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# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE  
AND  
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\*AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.\*

Dairy and Cold Storage  
Commissioners' decision  
Dept. of Agriculture

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No. 1131

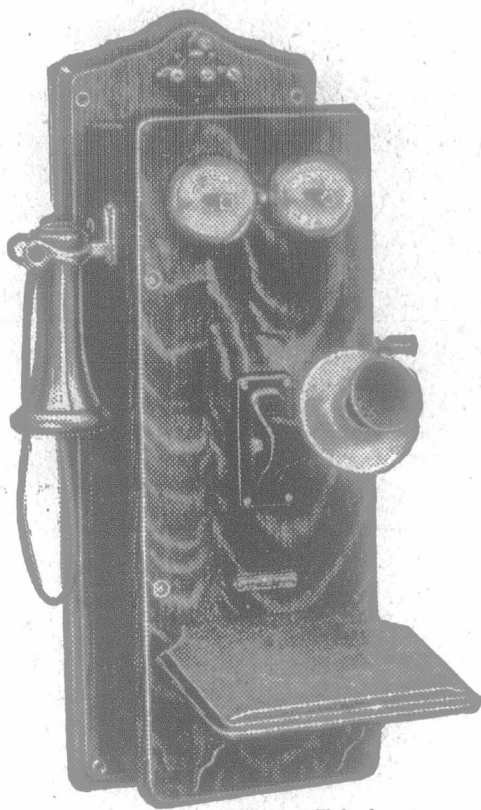
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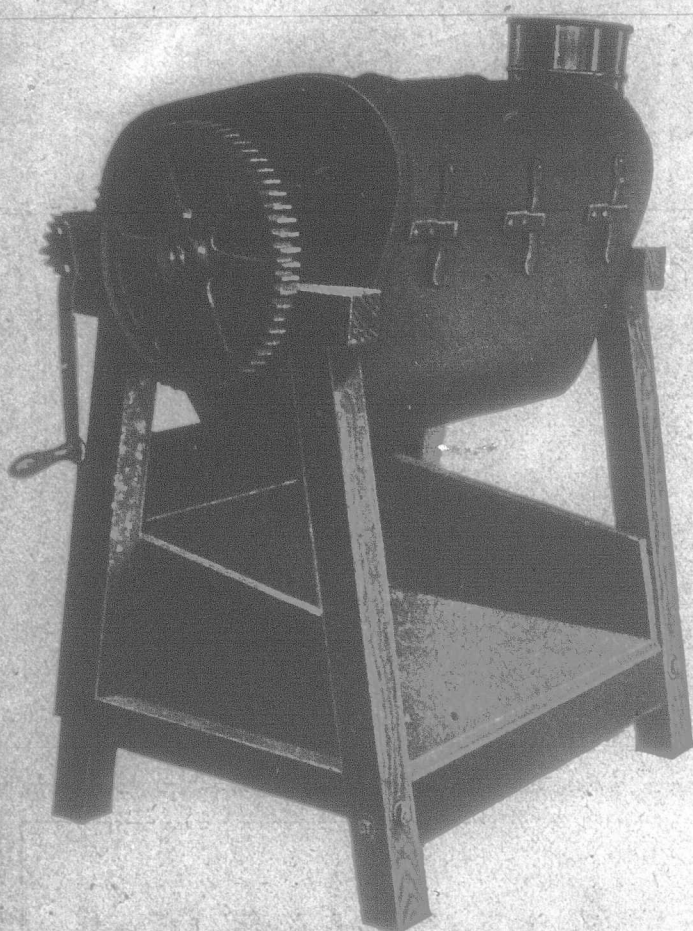
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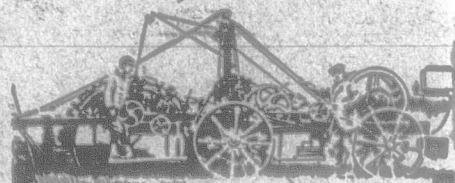
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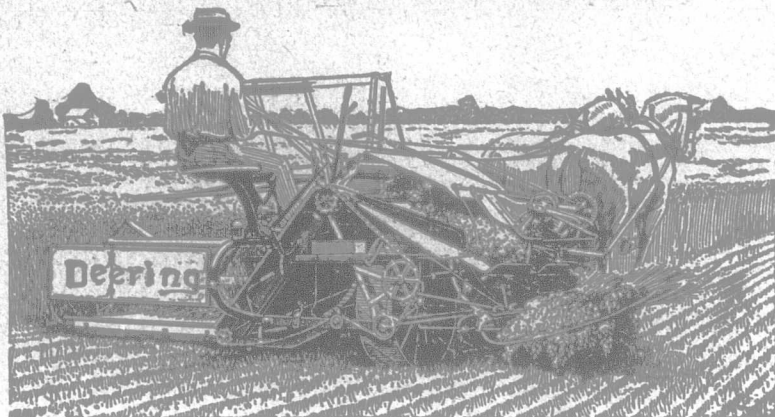
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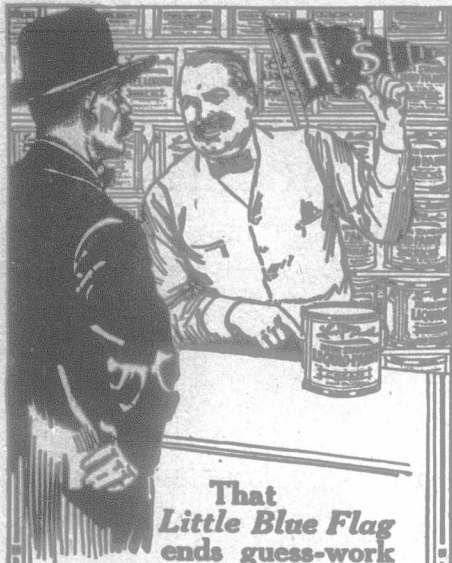
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I expect to build or remodel in 1914, about \_\_\_\_\_

I will keep \_\_\_\_\_ cows. Inside dimensions of my barn will be \_\_\_\_\_

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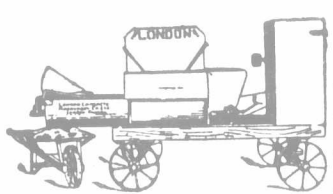
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IT DOESN'T TAKE AN EXPERT KNOWLEDGE OF mechanics or a long working test to tell the difference between the De Laval and other cream separators.

ON THE CONTRARY, WITH A 1914 DE LAVAL machine placed beside any other separator, the difference is apparent at first sight to the man who never saw a separator before.



IF HE WILL THEN TAKE FIVE minutes to compare the separating bowl construction, the size, material and finish of the working parts, particularly those subject to wear and requiring to be occasionally taken apart and put together, the manner of oiling, and everything which enters into the design and construction of a separator as a simple durable machine, he will still further see the difference.

IF HE WILL GO A step farther and turn the cranks of the two machines side by side for half an hour, particularly running milk or water through the bowl, he will see still more difference.

AND IF HE WILL TAKE THE TWO MACHINES home, as every De Laval agent will be glad to have him do, and run them side by side in practical use, the De Laval one day and the other machine the next, for a couple of weeks, he will see still greater difference in everything that enters into cream separator practicability and usefulness.

THE MAN WHO TAKES EVEN THE FIRST STEP indicated in seeing for himself the difference between the De Laval and other cream separators, doesn't put his money into any other machine one time in a thousand.

THE COMPARATIVELY FEW BUYERS OF OTHER separators are those who merely read printed matter claims or listen to the argument of some dealer working for a commission, and who do not think it worth while to see the difference for themselves.

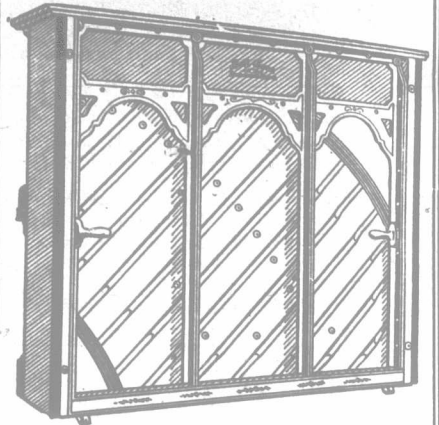
THE WISE BUYER OF A CREAM SEPARATOR TODAY does see this difference when buying his first separator, while the unwise or careless one usually finds it worth while to do so when he comes to buy a second separator a year or two later.

EVERY DE LAVAL AGENT CONSIDERS IT A PRIVILEGE to show the difference between the De Laval and other separators, and to afford every prospective buyer the opportunity to try out and prove the difference to his own satisfaction, if on first examination he feels the slightest doubt about it.

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MONTREAL PETERBORO WINNIPEG VANCOUVER  
50,000 Branches and Local Agencies the World Over.

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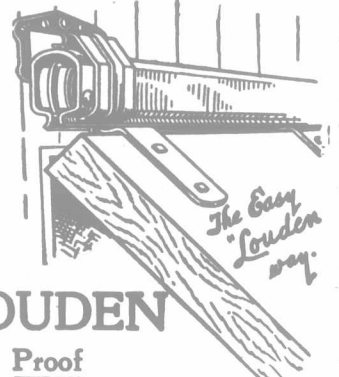
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## Barn Door Hanger

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—over 47 years of experience and practical experiments go to make Louden goods efficient and reliable. We make

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63 Bayswater Ave. Ottawa, Ontario



# The Farmer's Advocate and Home Magazine

PERSEVERE  
AND  
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ESTABLISHED  
1869

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875

VOL. XLIX.

LONDON, ONTARIO, MAY 28, 1914.

No. 1131

## EDITORIAL

Get the weeds while young and tender.

Put in a few swede turnips early in June.

There is a wide difference between broker's stock and live stock.

Spraying should spread to potatoes, as it has done to all kinds of fruit growing. It is essential.

What with gold bugs in the parliamentary lobby and June bugs on the farm, the man with the hoe must keep his weather eye open.

If there is a slack time just now, it would not be out of place to look over the haying machinery and see that it is all ready to take the field.

The trouble with speculations is this: that apart from the risks of absolute loss they absorb time and energy that might better be devoted to one regular business.

Are people who borrow money to put to good use as an investment in farm improvements and equipment most progressive, or does a high rate of interest hold up agricultural development?

Forty-five per cent. of Ontario farms are mortgaged, but the mortgages are small and growing smaller. A prosperous farming community means good business all the way around.

It is said that the money required to build and maintain one dreadnought would found, equip and operate a university on a par with Harvard. Do we want dreadnoughts or Harvards?

It is surely about time that members of parliament dropped the childish and useless habit of spending so much valuable time proving that "the other fellow" was as bad or worse than they are.

If a railway contractor worth several millions is not yet on "easy street," how can a farmer with six hundred dollars in the bank be considered in that class? What a difference in measuring wealth?

A late season generally brings rapid growth and rushes the farm work. Be ready for the hoeing, cultivating and harvesting a few days ahead of time. Better by far to be a day or so early than a week late.

"One side proposes, the other acquiesces." If this is so are our representatives in parliament working for the good of the country, the good of "The Authority," or the good of the political parties which they represent?

Truly this is a funny world. Parliaments bonus promoters to pay lobbyists to lobby parliament for more bonuses and concessions—an endless chain which dips in the country's cash, carries the people's money and dumps it in the coffers of Big Business like an elevator carries wheat from the hopper to the bin above.

## Ontario Farm Finances.

In the annual report of the Minister of Agriculture for the Province, of Ontario there appears an estimate on the financial condition of the farming community of this Province which will be of interest to our readers. According to information obtained by the various District Representatives in the different counties in the Province, 45 per cent. of the farms in Ontario, are mortgaged to some extent and of these mortgaged farms the mortgages would amount to about one-third of the total value of the property. This means that mortgages against farm property in Ontario represent only about 15 per cent. of the total value of that property which as the Minister states is a very encouraging sign.

Another fact of interest is that a considerable percentage of these mortgages are held by farmers. Opinions over the Province were unanimous that mortgages are steadily decreasing, payments were being met promptly and mortgages in large numbers are being wiped out each year.

Bank deposits have increased materially in recent years. In one county the bankers estimated that deposits had increased from 20 per cent. to 30 per cent. in the last few years. In another county it was estimated that from 70 to 90 per cent. of the money deposited in local banks was put in by farmers and in still another county it was estimated that 75 per cent. of the farmers had savings running from \$700 to \$12,000 each. The total amount of money deposited by Ontario farmers was estimated at \$100,000,000, and the aggregate wealth of farm property in this Province is estimated at \$1,405,950,940. The amount of money on deposit represents an average of about \$600 per farm, but all the surplus money is not in the banks although unquestionably a considerable portion of it is.

## Are You on "Easy Street"?

After reading the foregoing figures relative to the financial condition of the farmers of Ontario, many city people were led to believe, and some daily papers went so far as to make the statement that Ontario farmers were on "easy street." Very few of the men actually engaged in farming would agree with this statement, and if the people responsible for it or who believe that it is the case were daily facing the multiplication of problems which from year to year must be met squarely by the man on the land, they would be in a better position to understand the difficulties under which the farmer labors, and would not begrudge him the money which he is able to save from his yearly operations.

It would be interesting to know the average ages of the owners of farm property, whose financial returns have been so estimated. We hear the cry day after day that the young people in the rural districts of this Province are leaving the land as fast as they can, and that in many sections the population is smaller than it was some years ago. This being the case it must be a fact that the middle-aged and older men are the farmers and farm owners of the present day. Taking this into consideration and remembering the fact that these men have spent their lives on the farm, \$600 per farm of a bank account does not seem to be any too large if compared with the thousands and millions made by some of the successful men in other lines of endeavor. If it takes a man practically all his productive years to pay for a farm of from fifty to two hundred acres, averaging possibly one

hundred acres, and valued at an average of from \$5,000 to \$6,000, and he can with this save only \$600, and if he owns and works the farm himself is still forced by circumstances to work most of the time, we can scarcely see in it a flowery bed of ease. The man on the farm under present-day conditions is almost forced to work and work hard, no matter whether he has money in the bank or not. Labor is scarce and work must be attended to, otherwise sufficient interest cannot be made on the investment to maintain the place, and get a living for the farmer and his wife.

And the wife and family must be considered in these statements of finance. Has the former not in many cases worked just as hard and longer hours than her thrifty husband? Has she not slaved and saved that a small bank account might be accumulated after the mortgages and notes had all been met? Yes, in many cases she has worked all too hard. And then there is the family. Even where the young folks have gone to the city they generally have spent a few very useful years on the farm, many until they were over twenty-one years of age, and from the age of fifteen or sixteen until they left home done a man's work. On those farms where the boys and girls have stayed at home, the farm and the little money in the bank represent the earnings of the whole family, and on any of them represent the work of the man and his wife, and usually a few years labor of their children as they reach the age of productive effort.

True conditions are improving on most farms; prices are higher and expenses are greater, but much of the former drudgery has been eliminated from farming, which we are always pleased to uphold as an occupation, but lest some may be led to believe that the farmer is getting too much, is growing rich faster than he should, it is better that all sides of the case be considered. And again it is well that those who are dissatisfied with their occupation on the farms should know and understand that farming is making steady progress in this country, and that with hard work and close application it is possible to make a living, pay for a home, and save a little money as well as enjoy the freedom, fresh air and beauties of nature which we hear so much about in this twentieth century. The figures given are worthy of no little attention, and should serve to show that, all things considered, wages for all those who work, and interest on investments, the farms are not making their owners unearned fortunes, are not making capitalists, but are yielding returns which ensure a good living for their operators and a little besides, which, as before stated, if interest and wages were deducted, would be far from the "get-rich-quick" order.

## Does the Absence of Mortgages Indicate Prosperity?

It is just a question whether an estimate of the number of mortgages is the fairest criterion of conditions in the country. It was brought out at the recent conference on Marketing and Farm Credits in Chicago that the districts which show the largest percentage of mortgages were usually the most aggressive and progressive. They were going ahead. The money was being used to good advantage in the farming business. If a man can borrow money at a fairly low rate of interest and can use it on his farm to make a little higher rate of interest, it is good busi-



## The Farmer's Advocate AND HOME MAGAZINE.

... THE LEADING AGRICULTURAL JOURNAL IN  
THE DOMINION.

PUBLISHED WEEKLY BY  
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JOHN WELD, MANAGER.

