Brighton Tel. & Stn.

## Newcastle Tamworths and Cotswolds

For sale: Choice young sows, bred and ready to breed; boars ready for service; beauties, 2 to 4 months old, by imp. boar, dam by Colwill's Choice. Canada's champion boar 1901, 2, 3 and 5. Several choice ram lambs and ewes, all ages, and one 3-shear ram. Prices right. Bell phone.

A. A. COVILL, NEWCASTLE, ONTARIO.

Tamworths and Poultry We can supply both sexes and any age, bred from the champions of Canada; show stock a specialty. Also Toulouse Geese, Pekin Ducks and S. C. White Leghorns. D. DOUGLAS & SONS, Mitchell, Ontario.

Hampshire Pigs Get acquainted with the best bacon hog in existence. Both sexes for sale from imported stock. Write for prices. Long-distance phone. J. H. RUTHERFORD, Box 62, Caledon East, Ont.

Elmwood Ohio Improved, Chester White pigs, largest strain, oldest established registered herd in Canada. Choice lot of young sows, bred; young pigs, 6 weeks to 6 months; pairs not akin. Express prepaid. Safe delivery guaranteed. E. D. GEORGE & SONS, Putnam, Ontario.

Monkland Yorkshires I am making a special offering of 50 young bred sows. They will average 200 pounds in weight, and are from 6 to 7 months of age. An exceptionally choice lot, full of type and quality; also a limited number of young boars. MATTHEW WILSON, FERGUS, ONTARIO

## Duroc - Jersey Swine.

Largest herd in Canada. 100 pigs ready to ship. Pairs and trios not akin; also a few sows ready to breed. Bell phone at the house. MAC CAMPBELL & SONS, NORTHWOOD, ONT.

Morrison Tamworths—Bred from the best blood in England; both sexes for sale, from 10 months old; young sows, dandies, in farrow to first-class boars. Chas. Currie, Morrison, Ont.

## LARGE WHITE YORKSHIRES

Have a choice lot of sows in pig. Boars ready for service, and young pigs of both sexes supplied not akin, at reasonable prices. All breeding stock imported, or from imported stock, from the best British herds. Write or call on:

H. J. Davis, Woodstock, Ont.  
C. P. R. and G. T. R. Long-distance phone.

## O.I.C.

We have those fine Chester White boars for sale, 1-5 mos. old, 1-6 mos. old, 1-2 years old, and four sows over one year old; none are better, few as good; all are registered.

## GLEN ATHOL FRUIT RANCH

ST. CATHARINES, ONT.  
Poplar Lodge Southdowns and Berkshire sheep, rams or ewes, ram or ewe lambs, Berkshires, from youngsters up to breeding age, of both sexes; the highest types of the breeds in proper fit. SIMEON LEMON, Kettleby P. O., Schomberg or Aurora Stns. Phone.

The Tamworths in Canada—I have a particularly nice lot of young Tamworths just now of both sexes, from youngsters up to breeding age. If you want the best types of the breed, write me. HERBERT GERMAN, St. George, Ont. Long-distance phone.

Hampshire Hogs We have the highest-scoring and greatest prizewinning herd of Hampshire swine in Canada, bred from the best strains of the breed. Stock of both sexes and all ages. HASTINGS BROS., Crosshill P. O. Linwood Sta., C. P. R.; Newton Sta., G. T. R.

Spring Bank Yorkshires For two weeks, at reduced rates, a few choice young sows, registered, four months old. Long-distance phone. WM. BARNET & SONS, Living Springs, P. O., Ontario. Fergus Station C. P. R. and G. T. R.

Improved Large Yorkshires FOR SALE A lot of or fine young boars and sows of different ages. Full strength. Correspondence solicited. SENATOR F. L. BEIQUE P. O. Box 106 Lachinc Locks, Que.



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the Trinidad-Lake-Asphalt Roofing

is the lasting roofing for this reason: Trinidad Lake Asphalt is natural asphalt, full of life and vigor that are put in and kept there by the oily nature of this asphalt. Genasco is made of this natural asphalt, and has all its permanent weather-resisting qualities which keep it lastingly waterproof.

Roofings that you don't know about are risky. Their looks are apt to deceive you. Be on the safe side, and get Genasco Roofings—mineral or smooth surface. Fully guaranteed.

The Kant-leak Kleet insures the perfect application of roofing—makes seams water-tight without smeary cement, and prevents leaks from nail-holes. Ask your dealer for Genasco with Kant-leak Kleets packed in the roll. Look for the hemisphere trademark. Write us for samples and the Good Roof Guide Book.

### The Barber Asphalt Paving Company

Largest producers of asphalt and largest manufacturers of ready roofing in the world.