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

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ness to do so. There is room for thought right here. Have Ontario farmers been too conservative—too ready to "stand pat" and not willing to put more money in equipment and improvements, or have the rates of interest been so high that the supreme object was to get rid of notes and mortgages and keep free of them, even though a little borrowed money could often be used to good advantage? Add the one hundred millions which Ontario farmers now have on deposit in the banks to the billion and one-half they have invested, and it would only be a beginning towards the proper equipment of the farms. Could a good deal more not be profitably invested on our farms? We agree that some farms are over-equipped and cannot be made pay, but a far greater majority would be the better of added equipment. Would this not mean more borrowed money? After all is this statement sufficient upon which to base our prosperity? Mortgages are said to eat like cancers. Ontario farmers seem to be successfully fighting them. Study the figures, consider the statement made in Chicago and ask yourself: Mr. Farmer are you progressive, are you making the most of your farm?

People are continually being warned that fruit growing is being over done. In the introduction of a new work on strawberry culture the encouraging axiom is laid down that "demand is increased by a crop of well-grown, well-packed, and properly sold fruit."

If one has the money to spare, instead of dabbling in stocks, about the real nature of which we are unacquainted, why not invest it in farm improvements, equipment or live stock, or in the comfort and beautification of our homes? There is a certain and gratifying return from the latter.

### Medical Inspection of Schools.

Whether the speeches that some of our Health Officers are making on the condition of the schools and pupils are correctly reported or not we cannot say but we are disposed to hope that the reports are exaggerated or to think, that if correctly reported, the opinions are based on exceptional experiences. Most of the arguments lead to a plea for the multiplication of inspecting officers—dental inspectors, eye, ear, nose and throat inspectors, lung inspectors, sanitary inspectors and visiting nurses.

While it is impossible to exaggerate the importance of conserving the public health and particularly the health of the youth yet before creating new staffs of inspectors or otherwise complicating the machinery of inspection and increasing the expense it is worth while to inquire whether the teachers and the inspectors we already have are competent, or can be made competent, to do what inspecting is required. Cannot the teachers who are constantly with the children detect short-sightedness or astigmatism, mouth-breathing or carious teeth? If they can it is certainly better that the responsibility should be laid upon them than that it be removed to occasional visitors whose calls will be made at times when some of the pupils are absent.

It has to be admitted that there is better ground for believing that the teachers can be made competent for these duties than that they are already. Young people looking forward to becoming teachers receive their academic training in the high schools and so far as we know, Ontario is the only Province or state that does not teach human physiology and hygiene in its high schools. If this defect were remedied then in the normal schools the teachers-in-training could be trained to test eyes and ears and examine teeth and throat. Illustrated bulletins, clearly describing symptoms in popular language and advising as to procedure might without much cost be prepared by the Provincial Board of Health and issued in quantity to the schools, sufficient for distribution from time to time to all the homes in the school districts where children are being brought up. This literature would start and guide health inspection in the very best place and where it most properly belongs—namely in the home. Every step taken to place the responsibility for the health of the children directly on the parents and teachers is a wise one. At any rate we believe that it is the duty of the Education Department to devise methods of making the maximum use of the regular teachers and school inspectors in the matters under consideration. If these officers prove quite incapable, then the creation of staffs of special inspectors and nurses may have to be considered, but first the teacher should do his part and the inspector should exercise his authority where necessary.

### Nature's Diary.

A. B. Klugh, M.A.

In the woods, and more particularly in openings in coniferous woods, the Dwarf Cornel or Bunch-berry is now blooming in great showy patches. This little plant is attractive even when it only occurs scattered through the woods, but when it is seen in huge clumps it is a striking feature of the early summer landscape.



Dwarf Cornel.

The parts of this plant which look like petals are really large white bracts, which surround the clusters of small greenish-white flowers. Later in the season, the plant bears compact bunches of coral-red berries, which are edible.

"The Catbird sings a crooked song,  
in minors that are flat,  
And when he can't control his voice  
he mews just like a cat,  
Then nods his head and whisks his tail  
and lets it go at that"

So writes Oliver Davie of the Catbird. This species is a variety artist among the bird performers, having a great many "turns." These include a wide range of notes from those which it pours forth in its beautiful song to "clacks" and catcalls. Another vaudeville characteristic is its imitations of the songs of other species. He also emphasizes his various notes with gestures of the head and tail. Even when singing his tuneful melody he will interject into it a harsh "mi-au-aw".

The Catbird is a very alert species and is always on the watch for intruders upon his domains, and protests against intrusion by most emphatic "mi-au-aws." It chooses a nesting site in a low tree, shrub or briar, where the nest is usually built at about four feet from the ground. The nest is not a particularly neat structure, but is strongly made of sticks, coarse grass, weeds, strips of bark, and is lined with soft rootlets.

Concerning its economic status, the Catbird is "on the fence" since it does both harm and good. The food of the adults consists very largely of fruit, and when nesting in cultivated places, mostly of garden varieties. However there is a way to prevent entirely its depredations upon cultivated fruits and at the same time to benefit from its work in eating insects. That is to plant Elderberries or Russian Mulberries along the fences, as the Catbird, and also the Robin, prefer the fruits of these species to that of any cultivated varieties.

The greatest good done by this species is in feeding its young, since they are fed almost exclusively on insects. In one instance where the food of the young was investigated, sixty-two per cent. was found to consist of cutworms, one of the most annoying of all garden pests.

The young Eels are now ascending the rivers. The Eel is really a fresh-water fish whose real home is in rivers and lakes, but which runs down to salt water at spawning time. In this it is the exact opposite of many fishes like the Salmon and Shad which live in salt water and run up the rivers to spawn. The method of reproduction of the Eel was for ages a puzzle. Among the Greeks, who understood well enough the reproduction of most of the fishes, the Eel was supposed to be spontaneously generated from the mud. Pliny, a Roman writer on natural history, maintained that the young Eels sprang from the slime and fragments of skin which come off when the adult Eels rub against rocks. Some writers in the middle ages claimed that the young Eels were born alive, and in the seventeenth century, Leuwenhoek mistook certain parasites in the Eel for the young. Not until 1877 was the life history of the Eel fully worked out, and found to be as follows. They spawn in the fall in salt water, usually off the mouths of rivers, on mudbanks. Here the eggs hatch and at the beginning of the second spring the young Eels find their way to the mouths of rivers, which they ascend in immense numbers. In the fresh-water streams and lakes they remain until of adult size, when they return to the sea to spawn. During this seaward migration they do not take any food, and when they arrive in salt water they do not remain near shore, but go out to deep water, where the development of the ovaries and testes takes place remarkably rapidly. When they reach the sea these organs are but very little developed, but within five weeks after reaching salt water the Eels are sexually mature. The spawning then takes place and the old males and females die, never returning to fresh water a second time. It was because they did not know of this very rapid development of the productive organs that the older writers were at a loss as to the method of reproduction of the Eel.

The Eel is remarkably prolific, the number of eggs produced by a single female being about 10,700,000. Oh! for a hen built on the same lines!

In their feeding habits Eels are chiefly scavengers, feeding upon all sorts of refuse but preferably on dead fish or other animal matter. They are great destroyers of the spawn of other fishes, and in this way are a serious menace in waters where fish-culture is being carried on. They also frequently eat all but the head and backbone of fish caught in nets before the nets are hauled.

About election time the country's future hangs tremulously on the height of the tariff or the old flag, but between times, as the chairman of the Toronto Manufacturers' Association the other day declared, the return of the country's prosperity depends upon how good the farmer's crops are.



**The Last of the Barons.**

By Peter McArthur.

It is a long time since anything in Canadian public life has attracted such wide-spread attention as the stand taken by W. F. Nickle, of Kingston and R. B. Bennett, of Calgary, against the Government's proposals regarding the Canadian Northern Railway. I have yet to meet a Liberal or a Conservative who disapproved of their action. Their conduct has been pleasing to a majority of the people, and I cannot believe that a man with so fine a sense of public duty as Premier Borden can harbor any resentment to his high-spirited supporters who have ventured to assert their right to oppose him on a debatable question of government policy. They have acted entirely within their rights as men and as representatives of the people. I have no doubt that their constituents will endorse their action. And yet it is recognized everywhere that Mr. Nickle and Mr. Bennett have risked their political future. Why? Because they have ventured to defy Sir William MacKenzie. Here is something for free-born Canadians to think about and to think about seriously. Here is a man who occupies no position of public trust, a man who possibly could not be elected pound-keeper if he ran for office, and yet he bulks so large in our public life that our elected representatives fear him even when they are standing on the privileged floor of parliament. Without hereditary prestige or record of high public services, he presumes to play the role of Warwick to our government. He will make or he will unmake. He imposes his will on political parties and they do his bidding. The vastness of his enterprises dazzles the popular imagination and his successes have made him an object of admiration and envy. With his partners, Sir Donald Mann and Zebulon A. Lash, and a few associates he has extended his power into every field of Canadian effort until a point has been reached where the financial credit of the nation is involved. The government must come to his aid or wide-spread ruin will follow the collapse of his daring business adventures. And although it has been shown that support he has hitherto received from the people has been secured through shameless mendicancy and mendacity he claims further aid as a right. From a private car pauper he has developed into a financial panhandler who adds threats to his pleadings. One of his lieutenants recently threatened to "get" Mr. McCoig, of Kent, because he had brought on a premature discussion of the C.N.R. guarantee and Mr. Nickle explained in the House, the preparations that have been made to "get" him. But in this Sir William has over-stepped himself. I miss my guess if the people will long endure this baronial insolence. For some years past he has probably exercised more power than any other man in Canada but his abuse of that power should make him the last to wield it. Warwick was the greatest of the Barons—and the last. When the people finally understand what he has done, our mushroom Warwick will go the way of his greater and more chivalrous prototype.

Sir William MacKenzie denies having threatened Mr. Nickle, but it has been shown that in his dealings with the government, Sir William has contradicted himself so often that his contradiction of anyone else does not carry much weight. No one who has had any insight into the workings of the railway lobby at Ottawa can doubt that Mr. Nickle's charges were founded on fact. Mr. Bennett described this lobby as one of the most powerful and shameless that has existed on the continent—only equalled in audacity by the lobby of the Central Pacific that disgraced Washington a few years ago. And it is as thoroughly organized as the Central Pacific lobby which, was perfectly described by the Hon. Joseph Choate, late ambassador to England, in the witty comment "When Hopkins takes snuff in San Francisco, Huntington sneezes in Washington." MacKenzie and Mann's lobby is said to be just as sensitively organized from Halifax to Vancouver and when it threatens to "get" a man it is no idle threat. Only those who know the true state of affairs in Ottawa realize the splendid courage of Mr. Nickle and Mr. Bennett in daring to oppose the wishes of those who control this lobby and direct the power it wields over political parties.

In stating his position, Mr. Bennett made a few statements that every partisan should read and digest. "Both sides of the House have been to blame. Look to the statute books for the aid that has

been given to this company. Just a few days before an election, one party proposes and the other acquiesces. They are bound to ask a few questions in order that the contribution to the party funds may be large enough. Let us look the business squarely in the face. The time has come when people must take stock of the conditions, and now, faced as we are with conditions such as we never met before, we must decide whether we will continue to add to the predatory wealth of promoters or whether we shall strike a blow for the people of the country."

I do not need any outside confirmation of Mr. Bennett's words. I once sat in the gallery of the House when a railroad measure was being put through—just before an election. The program was carried out just as he described it. The Government proposed certain measures of aid to different railways and the Opposition protested with about the same vigor as you would find in a bunch of trained seals. Campaign funds were at stake and all opposition speeches were made with great care. And the lobbyists of the railways sat in the gallery watching the disgraceful olio and noting who did or did not speak their pieces acceptably.

The words quoted should make it clear to everyone how the lobbyists gain their power. It is through contributions to the campaign funds. There is no longer any possibility of blinking the fact that no political party can hope to succeed in an election without ample funds. The legitimate expenses are too heavy for any candidate to bear. They must be secured somehow, and in that fact lies the source of all the corruption that has blackened the political history of nations. It is useless to pass laws compelling publicity of campaign funds. That only compels greater secrecy. The voters must contribute the funds themselves. If each man who supports a political party would contribute from one to five

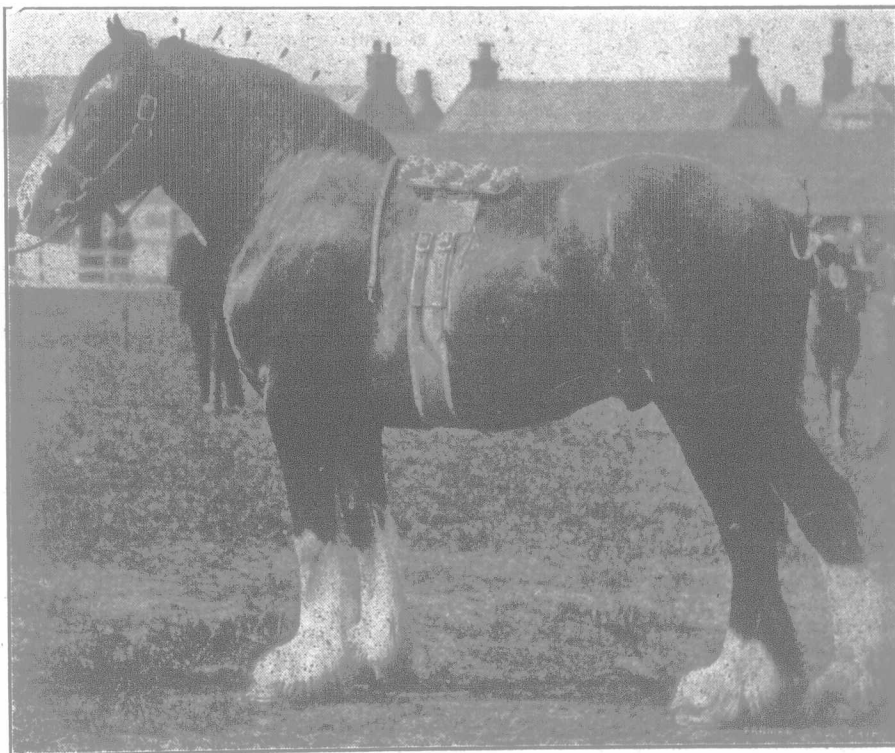
**THE HORSE.**

**Indigestion in Horses.—II.**

**ACUTE INDIGESTION.**

Acute indigestion is one of the most common and most fatal diseases of the digestive organs of the horse. As digestion in the horse takes place largely in the small intestine it is often very difficult to determine in cases of this nature, whether the trouble is confined to the stomach or whether the intestine is also involved. This is not very important, as affections of this nature in both organs are concomitant and require the same treatment so far as treatment by an amateur is concerned. When the trouble is confined to the stomach the modern veterinarian can act directly by the use of a stomach tube. While this treatment has practically no action upon the contents of the intestine, but none other than a veterinarian should attempt to adopt this treatment.

**CAUSES**—The usual causes are too much food; food greedily swallowed without proper mastication; feeding immediately after severe and long-continued exercise; severe exercise too soon after a hearty meal, especially if the horse has been given something to which he is not accustomed; sudden change of food; (I may here state that change of diet in horses, and to a great extent in all animals, should be made gradually); drinking large quantities of water too soon after feeding, etc. It is not uncommon to see a well marked case for which no well-marked cause can be given. One of the most frequent causes of the disease is what may be called mistaken kindness on the part of the owner. For instance, a horse that has been idle for some time and given little or no grain is unexpectedly required to go a journey or do a day's work. In order to fatten him for the unusual exertion, he is given a full feed of grain, hitched and driven. The stomach is charged with grain to which it is not accustomed, and the horse subjected to unaccustomed exercise. These two conditions in many cases causes "acute indigestion" or if the horse withstand this usage he is given another full feed and then again driven or worked. He may withstand even this, but we must not be surprised if he does not. When horses under the conditions described are required for service, care should be taken to feed very lightly on grain until after the labor has been performed, then, in order to compensate for the extra labor they should be fed a moderate



**Rising Tide.**

First-prize three-year-old Clydesdale stallion at Ayr, 1914.

dollars to the party funds the lobbyists would find their occupation gone. At the present moment I am not particularly interested in the final form which the C.N.R. guarantee shall take. A situation has been developed that forces the government to give aid of some kind to prevent disaster. If the Opposition truly realizes its position it will do all in its power to aid the government to make the best bargain possible. Both parties are to blame and they should unite in an effort to redeem the past. But what concerns us as citizens, is the absolute necessity of sending men to parliament who have no political debts to pay. Both parties have a necessary work to do and they should both be in a position to do their work without fearing the wrath of Sir William MacKenzie or any other member of "The Authority." The political organizations in the various ridings should take immediate steps to gather the necessary funds for the next election from the voters in the riding so that their representative may take his place in parliament without being under obligations to anyone but the voters who send him there. And above all, I hope the voters of the constituencies represented by men who have shown an independent spirit will not allow anyone to "get" them because they have had the courage to defy The Last of the Barons.

allowance of grain for a few days. Some horses are especially predisposed to digestive derangement, as those whose digestive organs are weak either congenitally or temporarily, or when the organs have become weakened by disease; weak, anemic, poorly-fed and emaciated animals; very young or very old animals, horses recovering from diseases, etc. Among the direct irritating causes are green food, food and drinks that are hot, or that are frosted, unclean or partially decayed foods, impure water, mouldy hay or grain, matters undergoing fermentation or decomposition, as roots, fruit, grass or germinating grain. In cases that no well-marked cause can be given, we must conclude that there is some temporary weakness of the digestive organs that, while producing no visible symptoms, render the horse in that condition in which indigestion is easily produced. At the same time it is seldom, except in horses congenitally predisposed, that an attack occurs that cannot be traced to carelessness or ignorance in feeding or usage.

**SYMPTOMS**—The symptoms of many diseases of the digestive organs simulate each other so much that it is often difficult to say for a few hours just what the disease is. Hence the advisability, when convenient, of procuring expert assistance, as an attack of a serious nature may be mistaken for a simple ailment, and if not



energetically and skillfully treated may reach that stage in which treatment will be of no avail. In other words, there are many attacks of digestive troubles the symptoms of which are not typical. The first symptoms of acute indigestion usually are: uneasiness, dullness, stamping of the feet, lying down, rolling, rising again looking around to the flank, etc. The pulse increases in both force and frequency, which, if relief be not given loses force but becomes still more frequent. In many cases these symptoms are preceded by a semi-diarrhoea, the animal voiding semi-liquid faeces frequently and in small quantities. There is usually more or less fullness (bloating) noticed, more marked on the right side, but in other cases the formation of gases is confined to the stomach, in which cases little fullness of the abdomen is apparent. The pain is usually constant but of varying intensity. Eructation of gas is not uncommon and in rare cases there is actual vomiting of small quantities of ingesta. Either of these conditions indicate a serious case. When relief is not obtained the symptoms increase in intensity. In some cases death occurs in from 1 to 2 hours after the first symptoms are noticed, while in others 24 to 48 hours or even longer may elapse before recovery or death takes place. In cases that do not yield to treatment the violent symptoms are succeeded by dullness and stupor. The pulse becomes very frequent and weak, almost or quite imperceptible at the jaw. The patient will either stand or walk aimlessly around the stall or paddock, breathing short and frequently often perspiring freely, the visible mucous membranes highly injected, the eyesight evidently impaired. This indicates that inflammation of the stomach and probably also the bowels has resulted and he will probably remain standing or wandering about until he falls and expires. In the meantime there is usually little or no passage of faeces; and the intestinal murmur is absent or of a metallic sound.

**TREATMENT**—Place in a large, comfortable box-stall or small paddock. Do not force exercise or prevent him from lying down. Give 2 to 3 ozs. oil of turpentine (according to size of the patient) mixed with a pint of raw linseed oil as a drench. It is good practice to foment the abdomen with hot water and give injections of warm soapy water per rectum. If the pain be severe give 1 to 2 oz. of chloral hydrate in a pint of cold water, or 2 drams of the solid extract of belladonna or 2 oz. or the tincture of belladonna. Do not give opium, as it checks the actions of the bowels, which we want to encourage. Watch him closely and if he becomes fast in the stall release him. If relief be not obtained in at most two hours, repeat the doses and if possible procure the services of a veterinarian at once. If this cannot be done continue the above treatment, repeating the doses every two hours as required, but after the second dose of turpentine mix it with new milk instead of oil. When bloating is excessive, the veterinarian will puncture in front of the point of the right hip or give a hypodermic injection of 1 to 1½ grains of eserine or arecolin, but few except veterinarians have either the necessary instruments or the necessary skill for these operations. It is good practice to administer a purgative of six to nine drams of aloes and two drams ginger either moistened, rolled into a cylindrical shape, wrapped in tissue paper and administered as a ball or mixed with cold water and given as a drench after the acute symptoms have passed. After a purgative has been given the patient should be given bran only and water a little at a time and often until purgation commences, which is usually between 18 and 24 hours. Lut may be longer and it is not safe to repeat the dose until about 48 hours, when, if necessary a smaller dose may be given. The patient should not be exercised until the bowels have regained their normal condition and he should be carefully fed and lightly worked for a few days afterwards.

WHIP.

### How Horses Sell.

Judging from reports of the horse trade, both in Europe and America, prospects are bright for certain classes of horses. The demand for the best type of heavy-draft geldings and heavy-draft sires of the high quality order, we are told was never greater than at the present time in Great Britain. Reports from the United States show they have not enough good horses to supply the demand. By good horses is meant the big, heavy geldings, with the right kind of feet and legs to stand the steady pounding on city pavements. From far away Russia comes the report that horses are also in keen demand in that country. It would seem as though breeders need not fear the outcome if they are careful in selecting the right kind of horses to breed.

Recent exhibitions in the Old Land have shown that the fancy road horse is not in as great favor as he once was. The Hackney has

suffered most from the inroads of the automobile, and other types of light horses, outside of hunters and jumpers, are not wanted as they once were. The point should be plain to those in the business. The big horse is wanted; he has a place in the affairs of the world and will have for some time to come, but as years go by competition with other powers becomes keener and the scrub horse is the first type to suffer. This competition should be a good thing for the horse business in the end, as a better class of horse must be bred, and for this better class a market will be sure.

### What the Horse Shoer Should Know.

Editor "The Farmer's Advocate":

In all climates, when horses have to toil continuously on hard ground, and particularly if it be broken and stony, some kind of provision has to be made against undue wear of the hoofs, and consequent lameness and inefficiency. Horses are generally shod with iron shoes in the East; and even where the soil is sandy, the Arabs avail themselves of this device; and their farriers hold a high place in the social scale, because their services are so valuable in increasing the usefulness of the indispensable steed. Until the campaign in North China, in 1860, the Japanese employed sandals made of rice-straw for their horses' feet. Though the hoofs of their diminutive horses are remarkably sound and tough, yet they found, from long experience, that in journeying on rocky ground these soon became so much worn that lameness ensued. When a traveller started on a long journey among the mountains, he was furnished with a dozen or two of these straw slippers attached to his saddle. When his hack began to limp he had to dismount and tie a pair of them on the front feet, and as their durability was not great, the operation had to be performed at brief intervals. As present-day shoeing is ordinarily practiced, it is a difficult art—the difficulty being solely due to the mutilations the hoofs sustain at the hands of the farrier. As shoeing ought to be practiced, nothing can be simpler or easier. The foot of the horse is a perfect organ, thoroughly adapted for its purpose, and man cannot improve it. It only needs protection from undue wear, and this protection is easily and readily afforded by arming the hoof with metal sufficient to last for a certain period.

The wall of the hoof is that portion which surrounds the foot, and is alone seen when this is placed on the ground. It is fibrous in structure, the fibres passing from above to below, as they grow from where the skin terminates. Externally, the fibres are dense and resisting, but those nearer the interior gradually become soft and spongy. The growth of the wall is indefinite, it being the part which has to sustain wear through contact with the ground.

When the foot is lifted, the sole and frog are seen on its lower or ground surface. The sole is usually more or less concave in a healthy foot. It is fibrous like the wall, its fibres passing in the same direction; but they are much softer, and their growth is definite, breaking off in the form of flakes when they have reached a certain length. The frog is a triangular mass of somewhat soft and elastic fibrous horn, situated at the posterior part of the sole. Like that part, its fibres are also of definite growth, and flake off in large patches from time to time. The wall sustains weight and wear on all kinds of ground; the sole is adapted for sustaining weight on soft ground more particularly; while the frog has a most important use in acting as a cushion to support the powerful tendon which flexes the limb, in diminishing jar, and in preventing slipping.

The unpared sole and frog of the healthy foot need no protection of any kind on soil. The flakes of loose horn on the former serve a very useful purpose in retaining moisture, and so keeping the solid horn beneath soft and elastic, while they act as so many springs when the foot is placed on projecting stones. The more the frog is exposed to wear, the larger and sounder it grows, and the better it is for the entire foot and limb.

The fore foot is of much more importance, in the matter of shoeing, than the hind one, inasmuch as it has to support much more weight, and is consequently more exposed to disease and injury. The fore foot, when well formed, is nearly, if not quite circular; the hind foot is somewhat oval, the frog smaller, and the sole more concave.

When the hoof is shod the wall is not exposed to wear, and, therefore, would grow to an indefinite, and consequently, most inconvenient length, if the shoe should chance to be retained too long, and the excess in growth of horn not removed. The sole and frog on the contrary never cause inconvenience, as their growth is limited.

What is required in shoeing then is merely protection from undue wear, with the least possible interference with or disturbance to the functions of the foot and limb. The excess in length of the wall ought to be removed at frequent intervals, but the sole and frog if healthy should not be taken away. No more iron than is neces-

sary should be allowed as a protection. A shoe six or twelve ounces heavier than is absolutely necessary to protect the wall from wear, causes a great wastage of muscular power of the limb and consequent fatigue.

The mode of shoeing is simple in the extreme, for, when the old shoe is removed from the hoof, nothing more is required than to remove the excess in growth of the wall by means of the rasp, applied to the lower margin or ground or sole edge—not the front of the wall. The amount to be removed will depend upon the growth. It is at the toe or front portion that the excess is found, and this should be removed until, in an ordinary hoof, when placed on the ground, the angle should be about 50 or 52 degrees. The sole or frog should not be touched, not even the loose flakes removed, and all the work ought to be accomplished by means of the rasp. Paring out and hacking at these parts with the drawing-knife should be absolutely condemned as destructive to the foot.

In reducing the wall to a proper length, care should be exercised in keeping both sides of the same height; as, if one is left higher than the other, the foot, fetlock, and indeed the whole limb, will be thrown out of the perpendicular. This causes the horse to travel painfully, as it twists the joints, and in time leads to disease. Nearly always the inside of the foot is left higher than the outside, and this throws severe strain on the outside of the fetlock. Standing in front of the horse when the foot is on the ground, one can perceive at once whether this deviation is present. In a well-formed foot and leg, a plumb line should fall from the point of the shoulder through the middle of the knee, shank, pastern, and front of the hoof.

The wall having been reduced sufficiently, the shoe should fit full all round the circumference, and project slightly beyond the heels. Heat is not absolutely necessary in fitting it, or procuring accurate co-adaptation between it and the hoof. The nails should take a short, thick hold of the wall, so that if possible the old nail-holes may be obliterated when the excess of horn is removed at the succeeding shoeing. With the fore foot the nails should be driven home more firmly at the toe than the heels, particularly the inside heel. The clinches must be laid down as smoothly as possible, and with only the most trifling rasping. The front of the hoof or wall should on no account be otherwise touched with the rasp, but ought to pass in a straight line from the top, or coronet to the shoe. Rasping this part of the hoof is most injurious, and should not be tolerated on any consideration. It removes the dense tough fibres which are best adapted for holding the nails that retain the shoe, and exposes the soft, spongy horn beneath; this soon dries, cracks, and breaks, and does not afford sufficient support to the nails.

The evils of shoeing then, as generally practiced, are: 1, paring of the sole and frog; 2, applying shoes too heavy and of a faulty shape; 3, employing too many or too large nails; 4, applying shoes too small, and removing the wall of the hoofs to make the feet fit the shoes; 5, rasping the front of the hoofs.

Don't forget that the shoe should give the foot a level and natural bearing on the ground.

It is somewhat remarkable that the primitive shoes and nails, of early Britain are evidence that the farriers of those days had a better notion of what was necessary than many of the more civilized workmen of modern times. The shoe is very light, has usually two small nicks, and three nail-holes on each side, into which are fitted six very large-headed nails; so that the horse has eight good projections on the surface of each shoe, which ensures an excellent foothold with the least possible weight, without disturbing the balance of the limb or position of the foot.

London, Eng.

G. T. BURROWS.

## LIVE STOCK.

### Stockers and Feeders Scarce.

Unless all indications fail stocker and feeder cattle seem destined to be scarcer this summer and fall than they have been for many years. Feeders experienced a good deal of difficulty last autumn in purchasing enough cattle at a reasonable price to place in their stalls, but, judging from the few cattle in the country and the increased demand for stockers on the markets; they are growing scarcer week after week. Of course, the market will have its ups and downs, as some weeks larger numbers will be offered than on others, but if we mistake not those who buy their cattle fairly early in the season will this year, as they did in 1913, save money. The demand for this class of cattle is almost insatiable, and anything to which the name stocker or feeder is attached sells for well up to the price paid for the finished article. There seems to be a good future for the man who raises stocker and feeder cattle to be finished on his own farm, but he should not allow a keen demand to lead him to believe that a poor class of stock will pay. He may be able to sell it, but the greatest profits come from the good stock.



**The Cost Of a Yearling.**

The question is, what does it cost to grow a steer to one year of age? This will be governed by several circumstances, but principal among these is the condition or ultimate weight of the steer. Henry, in his "Feeds and Feeding," refers to a test with 57 calves of various dairy and beef breeds, and gives the following table:

Average weight at birth	81 pounds.
Average weight at end of year	648 pounds.
Average gain during the year	567 pounds.
Average daily gain	1.6 pounds.

These are quite satisfactory gains, and any feeder who attains them as a general thing should be well pleased. The same calves on an average consumed 405 pounds of whole milk, 3,968 pounds of skim milk, 111 pounds of dried beet pulp, 1,033 pounds of grain, 1,057 pounds of corn silage, 1,007 pounds of hay, 149 pounds of roots and 148 pounds of silage. Simply by calculating at market prices this amount of feeding stuffs is worth \$30.00, which signifies that each 100 pounds of gain cost \$5.29. It is customary in experimental work to allow the value of the manure to offset the cost of labor, and doing so this average steer has cost \$30.00 to rear.

At twelve months of age 648 pounds would not be a satisfactory weight to many stockmen when raised on the dam and given grain. Eight or nine hundred pounds would be more gratifying, but even that weight does not bear with it the proof that the steers have cost less per 100 pounds of gain than the lighter steer. In another experiment a number of calves were fed skim-milk, some were fed whole milk, and another bunch were reared on their dams. Those fed on skim-milk made an average daily gain of 1.5 pounds. The whole-milk calves gained 1.9 pounds daily, while those reared on their dam gained 1.8 pounds. This shows a decided advantage in favor of whole-milk calves and those running with their dam, but when we investigate the actual cost of rearing these calves under the different methods the tables are turned in favor of the skim-milk growing. Those fed skim-milk made 100 pounds of gain at a cost of \$2.26, 100 pounds of gain in the whole-milk-fed calves cost \$7.06, while those running with their dam gained 100 pounds at a cost of \$4.41.

Another interesting point in connection with the rearing of these calves was that after weaning, less concentrates were required to produce 100 pounds of gain with the skim-milk-fed calves than with those fed on whole-milk or running with their dam. These figures go to show that the first few months of growth may not be so gratifying with the skim-milk as with the whole-milk-fed calves, but when we estimate the actual cost for 100 pounds gain or look forward to the concentrates and fodder that will be required to produce 100 pounds of gain, the profits seem largest from the cheaply-raised calves.

**Fight Hog Cholera With Sanitation.**

Hog cholera exists in Canada in varying degrees of intensity, but it is chiefly to be found in districts that duplicate in similarity the corn-growing belts of the United States. The agricultural departments of the Union have expended fortunes in search of a vaccine that will immunize the swine of that country against this terrible plague, but the majority of their reports conclude by saying that there is yet a broad field for investigation, and that they still have hopes of a discovery that will at last be a preventive for this disease.

The Veterinary Inspector-General of Canada has prohibited the use of cholera serum in this country, and rightly so, we believe, for many of the wisest and most experienced stockmen of the United States still claim that the salvation of the swine industry in that country depends upon sanitation and intelligent care. It must not be forgotten that although a hog is immunized by vaccination and not susceptible to the disease, yet it is a carrier of the disease and will infest the whole herd. If this treatment were practiced in Canada it would simply mean the introduction of the disease germ that might ultimately cause more waste than does the disease itself. The trouble rests in the similarity of the symptoms of cholera, and those of many other diseases that swine are heir to. Indigestion, bronchitis, and many other common diseases are not easily distinguished from cholera by the ordinary raiser of swine, and only when the services of a veterinarian are obtained is the stock raiser sure that his herd is not infested with this contagious disease.