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Trinidad Lake Asphalt  
Asphalt-saturated Wool Felt  
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Round Trip Tickets now on sale to all principal Winter Resorts, including

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The Attractive Route to

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### GNAW THIS TROUGH

Made of heavy galvanized steel, your hog cannot gnaw or damage this feed trough. So successful have these troughs stood the test during the past 5 years that we are willing to ship any size you select to your station on the understanding that you can ship them back at our expense if not first-class in every detail. We know you will be delighted with them. Send for Catalogue 22 today. We supply tanks in stock sizes or to order.

STEEL TANK CO., Tweed, Ont.

MENTION "FARMER'S ADVOCATE."

### GOSSIP.

HIGH-CLASS CLYDE STALLIONS FOR T. D. ELLIOTT, BOLTON.

T. D. Elliott, of Bolton, Ont., has lately had landed a small but exceptionally high-class shipment of Clydesdale stallions from the stud of A. & W. Montgomery, Kirkeudbright, Scotland. This makes the second shipment for Mr. Elliott for the fall of 1911. One of them is the big, choice son of the renowned Gay Everard, out of a daughter of the Cawdor Cup champion, Royal Gartley. This is a big, ideal draft horse, as high-class in his quality and character as his royal breeding would indicate. Another is a four-year-old son of the H. & A. S. first-prize horse, Ruby Pride, dam by the H. & A. S. champion, Prince Thomas, and granddam by the great prize horse, Cairnbrogie Stamp. This is a high-class horse that will make his mark in this country. Another big, full-grown horse, of true draft character, is a son of the noted Lord Lothian, who was sire of the Cawdor Cup champion, Lady Lothian. This horse's dam was the popular sire, Prince of Currah. The other of this importation is a get of Prince Lawrence Marcellus, with dam by Lord Lothian. With this strong lot added to his stud, Mr. Elliott will be in a position to meet the wants of the most exacting critic. He is now making arrangements for a big shipment of fillies, which will arrive later, and be sold by auction at some convenient center, particulars of which will appear in these columns later.

John Racey, of Lennoxville, Que., as stated in the advertisement in this issue, being overstocked, has decided to offer his last year's crop of Shorthorn bull calves by auction on January 17th, along with a choice lot of heifers, consisting of two-year-olds, yearlings and calves, a fine thick-set lot, in nice breeding order, and all of the old Lily by Warden strain, the foundation of which was purchased from J. C. Snell, of Snelgrove, Ont., and found well suited to the requirements of the general farmer, being not only good feeders, that can lay on flesh smoothly and thickly, but having deep milking qualities as well. The sires used were of the Nonpareil, Strathallan, and other families, and were selected, with a view to producing animals good for both beef and milk. The greater part of the stock offered are by Leix Viscount =76453=, a roan son of Imp. Lennix =60489=. There are some splendid individuals in this lot. The heifer, Bingham Duchess, is an almost faultless calf, a beautiful dark red, and should satisfy the most critical. The young bull, Windsor, is a great, massive animal, dark red in color, with good length, and the masculine make-up we all like. Another good one is Refiner, a handsome roan, out of Begonia =41328=, by Strathroy =9305=, used here for 14 years with the greatest success. He was by Imp. Vice Consul, and his dam was a daughter of the famous Imp. Rose of Strathallan. The heifers Belle of Granton, Belle of Windsor, and others, by Golden Crescent =72325=, should prove profitable investments for their future owners. Golden Crescent was by Frosty Morning =4973=, a son of Imp. Joy of Morning. A heifer of our breeding, by Golden Crescent, gave her owner over 40 lbs. of milk per day last summer, with her first calf. Catalogue will be sent to all applying.

At a church conference, the preacher who delivered the convention sermon read from manuscript. He used small sheets of paper, and as he read one he laid it aside on the pulpit.

As the sermon was long (and many leaves), the minister, in concluding, said: "We will close the services by the choir selecting some appropriate hymn." And that choir, by association of ideas perhaps, unconsciously sang, "Leaves, Nothing but Leaves."

### TRADE TOPIC.

The Gould, Shapley & Muir Co., Brantford, Ont., manufacturers, in their new advertisement in this issue, call attention to their popular gasoline engines, windmills, grain grinders, pumps, tanks, water boxes, steel saw frames, etc. Farmers requiring any of these will do well to look up the advertisement and write for catalogue.

# Stammering or Stuttering

may make life miserable for your child, or for one of your family or friends. If it does, you owe it to the sufferer to investigate the sensible, successful Amott Methods of treating the Cause—not merely the habit—and permanently curing these distressing impediments. We'll gladly give you full particulars and references. Write

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Berlin, Ont., Canada.

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Important as it is to save money, it is equally as important to invest safely and profitably funds which you have accumulated.