At this stage of the disease in Canada what we require is more vigilant inspection by our local inspectors, and a more thorough knowledge of the disease on their part. If the grower will follow this up with some attention and report all suspicious diseases or deaths to the local inspector and have them investigated, many sources of this disease will be eliminated.

It has been reported that cases of this disease have existed outside the knowledge of our veterinary departments, and that the dead swine have

simply been thrown to one side where they could be visited by rats, mice, birds and other carriers of the disease, which in turn transmit it to healthy herds in the same neighborhood, and then the disease is attributed to the introduction of diseased swine into Canada, to city garbage and many other causes that are known to experts to be the source of the disease. The disease is serious, and with the absence of drugs for treatment every precaution should be taken by stockmen to eliminate sources of infection, and to have all diseases investigated by a local inspector.

**Constitution First.**

Few stock raisers appreciate the exact importance of constitution in their animals, and what it means to them in the development of their herd and the profits that accrue therefrom. Many are short-sighted enough to think that most economical gains will be made by maintaining the stock on a meagre ration, and feeding heavily when the time of finishing comes. This is one mistake that has led to a reduction of profits and deterioration of many herds.

There is nothing more important than constitution in animals for all the purposes for which the herd is maintained. The success of an animal as a good breeder depends largely upon its constitution, and most dairymen know that the persistency and abundance of a cow's flow of milk depends largely upon her constitution. The same may be said of fattening steers. If they do not have that development of lungs, heart and other organs whose active operations maintain and develop the body they will be poor doers in the end.

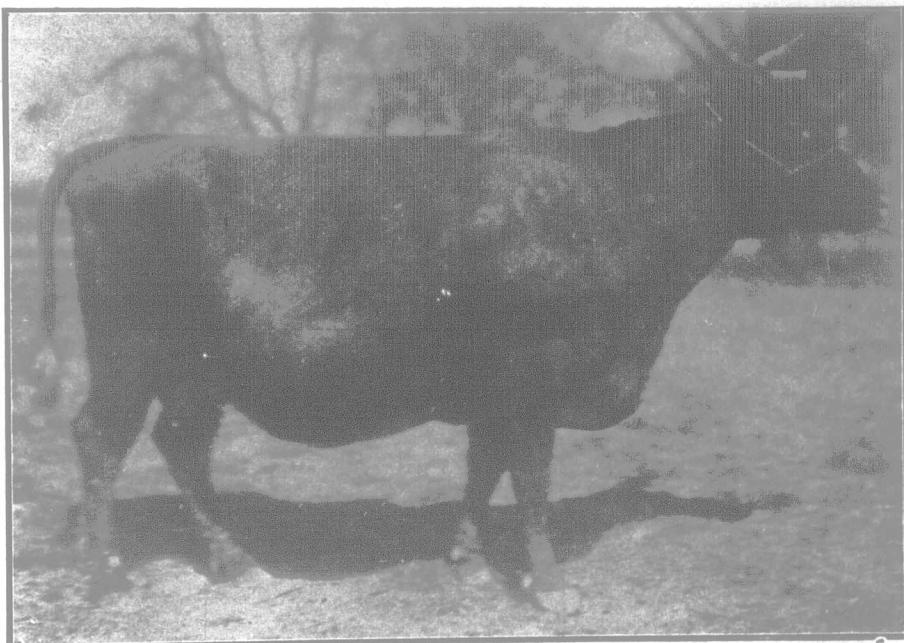
The first year of the animal's life is the critical time in the formation of these organs which go to make up the constitution of the animal. If they are maintained on meagre rations

**Weaning Litters.**

The critical time in the life of the pig occurs when he is separated from his dam and placed upon rations fed from a trough. The weaning of the litter often causes indigestion, loss of appetite, convulsive fits or some other trouble directly due to over or improper feeding. Any of these troubles may cause a serious setback, or may place the pigs in the unthrifty class of bad doers so common amongst inexperienced, and even with some experienced pig feeders. Nearly all the troubles start from indigestion. Very often the pigs are weaned too early in their lives, and are not sufficiently accustomed to eating solid and sloppy food from the trough. These young pigs have subsisted until the time their mother has been separated from them upon her milk alone, a food which is nature's most easily digestible and nutritious offering for the young animal. Right here it might be stated that it is not generally advisable to wean pigs before they are from six to eight weeks of age and sufficiently well started in life that they may the better stand a little, of the which must seem to them, rough usage, consequent upon depriving them of their natural food supply. When the pigs are allowed to reach six or eight weeks of age they very often have learned to eat a good deal from the trough with their dam. It is better, where at all practicable, to have a trough in another pen to which the youngsters have access, and in which may be fed a little shorts and skim milk, separated from their mother, and where they will not be disturbed.

It is well to get the pigs eating fairly well before the sow is removed to other quarters. If a little trouble is taken the youngsters may be taught to eat first with a little sweet milk, and afterwards with sweet or sour skim milk. If new milk is used in beginning the pigs a small amount of water, some say as much water as milk, should be added, or some sweet skim milk might be added to the whole milk. A little shorts stirred in to thicken it after the pigs have commenced feeding from the trough, is one of the best feeds to be given.

It is not generally advisable to attempt to start young pigs on kitchen slops and waste. These are all right after the pigs are a little older and have become accustomed to all kinds of feed. At this season of the year, when grass and clover are so abundant, an outside



**Dewdrop.**  
Shorthorn cow in the herd at Weldwood. Since photo was taken, she has dropped a fine heifer calf.

and dry foods they will not develop those organs as will the animal that is fed on succulent food and liberal rations. The entire organs of the body will develop in harmony with the amount of food they consume. It is true with growing animals that where they are sent to the block at an early age, those fed on rape, silage, roots and such roughages will not dress out as heavy a percentage as will the dry-fed animals, but if they are maintained for a longer period of time the subsequent gains will be made at a much cheaper rate, and whether they be kept for breeding purposes or whether they be retained to finish at two years or two and one-half years of age, the breeder of stock will enhance his profits by developing the animals from the start with succulent fodders such as silage, rape, clover and roots. It was demonstrated years ago that root-fed animals contained more blood and necessarily more water in the blood, that root-fed steers had heavier vital organs, and that fat was always less for the root-fed animals. Water is the cheapest article of feeding stuffs now on the market, and if we can develop robust, vigorous animals on such nutrients, it will be wisdom on our part to do so. The good line of cattle reared and maintained in Great Britain substantiates this doctrine. We go there year after year to get that big, strong individual to strengthen our herds, and they have been reared on an abundance of roots and succulent foods. It is during the early period of the animal's life that the organs of the body are molded, and that is when the feeder should start the structure properly in order to get the most gratifying results.

paddock is a good place for the pigs as soon as they are large enough not to give trouble by slipping through the fences. They will eat a good deal of clover and grass, which will aid in keeping their digestive systems in condition.

As a grain feed we believe that finely-ground oats for the young pigs along with some shorts make about the best ration. Barley alone is too heating and is not so easily digested as the oats, but the latter must be finely ground. A large percentage of hulls make them unpalatable and more difficult to properly digest. It is generally conceded a good plan to start the pigs on shorts, gradually put in a few oats where plenty of grain is grown on the farm, and it is not necessary to buy very much outside millfeed, and as the pigs grow substitute for a part of the oats some barley, peas, wheat or buckwheat, in fact the heavier grains after the pigs have reached three or four months of age are preferable in order to get them marketed at as early an age as possible.

Many successful pig feeders, however, put a small proportion of oats in the ration even up until the time the hogs are finished, believing that these help the pigs to digest the heavier grains, and there is not so much danger of crippling them. This is one feature which must be carefully watched with the young pigs. Do not feed the heavy grains to excess until the pigs are old enough to stand it, and give them all the exercise possible in an open yard while they are growing. The start which the litter gets during the few weeks immediately following separation from the sow means a great deal in the profits realized from feeding pigs.



## THE FARM.

### Farm Engineering.

#### UTILIZING SMALL STREAMS FOR POWER.

The idea of water power is generally associated with a mental picture of an expensive installation which is beyond the purse of most farmers, yet it is no exaggeration to say that on many farms small streams could be harnessed to do the work required of an engine, and with very little expense. The size of stream and amount of fall is of first interest, of course, in order that calculations may be made of the possible amount of power which could be generated. To understand how these calculations are made, we must first find out just what is meant by "horsepower."

Power is defined as "the rate of doing work." That is, time has to do with power. A very small engine or water wheel could do the amount of work done by a large engine, but it would consume more time. Work is used here in its mechanical sense. Work is the product of force and distance. That means that a force of 12 pounds exerted through a distance of 6 feet does  $12 \times 6 = 72$  foot-pounds of work. This would be the work done by a weight of 12 pounds falling to the ground from a height of 6 feet. The unit of work used is the foot-pound, the amount of work done by a weight of one pound falling through a distance of one foot.

The unit of power could readily be taken as one foot-pound of work done in one minute, but a great many years ago the unit of power was taken as 33,000 foot-pounds of work per minute, and the unit was called a horsepower. At that time, as the result of a great many tests, it was believed that this represented the power of the average horse. To-day it is generally recognized that the average draft horse cannot do more than about 25,000 foot-pounds of work per minute for any continued length of time. The name of "horsepower" still clings, however, and is universally used for the unit.

To find the maximum possible power which can be obtained from a falling body of water, then, it is only necessary to determine the weight of water which falls in one minute, and the distance that this water falls. The latter distance may be easily measured, as a rule. If the weight is to be determined, we must determine first the amount of water falling in one minute. This is comparatively easily found if the body of water inspected is a small stream. In that case, the average depth in feet is multiplied by the width in feet, and the resulting product is multiplied by the velocity of the stream reckoned in feet per minute. This may be roughly determined by noting the distance moved through by a light chip thrown on the surface of the water at the place where the depth and width measurements were made. The product of the three measurements pointed out above give the cubic feet of water which flows by that particular spot in one minute, and, of course, the same amount of water must flow past every other spot in the stream in a minute, so we call that number the stream flow. Now, a cubic foot of water weighs approximately 62½ pounds so, multiply the stream flow in cubic feet by the weight of a cubic foot, and the result will be the weight of water falling in one minute. Multiply this result by the distance fallen through, and we have the foot-pounds of work done in one minute. This divided by 33,000 will give the horsepower which is available at the stream. Right here it should be observed that this maximum horsepower cannot be received from the best water wheels, their efficiency ranging from 50% to 85%, as will be pointed out later.

The term "miner's inch," which is sometimes met with in catalogues of water power apparatus, is a California term and is quite indefinite in its meaning, the exact amount meant depending upon the particular locality where the term is used. An average value for the miner's inch is 1½ cubic feet of water per minute. The number of miner's inches, then, in the above stream could be obtained by dividing the stream flow by 1½.

If the water to be utilized is from a small waterfall, the easiest way to measure the amount of water flowing is to make the above calculations in the stream above the waterfall. If necessary the stream might be led through an open wooden channel of known cross-section and known length. The width of the box will give the width of the stream; the depth of the stream can be read from a rule held upright with the end on the bottom of the box; the velocity of the stream can be determined from the time taken for a chip to float the known length of the open box.

The following table gives the number of cubic

feet which must fall per minute to give one horsepower under the various heads:

TABLE.						
Head in feet.						
5	10	15	20	25	30	35
105.6	211.2	116.8	422.4	528.0	633.6	739.2
844.8						

Cubic feet per min. required.

(Next week.—The kinds of water wheels and the proper choice under given conditions.)  
Nova Scotia. R. P. CLARKSON.

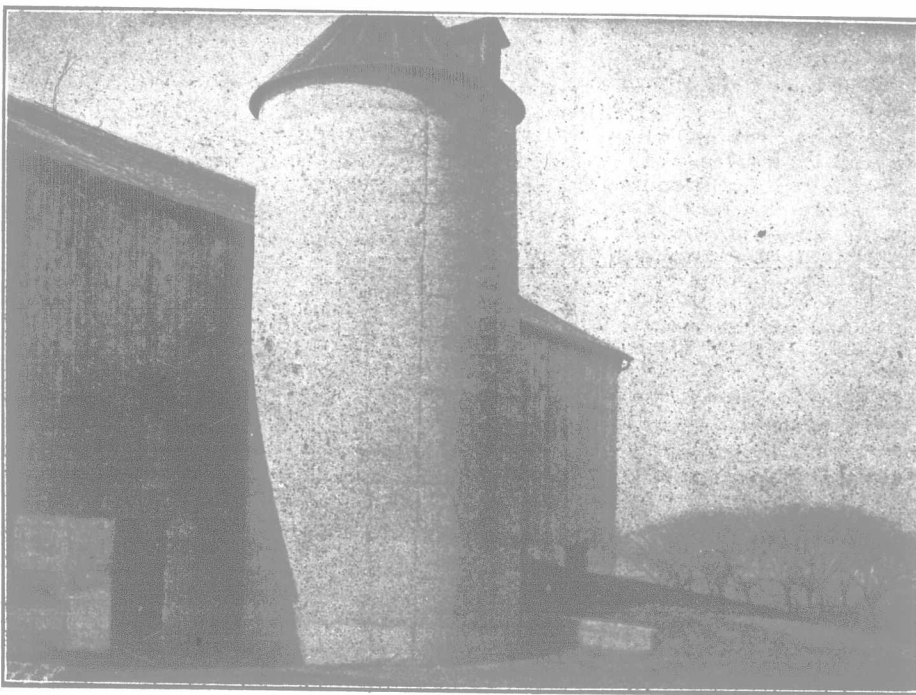
### A Sweet Clover Mixture.

Editor "The Farmer's Advocate":

Regarding the use of sweet clover on the farm, I will give our brief experience for the benefit of your readers, who are thinking of trying this new, yet old legume. We have two plots, of two acres each, of rather light, sandy soil lying nearly a mile from the barn, and hence, have not received much manure. Thinking it would be a good place to try this clover, we purchased in the spring of 1913, fifty pounds of the white variety (*Mellilotus alba*.) The land was plowed in May, working as for corn, at intervals until June 15th, when we sowed one plot, using twenty-five pounds of seed. Also ten pounds of hairy Vetch were sown on a one-half-acre plot with the clover. One stroke of the harrow and the roller, followed the seeding.

Plot No. 2 was harrowed once a week until July 15th, and sown with 25 pounds of seed mixed with 10 pounds of Alfalfa.

On plot No. 1, on September 15th, we cut a crop of hay averaging thirty inches in height. Some was cured in cock and some in a side-delivery-rake swath. It cured just the same as common red, and more easily than Alfalfa, no leaves falling.



The wise ones are not so emphatic in their denunciations of the silo as they were formerly.

Three good loads were put on top of our hay in the barn and we had a sweet time of it. Almost too much of a good thing. We soon got accustomed to the fragrance and were often complimented on our sweet-smelling hay. We had to feed it first and never found anything refuse to eat it. It seems to be very nutritious. Our horses improved while eating it. The Vetches grew right along with the clover and made an especially nice quality of feed.

Plot No. 2 was sown July 15th, and just before killing-frost, was a beautiful sight, being about 30 inches high and very thick. The Alfalfa could hardly be distinguished from the sweet. It was left on the ground and will not materially hurt the quality of this season's hay as it mostly disappeared during the winter. This spring both plots made a very early start, showing no winter loss; although much of the red clover in this vicinity was killed. On May 9th, 1914, it was from 12 to 14 inches high, both Vetch and Alfalfa keeping pace with it.

From appearances it would be grand pasture and no doubt stock would thrive on it, if confined to that feed. It seems to me the addition of Hairy Vetch would make an especially fine feed. We intend to sow three acres more this season and cut what we have for hay, first, and then cut for seed. We shall be glad to give our experience from time to time and hope others will do the same.

Elgin Co., Ont.

C. L. SPRAGUE.

### Rainy River for Good Soil.

Editor "The Farmer's Advocate":

I have taken "The Farmer's Advocate" for some time, and think it one of the best farm papers obtainable. No farmer should be without it. Having never seen any letters written from Rainy River Valley, I decided, if you would allow me a little space in your valuable journal, to make a few remarks about it; which may be of interest to your Eastern readers. I was greatly surprised while visiting in Old Ontario to find that the people there thought Rainy River Valley was a perfect wilderness just on the outskirts of civilization. When I came here twenty-seven years ago it was indeed a wilderness, there being only five white families along the river, a distance of eighty miles. Our only way of getting in provisions was by boat from Kenora (then Rat Portage). We always had to lay in a supply in the fall to carry us through until spring; and with what joy we always greeted the first boat of the season. But those days are gone, and almost forgotten. Now we have the main line of the C.N.R. running through our fertile district which has greatly aided in opening up the country. For a new country we have good roads. Last year, the Government started work on a trunk road from one end of the Valley to the other, which when completed will be one of the best country roads in Ontario. We have without a doubt the most fertile land in Canada—nowhere can it be excelled. It takes some work to clear it and make it ready for cultivation, but the pioneer is sure of ample returns. Then too, the clearing is by no means unprofitable in itself, as thousands of dollars are realized every winter out of logs, ties, wood, poles, etc. People are coming here from the West at the present time, having been driven from farming there, by such obstacles as weeds, cyclones etc., and find here just the sort of land every farmer wants, land that will grow every kind of farm crop and give abundant returns. Timothy and clover are very extensively

grown here and always give good returns, and the ripe clover contains a great deal of seed. Alfalfa also does exceedingly well. All field grains yield well here and as for garden stuffs, field roots and potatoes, we are always sure of a bumper crop. One man here dug three hundred and fifty bushels of Delaware potatoes off less than an acre of land last fall. No small ones either, all salable potatoes.

By the way, we are progressive farmers here, we have organized what we call "The Rainy River Potato Growers' Co-operative Association" but do not confine ourselves to potatoes alone, but handle all kinds of farm produce, and sell directly to the consumers. The association has managers' offices at Emo and La Vallee, and although only organized a year ago, have already handled almost twenty thousand dollars worth of farm produce. We handle only one kind of potatoes for seed, namely Delaware, and find it a good idea, as in making up a carload, we are sure of them being all one variety.

This is the country for the poor man, for he can get a free homestead and is sure of work the year around. This is the place for the man with money to invest, to come, as he is sure to make well on his investment and he cannot lose, as land here is steadily increasing in value. Our markets, though as yet, principally local are good, and the farmer is always sure of selling all his products at as high prices as are obtained almost anywhere else in Canada.

"A RAINY RIVER FARMER"

### The May Beetle Swarms.

A Middlesex, Ont., correspondent writes: "We are evidently in for another destructive invasion of the May beetle, like that of a couple of years ago. Already (May 20th) they are buzzing overhead in the evenings like a swarm of bees. In the garden regularly under cultivation, they were turned up everywhere, and dozens of them were found working about the roots of plum trees and other bushes in the fruit plantation. Any practicable suggestion through "The Farmer's Advocate" from the insect-pest expert will be appreciated by farmers and gardeners."



**Food and Pearl.**

Editor "The Farmer's Advocate":

Your correspondent has given us an interesting letter, printed on page 954, on the oyster and oyster farming. He mentions that in addition to the twenty-seven thousand barrels taken from our own waters in 1907 we imported nearly \$370,000 worth from other countries. If what the dietitians tell us is true, we did not get much food value for our money. In a list of twenty kinds of food, tabled in a standard text on physiology, oysters at 35 cents a quart is the most expensive. At that price a dollar for oysters buys only one twenty-eighth of the food value that it would in cornmeal at 25 cents per pound, and about one-third as much as in eggs at 25 cents a dozen. Raw oysters are, it is true, easily digestible, but the possibility that they may have grown in waters exposed to drift of sewage and consequently may carry typhoid or other disease germs, moderates the satisfaction with which they are eaten. In this respect, however, Canadian oysters are likely to be devoid of offence.

In the letter referred to, the origin of the pearl is attributed to the irritation of a grain of sand. Modern science seems to reject that theory. Jeffreys and other biologists hold that perfect oyster pearls are developed around a parasite, most probably the larva of a fluke-worm, which invades the mantle of the oyster. If the only cause were the intrusion of grains of sand, it would be difficult to account for the prevalence of oyster pearls in certain waters, and their rarity in other localities where the waters are more frequently turbid.

It is interesting to note that notwithstanding the many years, centuries one might say, that the oyster has been under observation and cultivation, it is only within a year or two that its interesting larval history has been completely worked out. The honor of doing so belongs to a Canadian biologist—Dr. Joseph Stafford. He has shown that the sense, and locomotory organs of the fully-developed, free-swimming larva are decidedly more highly organized than those of the adult animal, also that the free-swimming period covers nearly a month instead of a week, as formerly supposed—an important fact to those who are attempting artificial fertilization of oyster eggs. J. D.

**Cut Clover Early.**

A point which growers of clover seed cannot afford to overlook was recently brought out by C. S. Wheeler, of the College of Agriculture, Ohio State University. It is quite a common occurrence on the farms of Canada that clover growing for seed has proved unprofitable, while it is equally demonstrated that other growers successfully produce paying crops. The prevalence or absence of bumble bees is often taken as the cause of good or poor crops, as the case may be, but according to this authority, and we are inclined to agree with him, a great deal more damage is done by the clover midge than by the absence of bumble bees. The maggots of this midge are found in the clover blossom where they destroy the ovary in each small floret before it can be fertilized and develop seed. Two generations of these maggots appear each season at the regular time of the two blossoming periods of the clover. Keeping this in mind, and also remembering that it is impossible to get rid of the midge because the adult, which is a fly, comes on the place from neighboring farms, it can easily be seen why it is so important that in clover seed growing the first crop be removed early in the season, in order that the second crop be in blossom before the second generation of the maggots are ready to attack the plants. Only two alternatives are open in any district, one is to have the second crop in blossom earlier than it ordinarily would be, and the other is to have it late. The danger of frost in this country precludes the later blossom to a great extent, so that the only safe means is to get the first crop of clover out of the way very early in the season to allow the second crop to grow up and blossom at a time when there is little danger of midge working havoc. To make the best use of the first crop and get it out of the way early many good growers pasture until early June or cut as hay very early in the season. When it is pastured it is advisable to run the mover over the crop at the time the stock are taken off. There will be some loss in hay crop, but it will generally be more than made up in the increased yield of seed.

**Alfalfa Clogs Tile.**

A short time ago we had a call from an experienced ditcher, T. W. Glasgow, of Middlesex County, Ontario, who has taken much interest in reports in "The Farmer's Advocate" re the clogging of tile drains by alfalfa roots. He has observed upon several occasions that the alfalfa plants send down their roots to the drain, that the large roots do not enter it but throw out many fibres which

penetrate the joints of the tile and form a ball-like mass on the side of the tile obstructing them by holding silt which is being washed down by the water. He claims to have taken up many drains which were clogged in this manner.

**How Peanuts are Grown.**

The large illustration on this page depicts the manner in which peanuts are cured in the stack. If the weather is dry and windy, the curing process requires only about three or four weeks. Too rapid curing is not desirable as it tends to shrivel and discolor the pods. Picking is usually deferred until late, and special care is taken to protect the pods in stacking as the common crow will destroy many if they are not protected. Field mice and rats also must be figured with. Stacks should not be opened nor the vines handled during wet weather.

The peanut belongs to the same group of plants as do beans and peas, but as most of our readers know its fruit or nut is matured beneath the surface of the soil. The flowers of the peanut plant are small and yellow and born in the little pocket where the leaves are attached to the stems. Immediately after pollination has taken place the visible portion of the flower fades and falls. The short, thick stem supporting its elongated and sharp-pointed ovary is thrust downward into the soil where the pod develops. If the ovary fails to reach and penetrate the soil no pod forms.

Peanuts do best on a sandy loam soil, preferably light in color. They will do very well, however, on clay or loamy soil, but the latter must be well drained. The value of the crop in the United States is said to run from \$12,000,000 to \$15,000,000 annually, the chief areas being in Virginia, Tennessee, the Carolinas, and Georgia. The industry is now spreading across the entire Southern States.

The crop demands a long season free from frost with comparatively little rain-fall, abundant sunshine and very high temperature. Yields up to 50 and 60 bushels per acre are often recorded, but many run down to 30 and 40 bushels. The seed is planted with a machine and with a large podded variety it is usually shelled. Planting is done from the middle of June to the 10th of July, the larger kind being put in earlier, generally about the end of May. Rows are generally put in about 36 inches apart and plants from 9 to 16 inches apart in the rows. Cultivation at frequent intervals is given until the peanuts begin to form pods, after which they are not given further disturbance. The old idea that the blossoms of the peanut should be covered is erroneous, although growers frequently allow a good deal of the soil to be thrown over the vines during the final cultivation. Many now dig with a potato digger and with this machine are able to get out about twelve acres a day. After the vines are loosened from the soil they are allowed to lie spread upon the ground or in small bunches for three or four hours and then are placed in small stacks around a central stake as shown in our illustration. This is to prevent discoloration of the pods and loss of weight and besides a better quality of peanut hay is made from the vines when they are stacked as soon as pulled. The stakes around which the peanuts are stacked are three or four inches in diameter and seven feet in length and sharpened at both ends. These are set in the ground to a depth of twelve to fourteen inches. Storing in barns is seldom

resorted to until after the peanuts have cured in the stacks from four to six weeks.

Special peanut cleaning factories are in operation where the threshed peanuts are cleaned and polished ready for the market. All dust and refuse are removed by means of fans and ventilators. Peanut hay is said to be about equal to clover hay in value for stock feeding. An acre of first-class peanuts when the yield is calculated at about a ton of vines worth \$8 to \$10 and 60 bushels of peanuts worth \$40 to \$60 gives the grower an income of anywhere from \$48 to \$70 while the cost of growing is estimated at from \$12 to \$25 including, of course, seed and fertilizers. The crop is growing in importance in the Southern States.

**Soil Fertility Depends on Live Stock and Green Manuring.**

For the farmer who does not keep live stock green manuring is almost absolutely necessary, but as pointed out in a bulletin recently issued by the Missouri State Board of Agriculture judgment must be used. Green manure adds humus to the soil and adds it very quickly and unless the soil is very thin and badly worn, according to this bulletin, it is doubtful if as large money returns are obtained by ploughing down green crops as would be the case if these crops were fed off the soil. In round numbers they claim that about three-quarters of the fertility value of the green crop is left in the soil when pastured and the feed is obtained in addition which with red clover may reach as high as \$35 per acre. Of course, where a catch crop is grown for green manuring the land is that much ahead. Rye sown between the corn rows in August or September serves the three-fold purpose. It conserves plant food set free in the fall which might otherwise be lost; and it gives some fall and spring pasturing and prevents washing in the soil. A very heavy growth turned under as green manure just before planting may not have a chance to decay, especially if the weather is dry. This results in a mat of vegetable matter between the ploughed ground and the harder subsoil. This method cuts off the rise of water from below and as soon as the water in the top or cultivated soil is used up the crop begins to suffer. On such land as this it is always advisable to roll with a heavy roller.

One of the most important points brought out in the bulletin is the value of live stock as a factor in soil fertility. If crop after crop are produced on the farm and sold in the raw state plant food is lost. The feeding of bumper crops on the land is what builds up soil fertility. Many farmers pin their faith to legumes to keep the soil in good condition and these crops including the clovers, alfalfa, peas, beans, etc. work wonders in this respect, but it must be remembered that the legumes are heavy feeders on potassium in particular. Selling this plant food from the farm finally brings trouble so that it is necessary even, where legumes are grown that these be fed to the stock and the greater portion of the plant food returned to the soil. Clover adds humus to the soil and makes phosphorous and potassium available resulting in larger crops, but the soil may be actually poorer in total plant food. There is a difference between a fertile soil and a productive soil. The former has a sufficient amount of plant food present, while the latter is one that has a sufficient am-



Harvesting Peanuts in Virginia.



ount of plant food present in such a condition that it is available for the use of the crop. Farmers should grow more clover and should market it as the finished product—beef, pork, mutton or milk products.

Feeding of the crops on the soil is not all, proper care must be taken of the manure. Where crops are harvested by the live stock the labor problem is solved as well as the problem of maintaining soil fertility. There is no better way as far as the soil is concerned of returning the fertility to it than by allowing the cattle to feed off the crops, but climatic conditions in this country make it imperative that live stock be housed for a considerable portion of the year. This necessitates some care with the manure that it be returned to the land without considerable loss through drainage and bad handling. Where possible the manure is better hauled to the field every day, but this again is not practicable under all conditions and the next best thing is to keep it in a covered shed where it may be tramped solidly to prevent heating.

At the Ohio Station some barnyard manure was taken that had been exposed to the weather during the winter and some fresh manure from the stall. These two lots of manure were spread on clover sod, at the rate of eight tons per acre. The sod was turned under in preparation for corn; wheat followed the corn in the rotation and clover followed the wheat. This rotation was repeated twice. At the end of ten years it was found that the stall manure had given a net increase of \$23.70 per acre for the three years of one rotation as compared to \$17.22 per acre for the yard manure. If stall manure, according to the bulletin, is almost one-half better than yard manure surely we cannot afford to pile the manure outside the barn letting the nitrogen get away into the air and allowing the phosphorous and potassium to leach away into the soil. Unless manure heats its nitrogen is not going to escape to the air and neither the phosphorous nor potassium is going to become soluble in water and leach away. These plant foods remain in the plant tissues until certain forms of bacteria work upon them and change them to new forms. The prevention of heating is the main thing in the caring for the manure.

According to the Wisconsin Station, a ton of mixed manure of average composition contains approximately five pounds of phosphoric acid, ten pounds of nitrogen and ten pounds of potash. At these prices they value a wagon load at from \$2 to \$3. Farmers cannot afford to do without the live stock which makes it possible thus to enrich their soil, neither can they afford to neglect the careful handling of the product when they get it. It is also estimated by the Wisconsin Station that the value of manure per thousand pounds live weight for the different classes of animals for one year is as follows: Sheep \$26.09; Calves \$24.45; Pigs \$37.96; Cows \$29.27; Horses \$27.74. The value of liquid manure with the exception of that from swine is greater than the value of solid manure. From figures given it is shown that the yield of crops is being maintained far better in the live-stock breeding States than in those States where corn and other crops are grown year after year and sold off the farm. Truly live stock is the prime consideration in the maintenance of soil fertility.

### General Principles of Rotation.

Prof. S. A. Bedford, Deputy Minister of Agriculture in Manitoba gives the following general principles of crop rotation:—

1. Include at least one leguminous crop in the rotation to gather nitrogen from the air.
2. Have at least one cultivated or hoed crop in the rotation that the land may be cleaned of weeds.
3. Rotate shallow-rooting crops with deep-rooting ones, so as to enlarge the feeding ground of the plants.
4. When possible to do so avoid rotating small cereals with other small cereals, especially avoid repeating the wheat crop.
5. If live stock is kept plan the rotation so as to have approximately the same amount of forage each year.
6. As soon as conditions permit keep more or less stock on the farm, in no other way can the fertility of the land be kept up.
7. At the earliest possible moment have the bedding so free of weeds that the manure can be applied direct from the stable and thus save much waste of fertilizer.
8. Arrange the rotation so that most of the hired help will be profitably employed all the year round, the rate of wages will be less and employees will be more contented.

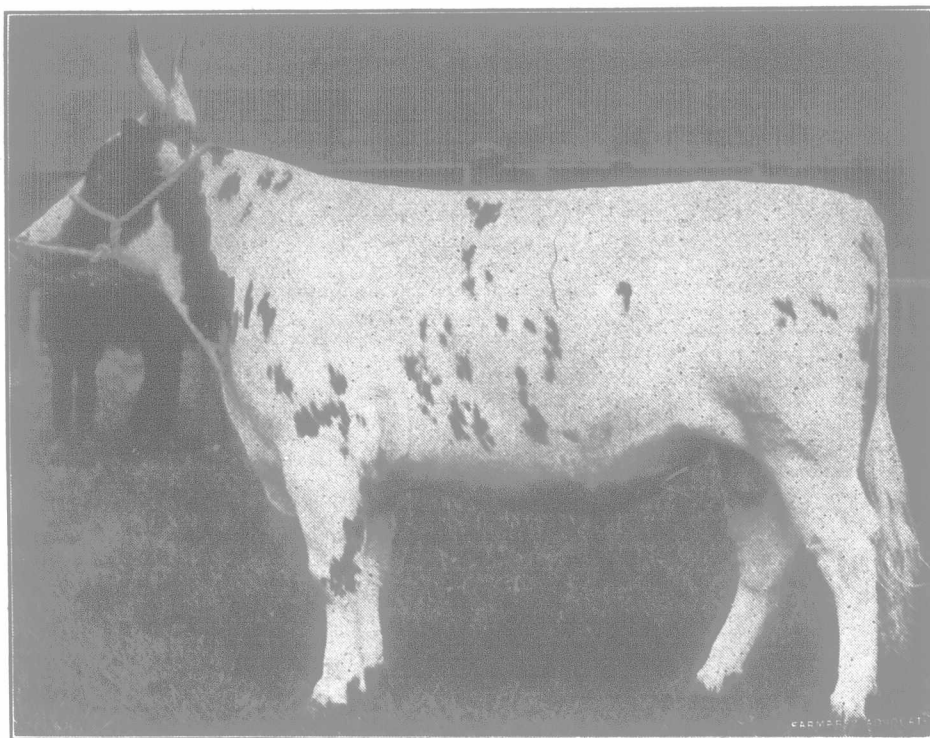
## THE DAIRY.