In a savings account your money draws 3% interest; in an investment, such as one of our Debentures, it yields 4% interest.

Those who have attained to great wealth have done so by getting a start through saving, and then by continuing to save and always judiciously investing their money.

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Is it your knowledge or the other man's word?



Why not know as much as the buyer?

Don't give away your profits.

"The Profit in the last ounce."

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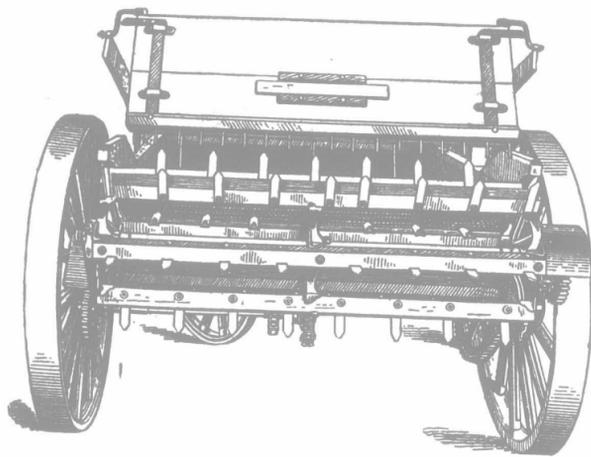
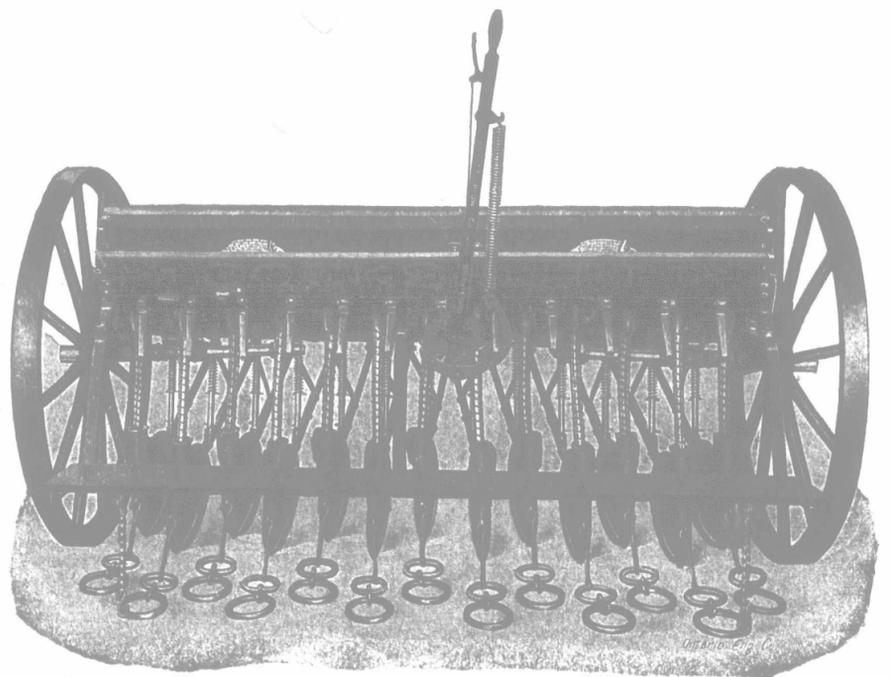
# TREAT YOUR LAND RIGHT, AND IT WILL TAKE CARE OF YOUR INCOME

### Use the COCKSHUTT Disc Drill

This famous seeder is here shown fitted with 13 single discs. These discs are self-cleaning, and have self-oiling dust-proof disc bearings, giving light draft. The discs are staggered, and sow at 6-inch widths between drills, giving more growth per acre. An I-beam frame protects center drills from deep sowing, due to sagging of the grain box. The feed is positive

and even to the last grain. The feed adjustment is protected against wear and strain, remaining accurate. All parts are strongly built—designed to give long service.

With this Cockshutt Drill you can sow evenly, quickly and steadily, with many years of service. The easy-draft features make it the best drill to use. Write us for the Catalogue.



### But First Use the KEMP Manure Spreader

Which distributes manure thinly and evenly, no matter how uneven the character of manure. Over-manuring is as bad as insufficient manuring, and a "spotty" crop growth does not give full harvests.

The Kemp Manure Spreader is non-clogging, owing to the flat, sharp teeth, which cut gummy manure and force it forward steadily, without wedging or friction. The operation is equally positive going up or down hill. The draft is very light, owing to the positive distribution of the teeth and the gearing devices. Special pamphlet on request, giving details.

Which Do You  
Want?

Ontario Seed Drill Pamphlet

Kemp Manure Spreader Pamphlet

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