### What is Skim Milk Worth?

The value placed upon skim-milk for feeding purposes has gradually risen from almost nothing until it has attained the alarming figure of \$1.50 or more per hundredweight. A writer in a recent number of Hoard's Dairyman estimates skim-milk as worth \$1.64 for every one-hundred pounds. These calculations are based upon the feeding of veal calves. One point in the argument seems weak and that is that the fat of the whole milk, fed in conjunction with the skim-milk, is charged up separately and the remainder of the whole milk, is charged up as skim-milk. This allows nothing for the stimulating and tonic effect of the whole milk and attributes all the gains outside of the value of butter-fat to the skim-milk. The calves were fed eight pounds of whole milk daily for a time; with this they got skim-milk and when large enough they were fed cracked corn and hay. They were disposed of or the calculations were made when the calves were about thirty days old and resulted in a valuation of \$1.64 per hundred for the skim-milk fed. This is the particular age at which the calves would show the greatest gains from the skim-milk consumed and this experience does not stand as conclusive proof that skim milk is worth \$1.64 per hundred under all circumstances.

The analysis of skim-milk compared with oats, a well-known food, will show well its percentage of food constituents.

	Protein	Carbohydrates	Fats
Skim-milk	2.9	5.3	0.3
Oats	8.8	49.2	4.3



Holehouse Marksman.

First-prize two-year-old bull at Ayr and Kilmarnock, 1914.

This table demonstrates the comparative amounts of the three principal food constituents. One hundred pounds of oats at 40c per bushel would realize about \$1.20 while skim-milk, which contains a little more than one-quarter as much protein, only about one-ninth as much carbohydrates, and one-fourteenth as much fats has been valued at \$1.64. Skim-milk under these circumstances must have a wonderful tonic or stimulative effect upon the young calf's system.

The facts regarding skim-milk may be gleaned from the following information, which has been gained from thorough experimentation. When fed skim-milk for a period of twenty to thirty days, 7.9 pounds are sufficient to produce one pound of gain, but when fed for a period of eighty to ninety days, 20.1 pounds of skim-milk are required for one pound of gain. This explains in part the wonderful gains made in this correspondent's case. The value of skim-milk too depends largely upon the amount of grain which accompanies it in the ration. For pigs of average age it has been estimated that five to six pounds are equal in value to one pound of corn, but it should always be fed in combination with corn, barley or other carbohydrate-rich feeds.

Another table compiled at the Wisconsin Station well demonstrates the proper proportions in which meal and skim-milk should be fed.

When feeding with each pound of meal	Milk required to save 100 lbs. of corn meal
From 1 to 3 pounds skim-milk	327 pounds
From 3 to 5 pounds skim-milk	446 pounds
From 5 to 7 pounds skim-milk	574 pounds
From 7 to 9 pounds skim-milk	552 pounds
Average	475 pounds

These figures plainly prove that about 300 pounds of skim-milk should be fed with each one hundred pounds of corn meal for if not so given much of its feeding value is lost. Skim-milk cannot be given any stated value for it depends largely upon the age of the animal, the character of the animal and the composition and quality of the food fed along with it. There might be cases such as the one referred to where skim-milk can be figured to have a value exceeding \$1.00 per hundredweight, but the experimenter should take into consideration the value and tonic effect of foods fed in conjunction with it and when making an estimate, credit all the foods with their true value. Experience proves that as the quantity of skim-milk increases and the grain decreases, the value of the milk will lessen. Its worth is governed by the amount of grain that accompanies it in the ration.

### Cheese Chat No. 3.

Editor "The Farmer's Advocate":—

"I wish we had some good cheese, I'm cheese-hungry." The foregoing is an expression the writer has frequently heard among farmers, especially in districts where there are no cheese factories, and sometimes in cheese districts, where the farmer's wife reports that she has frequently sent in word with the milk-hauler to get her some cheese, but he returns without any. His excuse is: "There ain't no cheese cut, and the cheesemaker says he won't cut a cheese for just one patron."

There is no reason why every farmer who keeps cows should not make his own cheese, and have it on hand all the time. The only things necessary to buy would be rennet, and a hoop in which to press the cheese. All the other things needed can be found on every dairy farm.

Some one says, "What about the time?" "Don't it take a lot of time to make cheese?" Not necessarily. We would suggest that a little rennet in liquid or powder form be purchased from the cheesemaker or dealer. A pint of rennet costing about 25 cents will be all that any ordinary farmer would need for the season. Or, if a veal calf is killed on the farm, or a young

calf of any kind, remove the stomach, turn inside out, wash, insert a shingle to keep it in shape, and hang in a dry place, after sprinkling on salt. When rennet is needed, cut off two or three square inches of the dried rennet, and soak in half a pint of brine, for two or three days. Strain this liquid through a cloth or strainer and the needed rennet will be ready for use.

Have some tinsmith make a loop about 8 or 10 inches in diameter and of the same height, out of heavy tin, with bands around top, bottom and centre. This hoop should be open at top and bottom. It ought not to cost over 75 cents to one dollar. Some rainy day, the man about the farm, handy with a jack-knife and saw, can make a wooden follower to fit inside the hoop for pressing the curd into shape. With this material on hand, if the women will keep home 100 to 150 pounds milk (10 to 15 gallons) where it goes to the cheese factory, or if separating, one-half the amount may be skim-milk, they will be ready to make cheese. Select a rainy day, when the men can be pressed into service if needed. Place the milk in a clean boiler and set on the fire of the stove, warming to 84° to 86°. After reaching the desired temperature, having stirred it gently all the time during heating with a dipper or large spoon, remove from the fire to the back of the stove. If a little good-flavored buttermilk



or sour skim-milk be on hand, half-a-cupful may be added to the milk before or after heating. Next, dilute about six teaspoonfuls of commercial rennet in a cupful of cold water and stir through the milk with spoon or dipper. (If rennet is home-made, the cheesemaker would have to experiment until he or she got the right quantity to curdle the milk firm, and ready for cutting in about twenty minutes.) Stir for five or six minutes, then allow the milk to sit quietly on the stove for about 20 minutes, or until when tested over the thermometer or finger, it breaks clean, when it may be cut into pieces with a long knife, where a curd knife or breaker is not available. After cutting as evenly as possible into pieces one-half to three-quarters of an inch cube size, move the boiler forward to the fire and stir gently until the curd and whey reach 92° to 94° F., when the boiler should again be set on the back of the stove, and the mass stirred every few minutes for an hour or two, or until the curd feels firm to the touch, when the whey or liquid part should be removed, or the curd be dipped out of the whey, onto a cloth spread on a slanting table or a three-cornered butter-worker for drainage. When the surplus moisture is expelled, add about two to three ounces of salt, depending upon firmness of curd and individual taste, and mix this thoroughly through the curd by stirring. In ten or fifteen minutes, the curd will be ready to fill into the hoop.

On a clean table or bench, spread a piece of clean cotton about one foot square. On this set the hoop, then fill in the curd, pressing it in firmly with the hands. When all the curd is in, spread another foot-square piece of clean cotton over the top of the curd and hoop, and put on the wooden follower, which should have a block about 2 inches by 3 inches and 2 inches high in the centre to take the pressure from the lever when the curd is pressed down in the hoop, although a separate block could be set on the follower, after it gets below the top of the hoop.

Put the lever in place next, which may be a piece of scantling, or a fence rail about eight feet long, with one end under something solid, and about one foot away from the end, have the lever rest on the cheese follower. About four feet away from the cheese hoop place a weight of 20 to 25 pounds—an old pail filled with stones does very well for a weight. Move the weight nearer the end of the lever from time to time, until full pressure is applied. A pail or dish, should be set under the cheese to catch the pressings and prevent a muss on the floor.

At the end of an hour remove the cheese from the hoop and bandage by sewing a cotton cloth around the cheese, or this may be done after it comes finally from the press in about 24 hours. Make the cheese as square on the ends as possible, and turn so as to have it even at the top, put back in the hoop, and apply full pressure for a day or two, when it should be taken from the hoop, and placed in a cool cellar. When about a week old dip in, or brush on, a thin coating of paraffine wax to prevent drying and mould. This wax should be applied hot. If wax is not available use butter, or clean lard.

Turn the cheese end for end every few days, and in about a month the cheese will be ready to eat. When cutting, take a thin slice from the whole of one end, then cut in slices what is required for each meal, returning the thin top piece each time to prevent drying.

One cheese like this a month would keep an ordinary family supplied throughout the year. There is nothing nicer, or more convenient than a cheese lunch. Try it during the coming summer.

O. A. C.

H. H. DEAN.

## HORTICULTURE.

### Pushing Rhubarb.

Nearly every farm garden has, or ought to have, half a dozen good rhubarb hills, which afford such an early and wholesome dish for the table. It requires a deep, warm, rich soil for best results. Two popular sorts are the Victoria and Linnaeus, (sometimes called Strawberry from its pinkish color). Early planting from divided roots is commended. It is very hardy, but can be hurried along in spring by putting around a couple of hills boxes or boards about a foot high, and laying a sash over them. A dressing of manure at the same time helps to force the plants along. About the 1st of April this season the buds were just showing life in the hills and were treated as suggested by the writer, and on April 26th the stalks were sufficiently large and well matured to make excellent sauce and pies. So rapid and vigorous was the growth under glass that one morning on going to note what progress the plants were making, they were found to have raised up the sash six inches above the top of the wooden frame.

### A Good Future in Strawberries.

The appearance of Southern-grown strawberries on our markets in the early spring only whets the appetite for the Canadian product. Beautiful in appearance and luscious as they may be they leave the Canadian demand unsatisfied and not until the home-grown berry appears does the Canuck revel to any extent in this, the daintiest of the berry kind. So great has been the demand and so limited the supply during the last two or three years that the strawberry, formerly a staple article of food on most tables when in season, has become a luxury. The restricted acres of plantations are not the only cause. The rotation of fields has done away with the old meadows where the wild berry thrives and the absence of proper mulching and inclement weather in the spring have been responsible for a curtailment of the production. Contemporary with this condition the canning and jam factories have required large quantities to make up a product that is consumed the year round and finds its way into the camp or ocean voyage thus extending both the field and period of consumption. All these conditions warrant more plantations on a commercial scale and increased attention to the garden patch. It is not wise to rush into any special crop that is being grown extensively in the neighborhood or for which the market is limited and may be overthrown by excessive production, but where the demand does exist and factories will consume large quantities the care and intelligence required in berry culture guarantee it as safe and sure.

Strawberries may be set in early spring, in June or in the autumn. June usually presents difficulties in the absence of sufficient rain-fall so necessary for the starting plant. Plantings during the current season would probably meet with most favorable conditions if set during the first two weeks in August. At that time the current season's runners will provide the plants and if they can be transferred from the old patch to the new without the deteriorating influence of drying out a great impetus will be given to the new beds. This season of setting also allows of clean cultivation for the field and the eradication of weeds. However the early spring is the recognized season of setting and should be anticipated by previous preparation. The autumn planting has only been discussed for those who might desire to set during the current season, and it is not always a mistake but the chief danger lies in the destruction of many of the young plants during the winter.

The preparation of the soil requires little explanation as all crops thrive in proportion to the amount of attention paid to the seed-bed. Like most other crops, berries do well on a clover sod, well worked down in the fall and again in the spring. Under intensive culture methods it is often possible, when setting in August, to set the plants on a field that has borne an early crop during the same season and when this is well manured and fertilized there need be little doubt as to the outcome, other things being right. The character of soil however is a matter to be considered. A light, sandy soil will give a good-quality berry but it is liable to dry out when moisture is the first necessity and thus destroy the chances for a crop. A limestone soil containing humus and loam is not a bad soil at all; the berries are well colored, have good quality and ship satisfactorily, but they will not attain to the size of the berry grown on friable, sandy-loam, retentive of moisture. This latter requirement as well as fertility will be enhanced by a liberal application of barnyard manure; even thirty to forty tons per acre will not be excessive.

Coming to the actual planting the individual must do some thinking. If the plantation is to be an adjunct of the home garden the check system has some things to commend it. When planted in hills, thirty inches apart each way the weeds are more easily controlled and the surface mulch preserved, but on a commercial scale the matted row system is followed almost entirely. Here, the rows are four feet apart, with plants from eighteen inches to two feet apart in the row. When set 18 inches apart in rows four feet apart it will require 7260 plants per acre. A method of setting which requires a little more time, but in the end is profitable, is to discard the trowel or dipple for making holes and make a shallow trench with a plow. Then taking the small plant in the right hand, rotate it with the thumb of the left hand held up close to the bottom of the crown. While the rootlets are in a horizontal position in consequence of the rotary motion place it in the trench and cover with soil to a level with the crowns, no more shallow and no deeper. The trouble with the spade or dipple method is the bunching of the roots in one spot and the resulting struggle to secure a foot-hold. This more arduous way allows the roots to assume their natural position

at once, and guarantees a more speedy growth. Following the planting, cultivation must be thorough, or the crop will be jeopardized at the beginning.

In successful strawberry culture, mulching is a necessary evil. True it is that weeds will be introduced, but from the appearance of berry fields this spring, mulching, despite its untoward effect, is necessary. One field under observation proves that bean straw has the happy quality of being fairly free from weed seeds and at the same time capable of protecting the plants. Wheat straw is probably next in order outside of rushes and swamp grasses.

It has long been a question whether or not it is advisable to take two crops of berries from the same patch. The second crop has always been a minor one in spite of the cultivation subsequent to the bearing season. Now two systems are in vogue whereby the field is resuscitated and made profitable for future crops. The more customary habit is to first mow off the plants, grass and weeds and remove them from the field and then burn them. Then two furrows are plowed between the matted rows, and the field is harrowed with a common levelling harrow, either lengthwise or crosswise. This scatters the soil in about the plants and next spring the whole field is practically a new plantation. The other system is to maintain the same bed indefinitely. During the first season, cultivation must be thorough, but in the second year the runners are trained out into the centre between the rows and here a new row is established which will ultimately become the source of the crop. The parent row will then be plowed up, and cultivated as was the space between the original rows at first. This system of transplanting the rows without losing the crop any one year may go on indefinitely, provided the cultivation is equal to or in advance of the growth of weeds. When they obtain possession of the field another kind of crop is the only avenue of escape.

### Put the Tomato Crop on a Safe Basis.

The latter part of May will see the tomato plants for early tomatoes almost entirely set in districts where early tomatoes are in any way a reliable crop, but after that will come the major part of the setting to supply the canning factories and the late tomato demands. The plants which have been set for early tomatoes have been reared in the green-houses and matured or hardened in the cold frames and are ready to go forward; but for the later crops many growers are too careless about the quality of the plants they set, for canning purposes especially, and think that so long as they once get hold on the ground that amends will be made by future growth for the lack of health and vigor in the young plant. We have noticed a difference in young plants which can best be represented in bushels, and it would be at least 100 bushels per acre. When the young plants are spindling, weak or started on improperly mixed soil, they will not come along and resist the blight as well under any conditions as will the more vigorous plants, and a grower can well increase his crop by 100 bushels per acre simply through the selection of strong, vigorous plants to set.

The soil for a good crop of canning tomatoes should be sufficiently loamy that cultivation must not necessarily be postponed or delayed after every shower, for a great impetus can be given to the crop by cultivation immediately succeeding a liberal shower. Cultivation should continue until the plants are injured by the horse or implement. The required distance for canning tomatoes is 4 feet by 4 feet, which requires 2,722 plants per acre. This allows for cultivation in both directions, and when properly done dispenses with much necessary hand hoeing.

The cost of growing an acre of canning tomatoes is estimated all the way from \$35 to \$60. This depends very much on the amount of fertilizer used and the character of plants set. In some places plants which have been transplanted twice are thought economical in the end, and cost in the vicinity of 5 cents apiece. When they are used it can easily be seen that the cost of growing will be comparatively high. The profits then depend largely upon the number of bushels harvested. 400 bushels per acre is considered a fairly good crop, and selling from 30 to 35 cents per bushel as they do, in different sections, a satisfactory balance remains in favor of the grower. In the County of Prince Edward in Ontario the canning crop industry has grown to considerable proportions, and although the average crop per acre in that county has not reached the 400 bushel mark, there are many who consider that anything less than that is not satisfactory. The production there has been very largely increased by a systematic and proper selection of the seed. They have not depended entirely upon the canning factories to supply them with good plants and good seed, but they



have gone into their own fields and selected healthy, vigorous plants bearing a large number of the proper kind of fruit, and have saved the fruit from those plants and have produced their own seed. (We use the term "fruit" as applied to the tomato without wishing to enter into any controversy regarding the botanical correctness of the word.) Healthy vines bearing few tomatoes is not enough; the plant must be healthy, vigorous, with proper height and thick, stout stem, but they must have a proper setting of fruit in sufficient quantities.

The fruit is harvested from these vines, cut crosswise and all thrown into a large container. Rain water or brook water is added to this until the receptacle is nearly full. Rain water is used principally because well water would be so cold that fermentation in the pulp would not commence with sufficient vigor. The contents are stirred every three or four hours for fifteen hours, then fermentation will have separated the pulp from the seed to a certain extent. The pulp is then skimmed off the top, after which more water is added and the remaining contents of the receptacle are thoroughly stirred and again allowed to settle. After several stirrings, skimmings and settlings, the contents of the barrel are poured out and the seed recovered. The water is pressed from it, and it is then spread in some dry and convenient place where it is turned two or three times a day for the first week, and once a day for a couple of weeks. After this it will be ready to bag-up and hang in a convenient place free from vermin.

Through this method of seed selection the weak and unproductive individuals have been eliminated, and the seed and young plants represent a percentage of vigor and productivity. This has led to an increase in the yield among the foremost growers of about 100 bushels per acre.

Looking after a field of canning tomatoes is no easy task, and if the grower goes about it in an indifferent manner and depends upon any kind of plants which he is able to procure, the probabilities are that he will be playing a losing game, but by securing plants that have been transplanted at least once, hardened off in the cold frame, and not subjected to any setbacks, he is making a good start on a profitable venture.

### Excepting Peaches, Prospects are Good in Niagara District.

Editor "The Farmer's Advocate":

It is now very evident that the peach crop in the Niagara District is practically a complete failure for this season. The very few trees that will bear only serve to accentuate the dismal barrenness of the other trees. Further than this it looks now as if a considerable number of the trees themselves will not survive, especially the older trees on the lighter and more porous soils.

Strawberries, raspberries, currants and gooseberries continue to appear in excellent condition, and I look for a good crop of these fruits under

favorable conditions from now until harvest time. Cherries are heavily loaded with blossom and should be a bumper crop. Plums, on the whole, will be only a fair crop. Early Japanese varieties of plums and Lombards are light, and the fancy varieties are no better than a medium crop. Pears are heavy, with the exception of Bartletts, which vary from poor to medium. Apples are looking exceedingly well, and promise a heavy crop. Grapes are still in the doubtful class, as I think they also have been hurt by the winter.

The weather for the past week, during the blossoming period, has been bright and warm and very favorable to pollination.  
Lincoln Co., Ont. W. R. DEWAR.

## POULTRY.

### Gapes in Chicks.

From the age of two or three weeks to a couple of months the young chicks are very liable to suffer from that pernicious pest known as gapes. This is due to the presence in the wind pipe or bronchial tubes of very thin, thread-like, reddish-colored worms which adhere to the inner lining of the tubes. The chicks usually manifest their presence by coughing, sneezing or gaping for breath. This trouble can often be obviated by running the young fowl on land that has not been ranged over by diseased birds of the previous year, and by spading or ploughing up the lot, after which it is given a thorough liming. When the young chicks are affected the worms should be removed in some way or other. Fumigation is often resorted to, but the old-time practice of putting several chicks into a closed barrel containing dry, air-slaked lime, and rolling it over and over is now discarded.

Amongst some of the treatments commonly practiced, the following are most successful: Some poultrymen strip a small feather down to a point, and after slightly moistening it in turpentine insert it into the wind pipe. Care should be taken that it does not enter the gullet instead of the wind pipe. After a time the chick will cough up the worm. Others enclose them in a tight box and fumigate with camphor or tobacco. Some feed a small quantity of kerosene in the water and some dissolve camphor gum in the water and give no other drink, thereby forcing them to consume the treated water. Only enough to slightly flavor the water is sufficient, for if any more is added they will positively refuse to drink it. Perhaps an older method than any of these is to make a loop from a strong horse hair and insert it into the wind pipe, pulling it out in a spiral manner; this often removes the source of the trouble.

A writer to the American Poultry World claims to have treated forty chicks in a short time by taking the bird in the left hand and

squeezing the wind pipe slightly from one end to the other, after this treatment the affected bird soon coughs up the worm.

### How Long Do You Starve Chickens?

After reading the suggestions as given by the Poultry Division of the Experimental Farm, Ottawa, in our issue of May 14th a reader called at our office to protest against the length of time which was recommended to elapse before chickens were fed any food after being hatched. According to the statement in that article when the chick is hatched it has a sufficient supply of nourishment within itself to last it several days and what it requires most is not feed but warmth and rest. Farther on in the article it was advised to allow the chickens to go until between the second and third day after hatching. Of course, we take it that if the chickens showed signs of hunger that they should be fed a little earlier. Our subscriber did not think it advisable to leave the chickens so long without feeding. He tested the matter this spring and left some of his chickens forty hours after being hatched before he gave them any food at all. He had a large percentage loss with these chickens and stated that before being fed they seemed to have grown weak and consequently died. He immediately consulted a well-known local poultryman who advised him to feed the chickens when they were twenty-four to thirty hours old and not leave them longer than thirty hours without feeding.

There is a good deal of loss with young chickens due to over-feeding too soon after hatching and we believe this is the case on the farm, more than where poultry keeping is carried on as a specialty. Very often the farm chickens are fed just as soon as hatched. We believe it is to guard against this that so much prominence is being given by poultrymen to the delay in feeding them.

A few years ago the experience of poultry keepers seemed to indicate that twenty-four hours was long enough to starve the young birds, but this has been increased and possibly the forty-eight to sixty hours which some recommend may be slightly too long a time to allow the youngsters to depend upon the food material obtained from the egg from which they hatched. The experience of readers of "The Farmer's Advocate" on this particular question is invited.

### Good Summer Eggs.

The problem in the poultry-house in the winter is to produce eggs at all, but during the summer months it is usually not very difficult to get eggs, but a good deal of care is necessary that these are marketed in the best possible condition. Nothing has hurt the egg trade more than placing upon the market a quality of eggs far below what it should have been. During the hot weather which is now near at hand every poultry owner who wishes to make a name for himself in the production and sale of good, fresh eggs should remove all male birds from the flock. This is far more important than most people realize. Hens often steal away their nests during the summer, or, in fact, the very high temperatures in the poultry-house may, in a short time, cause a fertile egg to commence incubation. With the male birds removed there is no danger from this cause.

Another point which should be more carefully watched than during the winter months is regular gathering of eggs. Where possible it is best to gather these at least twice a day, and under no circumstances permit broody hens to remain on the nests in the pens with the laying hens.

Eggs when gathered should be stamped with the date of laying, and marketed as quickly as possible. Egg-circle patrons understand well the value of this proceeding, and others not situated in a district where egg circles are in operation could profit by the experience of those who have marketed through the circles. It is no more difficult for an ordinary individual to gather the eggs frequently and market them regularly than it is for those connected with the egg circles.

Many neglect during the summer months to keep the nests clean, and this is a cause of bad eggs and vermin in the poultry-house. From time to time all nests should be cleaned and fresh straw put in. This will mean a better class of eggs, cleaner eggs, and fresher eggs. A few of these small points will mean two or three cents a dozen on the product at marketing time, which, on the year's output, it is no small consideration.



Good Prospects for Apples.



### Away With the Male Birds.

The poultry division of the Live Stock Branch recently sent out a small leaflet which contains information upon which all poultrymen should act. We reproduce it herewith:-

"Eggs which have been fertilized constitute the greatest proportion of the inferior stock which, when examined, proves unfit for food. It is not necessary that these shall have remained for a time under a broody hen, a temperature of seventy degrees being, in itself, sufficient to cause the germ to commence to grow. If the heat is constant the development of the chick will continue, but if it ceases or is intermittent, putrefaction at once sets in and the egg becomes bad. On the other hand infertile eggs which are free from the active germ cell, do not, under ordinary conditions, deteriorate seriously.

Few farmers seem to realize these facts, and consequently very few make any effort to insure infertility. The impression prevails among many, that the presence of the male bird in the flock is essential to the production of a maximum number of eggs. This assumption has been proven, time and time again, to be absolutely without foundation.

Farmers and others selling eggs for market are recommended to kill off or dispose of the male birds after breeding season. As a result of their remaining with the flock after June 1st, Canadian farmers lose each year at least a million dollars, through the presence of partially incubated eggs in the produce which is marketed. The fact that the best trade in many cities in Canada now offers the premium of from one to five cents per dozen, for non-fertilized eggs, suggests an additional financial consideration which but few can afford to overlook."

## FARM BULLETIN.

### Progress on Prince Edward Island.

Editor "The Farmer's Advocate":

The thirteenth of May and no work in preparation for the crop done yet. The weather is still cold and though some of the fields are firming up a little, there is no land fit for cultivation. The writer only remembers one later season. In 1888 there was no working the land until May 20th. Still, that year we had a good growing season, and splendid crops with harvest not too late. The snowfall here was heavy in the winter and continued through most of April, and as there was very little frost in the ground, about all the moisture from the melting snow, as well as the rain, has been retained in the soil. We are hopeful, therefore, though the crop will be late sown, that growth will be rapid, and a full crop will be reaped. Farmers are hoping to get on the land in a few days. Fodder is getting scarce with many of the poorer farmers, and all stock is still on full feed in the stables, even the sheep cannot get their living on the fields.

The dairymen are preparing for the opening of the factory season, on June 1st, with a hopeful feeling. Quite a few of the cheese factories in the eastern part of the Island have closed, and are shipping their cream by rail to a central creamery, hoping thus to reduce the expense of manufacturing. The tendency of our dairy business is strongly toward butter making instead of cheese, and the indications are that in a few years our dairy export will be mainly butter. Best beef cattle for June delivery are selling for \$8.00 per hundredweight.

These high prices are encouraging farmers to pay more attention to the beef breeds, and there are more and more enquiries for the Shorthorn. Since the organization of Farmers' Institutes some twelve or fourteen years ago very much more interest is taken in cattle breeding. The Institutes have been the means of distributing a very large number of pure-bred sires of all breeds among the farmers, and though the scrub bull is still to a certain extent in evidence most all of our stockmen, especially all who belong to the Institutes, insist on using only the best type of pure-breds in their herds. Co-operation through the Institutes has been of great benefit along all lines of stock breeding, and has been a great education to our farmers in all branches of production.

The Womens' Institutes lately organized are supplementing the work by doing for the home many things that will make life on the farm more attractive and enjoyable. We notice on the programmes of these meetings very many matters dealt with, such as short cuts in household work, beautifying the surroundings of the farm home by having artistically laid-off lawns and flower gardens—another commendable line of effort they are engaged in is beautifying our too-much-neglected country school grounds and striving to make them a thing of beauty instead of an eyesore to residents and travellers alike. They are also in many cases helping to better

furnish the school-houses by placing in them properly-covered, sanitary drinking fountains.

When the ladies take these matters up we look with confidence for great improvement. Once the co-operative spirit gets hold of all the people things will then go along from good to better. Another co-operative matter that has spread over the Island and has to do with the improvement of one of our biggest articles of export is the egg circle. In the organization of these circles a good deal of opposition has been met with. The big egg shippers, and the country merchants see some trade slipping away from them, and, being more particular to retain than to reform it, are putting up all the fight they can against the co-operative handling of the eggs by farmers. They even go the length of paying a little more than eggs are worth in the markets in hopes that they may injure or kill off this movement. But most of the egg producers can see through their little game, and will stick to the circles and be satisfied with the market value of their produce rather than gain a trifle more and lose immensely more if the egg trust gets its own way. The co-operative spirit seems to have got hold of our people—men and women—with a grip that is going to hold. But whatever happens the circles have already reformed our egg trade, which is proved by their opponents adopting circle methods, instead of taking good and bad eggs from the producers at a flat rate. Farmers should stand by one another in all co-operative movements, and not be deceived by those whose interest it is to exploit them and their business for private gain. We look for a great expansion of our egg and poultry business as a result of this last co-operative movement.

P. E. I.

W. S.

### Ontario Crop Prospects.

The following statement regarding crop conditions in the Province, based on the returns of correspondents sent in, on or about the 15th of May, has been issued by the Ontario Department of Agriculture.

In the April crop bulletin, which was based on statements of correspondents reporting on the first day of that month, fall wheat prospects were said to be encouraging, as the crop had come through the winter practically unscathed. April, however, proved to be a most trying time for the young wheat, and it suffered severely from the formation of ice and from "heaving." The area plowed up this spring will not be relatively great, as farmers have preferred to drill barley or other spring grains in the bare spots rather than lose the grass that was seeded down with the fall wheat. Some correspondents report a most promising outlook on high and well-drained land, but the bulk of the fields are more or less spotted, or patched in with other grain. Very little injury from insects has been reported, odd mention only being made of the Hessian fly.

As in the case of fall wheat, clover fields are very variable in appearance. This crop also suffered more or less from the testing weather of the early part of April, which caused considerable heaving, especially in low and poorly drained situations, although some correspondents report the fields as looking well on rolling and well-drained lands. Two-year-old clover is much poorer than that in the new fields, as the older meadows were greatly tried by last summer's drought. Some correspondents also point out that many pastures were rather too closely cropped last fall for best results.

Alfalfa has not come through the winter quite so well as clover. There is a strong desire expressed by correspondents for a hardier variety of alfalfa suitable for the climate of this Province, and Prof. C. A. Zavitz, of the Ontario Agricultural College, has recently expressed himself as being hopeful that he will be able to satisfactorily meet this need very soon.

Correspondents differ greatly as to the present stage of vegetation, some stating that the season is well forward, while others claim that it is a week or more late, the first two weeks of May having been too cold and wet for much growth. Cattle and sheep were reported to be on the grass at dates ranging from the 1st to the 11th of May. When correspondents wrote vegetation in the fields appeared to be more forward relatively than in the case of orchards and forests.

The low and sustained dips in the temperature at times during the winter caused much anxiety among growers of peaches and other tender fruits, and the results have shown that they had reason for their fears. In nearly every peach section, the fruit buds have been more or less frozen back. In some cases in the Niagara district the loss will be almost complete, while in Essex, Kent and Lambton the injury has been lighter. One correspondent points out the fact that early varieties have escaped better than the later sorts. However, there has been comparatively no root

freezing, and our great peach industry at the most is likely to suffer but one season's loss in bearing. On the other hand apples, pears, cherries and plums are very promising as to blossom, but the presence of the San-Jose scale and the oyster-shell bark louse is threatening many orchards. The tent caterpillar is also much in evidence in York and other counties to the east. Small fruits have come through the winter with comparatively little injury, and present prospects are good. Correspondents speak approvingly of the increase of the practice of spraying fruit trees, but complain of the lack of competent farm help in orchard work.

During the past seven years the farmers of Ontario have learned to make their fodder supplies go farther than formerly. Hay and grain are now fed sparingly, the coarser fodders being much more largely utilized. The quantity of hay on hand in most quarters is said to be sufficient for emergencies; but while individually some report a surplus others have had to buy in order to carry live stock over until they could be put on the grass. All classes of grains are being more and more fed on the farm, although it is likely that a decided rise in prices would bring out a fair supply of wheat, barley and oats. The rather backward spring, however, has had a tendency to decrease any surplus of either hay or grain.

The soil was in a splendid condition for a seed bed in the latter part of April, even heavy clays having been well pulverized by the severe frosts which occurred during the winter. Farmers who got on the land to sow early were well advanced—and some through—when returns were made; but cold rains early in May prevented those who had been tardy from getting to work for a week, and in such cases seeding was more or less unfinished, while the soil was in a much stiffer condition than at the opening of the season. The general tone of the reports is very satisfactory, except in the case of some from the low-lying townships of Kent and adjoining counties.

### Peaches Promise Well Around Leamington.

Announcements regarding the outlook for fruit in Canada have been encouraging this spring with the exception of the promise for a crop of peaches. The tenor of most reports has been that there would be no peaches at all and it is now generally conceded that the Niagara District, where the main bulk is produced, will have an off year. Lambton County will have few to offer and there only remains the sections in proximity to Leamington and Kingsville in Essex County, Ontario, that figure appreciably in the production of this kind of fruit in Ontario. A representative of "The Farmer's Advocate" was pleasantly surprised on May 21st, when visiting those districts to find a good show of bloom and in almost every blossom a peach in the early stages of development but large and healthy enough to guarantee a fruit. A few young trees suffered during the cold winter weather, but in most orchards the trees are unharmed and the older trees give promise of a good crop of peaches. The Leamington District has suffered in the past when Niagara was spared but the fates have been favorable to the former district this year and amends will be made for previous visitations if nothing interferes between now and the harvesting season. What factors have contributed to this condition would be hard to explain but the fact remains that Leamington growers are very optimistic regarding the crop. There appears to be little difference in the way and extent to which the different varieties have withstood the cold. The desirable commercial varieties seem to have been as hardy, generally speaking, as the white-flesh and less desirable yellow-flesh kinds. There is a difference in the hardness of the highly commercial kinds themselves, but taking the peach crop generally one cannot discriminate between the good and the bad varieties as to how they have wintered.

A bee-keepers' field day will be held in the apiary of John Newton, near Thamesford, in Nissouri township, Middlesex County, Ontario, on Thursday, June 4, at 1.30 p.m. A qualified apiary instructor sent out by the Department of Agriculture will show how to examine hives for disease and will put a colony through the treatment for cure, and also render old combs into commercial bees-wax, and other manipulations will be demonstrated, such as finding the queen, removing bees from supers, operations to prevent swarming, etc. A live discussion in which local bee-keepers will take part is looked forward to. Those interested in bees should make it a point to attend.



### Corn Growing now a Greater Industry.

Corn is king in Essex County, Ontario, at the present time. On the Essex farms it is being placed in the ground while car load after car load is being shipped away to plant the corn fields in more northern and eastern counties. The seed-corn-growing industry has assumed gigantic proportions in the south-western counties of Ontario, and it would be a very conservative estimate to say that over 200,000 bushels this year sold for seed from that district. When we remember that a bushel of corn will plant from four to six acres of land it will then dawn upon the reader what part this section of Ontario plays in producing seed corn for Canada's corn-growing districts. Not only is the southern part of Ontario devoted to the growth of corn, but this seed is now sent into Quebec, and the Maritime Provinces, and into Manitoba and Saskatchewan in the West, while New York State is a good buyer, and Michigan takes a small quantity. The old-time practice of importing seed corn from the Southern States has been reversed, and now we find the northern-grown seed being shipped south across the line.

One of the men prominent in the shipping of seed corn is J. O. Duke, Essex County, who started into the winter's business last fall with 110,000 bushels of seed corn, and from the 15th of March to the 15th of May averaged a car load a day in shipments. These car loads would average about 400 bushels each, and represent to a small extent the proportions of the industry. Mr. Duke has always been enthusiastic about the selection and growth of corn, and the success of the Ontario Corn Growers' Association is largely attributable to his efforts in its initial stages of development. Mr. Duke has decided views regarding the dimensions and characteristics of an ideal cob of corn. In expressing his views to a representative of "The Farmer's Advocate" he produced a cob of corn which he had selected as a typical ear of the White Cap Yellow Dent variety. This ear was 8½ inches long and 6½ inches in circumference around the centre of the cob. This might be called a medium-sized ear by many, but when one comes to consider that there are 10,734 stalks of corn on the acre when planted 42 inches apart with three stalks in the hill, it will be seen that the crop may easily be in the vicinity of 175 bushels of cob corn, which has more than doubled the average yield in the Province of Ontario. Where large cobs are produced on one stalk in the hill, small ones or nubbins are often noticeable on the other stalks

of the same hill. These nubbins are not salable for seed and have not the same value as the medium-sized cob, consequently by selecting a cob of medium proportions with good vitality, the possibilities of increasing this crop are almost unlimited.

Prominent among the growers of seed corn and one who makes a study of the industry in its minutest detail is J. H. Coatsworth, of Essex County. Years ago when Reid's Yellow Dent was being grown with only moderate success, on account of its lateness of maturity, Mr. Coatsworth set out to retain the type of Reid's Yellow Dent and yet increase its early maturing qualities. This he has done, but the type has not been altogether retained, for the original number of rows ranging from 20 to 22 has been reduced to about 16, and this appears sufficient for the length of the growing season which Essex enjoys. The deep kernel and strong vitality of Reid's Yellow Dent when matured have been retained in this selection, which outsiders have named "Coatsworth's Hybrid." The originator of this strain devotes considerable time to selection, and when the Seed Branch at Ottawa this spring was asked to make a germination test of his corn they returned a report announcing 100 per cent. germination. This vitality in the seed and the decreased period required for maturity has fully repaid Mr. Coatsworth for his years of selection and care.

Where the land is tile drained Mr. Coatsworth is in favor of fall ploughing for corn, but where artificial drainage is absent he finds it advantageous to plough in the spring and work the land thoroughly. Manure at the rate of about 12 loads per acre is applied either in the fall or in the spring, and the corn is planted at the usual distance of 3½ feet apart in hills. After the corn has been in the ground about three days a rigid-tooth harrow is run lengthwise of the rows to loosen up the crust and establish a surface mulch. The crop receives no hand hoeing, but Mr. Coatsworth endeavors to cultivate six times, three times in each direction.

Although the planter is set for three kernels to the hill more are sometimes dropped, and where this condition exists the extra plants are pulled out, leaving only three to the hill. When moisture conditions are right the seed is covered about one and one-half inches deep, but this would be increased in a time of dryness and drought.

Oats usually follow the corn, and the land is seeded down to clover. This is often pastured and followed again with corn, making a short rotation in which the clover appears frequently, and which Mr. Coatsworth considers sufficient to

eliminate the necessity of artificial fertilizers. One hundred bushels of corn per acre is considered a good crop on the Coatsworth farm, but this is not always obtained, neither is it the maximum yield.

### International Good Roads Congress

Last week there was held in Montreal the first International Good Roads Congress, at which men interested in the good-roads movement gathered in large numbers. From reports, however, it would seem that a greater number of those present were more interested in good roads for automobile traffic than good roads for farmers. However, the Deputy Minister of Roads for Quebec made it plain in a short address that the farmers must be satisfied before very much could be done in the way of improving highways. Most of the addresses were given by prominent men, many of whom endeavored to show what automobile organizations had done towards highway improvement.

The committee appointed to look into the matter of a permanent organization brought in a report at the last session recommending that this organization be permanent, and named the officers who were elected as follows: Hon. Pres., U. H. Dandurand; President, W. A. MacLean, Toronto; First Vice-Pres., D. Michaud, Deputy Minister of Roads for Quebec; Second Vice-Pres., O. Hezzelwood, President of the Canadian Automobile Federation; Secretary-Treasurer, G. A. McNamee. The Directors elected were fairly well representative of the Dominion from British Columbia through the Western Provinces down to Quebec in the East. Some of the speakers brought out the fact that automobilists should contribute more than they do to the upkeep of the roads. The decision as to where the Congress will convene next year was left to the officers and Board of Directors. Toronto, Winnipeg, Ottawa and Quebec were all anxious to get the Congress.

At an auction sale recently held at Matsqui, British Columbia, twenty-eight head of cows, mostly grade Holsteins from four to six years of age with a few choice Jersey and Shorthorn grades averaged \$172 each; eighteen averaging \$201 each, and six averaging \$237 each. Wm. Atkinson of Chilliwack was auctioneer, and the cattle belonged to M. E. Alexander of Matsqui.

Beehive, the unbeaten three-year-old colt, the property of Harry Giddings, Oakville, and the favorite in the race, won the King's Plate, with Dark Rosaleen and Sea Lord second and third for the Seagram stable.

## Toronto, Montreal, Buffalo, and Other Leading Markets.

### Toronto.

#### REVIEW OF LAST WEEK'S MARKETS

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

	City.	Union.	Total.
Cars .....	8	351	359
Cattle .....	74	4,495	4,569
Hogs .....	115	8,696	8,811
Sheep .....	82	719	801
Calves .....	67	1,388	1,455
Horses .....	—	71	71

The total receipts of live stock at the two markets for the corresponding week of 1913 were:

	City.	Union.	Total.
Cars .....	27	368	395
Cattle .....	547	5,283	5,830
Hogs .....	511	5,995	6,506
Sheep .....	409	1,450	1,859
Calves .....	134	557	691
Horses .....	—	50	50

The combined receipts of live stock at the two markets for the past week show a decrease of 36 car loads, 1,261 cattle, 1,058 sheep and lambs; but an increase of 2,305 hogs, 764 calves, and 21 horses, compared with the corresponding week of 1913.

The supply of cattle for the past week was liberal, the quality of which was generally good. Trade was active on each market day, nearly all of the offerings being cleaned up in all the different classes. Since many of the unemployed have found work, the demand for dressed meats has increased materially, and the several abattoirs and wholesale butchers have been buying and killing more cattle. As regards prices for the past week, they were almost a repetition of the previous week. The same outside buyers of fat cattle were again here, and bought about the same number. The demand for feeders and stockers was as large, many buyers, mostly farmers from the States

and Western Ontario, taking all offerings in these classes, at a little higher values, as there were some 750-lb. as well as 900-lb. steers, taken at \$7.80 per cwt., which is higher than was paid for some cattle bought to kill. The demand for feeding cattle has had the effect of steadying and strengthening the market for butchers' cattle. The highest price paid for straight loads of fat cattle of choice quality, was from \$8.30 to \$8.50, but not more than four or five loads reached those prices. A few odd cattle reached \$8.60 to \$8.75, but only about half a dozen, four fancy steers selling at \$8.75, and two fancy heifers at \$8.60. The bulk of the choice cattle sold between \$8 and \$8.25. Milkers and springers were scarce all week, not enough to fill orders received by dealers, and prices were very firm, and on the average higher, ranging from \$50 to \$100, and occasionally \$125 was paid. Receipts of sheep, lambs and calves, were larger, but prices did not recede, and, in fact, they were stronger when quality is taken into consideration. Hogs at the beginning of the week sold at lower prices than for several months, but before the close the market again became firmer.

Butchers.—Choice steers, "loads," at \$8 to \$8.30; good to choice, at \$7.75 to \$8; medium, at \$7.50 to \$7.75; common, at \$7 to \$7.40, but few sold at these latter prices; choice cows, \$7 to \$7.50; good cows, \$6.50 to \$6.75; common cows, at \$5 to \$5.75; canners and cutters, at \$1.50 to \$1.75; choice bulls, \$7.25 to \$7.75; good bulls, \$6.50 to \$7. Stockers and Feeders.—The market was firmer, as the demand was much greater than the supply. Steers, 750 and 900 lbs. each, sold at the same price, \$7.80, and having seen them, we could not call them short-keep feeders. Steers, culls we would style them, 500 lbs. each, sold as stockers, at \$6.75; these prices it will be seen are out of all proportion with the fat-cattle prices given above.

Veal Calves.—The receipts were larger,

but prices were quite as firm, if not firmer, than for the previous week, as the quality of the bulk of the calves on sale was only medium to good. Choice calves were scarce, at \$9.50 to \$10.50; good calves, \$8.50 to \$9; medium, \$7 to \$8.50, and common, \$6.75 to \$7; bobs sold at \$3.50 to \$6 each.

Sheep and Lambs.—Receipts were larger and prices as firm as ever, especially for spring lambs and light ewes, and choice yearling lambs. Light ewes, \$6.75 to \$7.75; rams, \$5.75 to \$6.75; yearling lambs, \$8.50 to \$9.50 shorn; American yearling wethers, shorn, \$9.50; spring lambs sold at \$5 to \$10 each, the bulk going at \$7 to \$10 each.

Hogs.—On Monday hogs sold at \$7.90 f. o. b.; \$8.25 fed and watered, and \$8.50 weighed off cars. At the close of the week selects sold at \$9 to \$9.05 f. o. b. cars; \$8.40 fed and watered, and \$8.65 weighed off cars.

#### TORONTO HORSE MARKET.

Trade at the Union Horse Exchange was reported to be a little better last week than usual, about 100 horses being sold. The bulk of these went to Quebec and Nova Scotia, and a few to the local city trade. Prices were reported as follows: Drafters, \$200 to \$250; general-purpose, \$175 to \$225; express horses, \$150 to \$200; drivers, \$125 to \$200; serviceably sound, \$35 to \$75.

#### BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, \$1.03 to \$1.04, outside; Manitoba, No. 1 northern, \$1. track, bay points; No. 2 northern, 98½c.; more at Goderich.

Oats.—Ontario, No. 2 white, 39c. to 40c., outside; 41½c. to 42c., track, Toronto; Manitoba oats, No. 2, 42½c.; No. 3, 41c., lake ports.

Rye.—Outside, 63c. to 64c.  
Peas.—No. 2, \$1 to \$1.10, outside.  
Corn.—American, No. 3 yellow, 75½c., all rail, track, Port Colborne.

Barley.—For malting, 55c. to 56c., outside.

Buckwheat.—No. 2, 83c. to 85c., outside.

Flour.—Ontario, 90-per-cent. winter-wheat patents, \$3.80 to \$3.85, bulk, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.60; second patents, \$5.10; in cotton, 10c. more; strong bakers', \$4.90, in jute.

#### HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$14.50 to \$15.50; No. 2, \$12.50 to \$13.50 per ton.

Straw.—Baled, car lots, track, Toronto, \$8.50 to \$9.

Bran.—Manitoba, \$25, in bags, track, Toronto; shorts, \$26; Ontario bran, \$24, in bags; shorts, \$25; middlings, \$28.

#### TORONTO SEED MARKET.

The following are the prices wholesale seed merchants are quoting to the trade: Red clover, No. 1, \$19 to \$21 per cwt.; red clover, No. 2, \$17.50 to \$18.50 per cwt.; alsike, No. 1, \$21 per cwt.; alsike, No. 2, \$17.50 to \$18.50; timothy, No. 1, \$8.50 to \$9.50 per cwt.; timothy, No. 2, \$7.25 to \$7.50 per cwt.; alfalfa, No. 1, \$14 to \$15 per cwt.; alfalfa, No. 2, \$13 to \$13.50 per cwt.

#### COUNTRY PRODUCE.

Butter.—Receipts have been liberal, causing prices to be easier. Creamery pound rolls, 24c. to 26c.; creamery solids, 24c.; separator dairy, 23c. to 24c.; more lots, 20c.

Eggs.—The market for new-laid eggs was easy, at 23c. to 24c., by the case.

Honey.—Extracted, 9c. per lb.; combs, \$2.50 to \$3 per dozen sections.

Beans.—Imported, hand-picked, \$2.40; Canadians, hand-picked, \$2.40; primes, \$2.25 per bushel.

Potatoes.—Car lots of Ontarios, per bag, track, Toronto, 95c. to \$1; New Brunswick Delawares, \$1.10 to \$1.15 per bag, track, Toronto.



**THE ROYAL BANK OF CANADA**

Capital Authorized - \$ 25,000,000  
 Capital Paid Up - 11,560,000  
 Reserve Funds - 13,000,000  
 Total Assets - 180,000,000

HEAD OFFICE: MONTREAL

Branches throughout every Province of the Dominion of Canada.

Accounts of Farmers Invited.  
 Sale Notes Collected.

Savings Department at all Branches.

Poultry.—Cold storage is now being used, and prices are quoted as follows: Turkeys, 21c. to 25c. per lb.; geese, per lb., 15c. to 15c.; ducks, per lb., 16c. to 20c.; chickens, per lb., 17c. to 23c.; hens, per lb., 14c. to 17c.

**HIDES AND SKINS.**

City hides, No. 1 inspected steers and cows, 14c.; No. 2, 13c.; city butcher hides, flat 14c.; country hides, cured, 15c. to 16c.; green, 12c. to 12c.; lamb skins and pelts, 35c. to 50c.; calf skins, 16c.; horse hair, per lb., 37c. to 39c.; horse hides, No. 1, \$2.50 to \$4.50; tallow, No. 1, per lb., 5c. to 7c.

**FRUITS AND VEGETABLES.**

Fruits and vegetables, the bulk of which is of American production, sold as follows: Cherries, \$3 to \$3.50 per case; pine apples, \$3 per case; wax beans, \$3.50 per hamper; green beans, \$3 per hamper; cucumbers, \$2.50 per hamper; new beets, \$1.75 per hamper; new carrots, \$2 per hamper; tomatoes, per case, \$3 to \$4; old turnips, 90c. per bag; parsnips, \$1.50 per bag; Egyptian onions, 112-lb. sack, \$5.25; Bermuda onions, 50-lb. case, \$2.25; radishes, per hamper, \$1.75; spinach, per hamper, 90c.; asparagus, 75c. per dozen bunches; rhubarb, 25c. per dozen; strawberries, 17c. per quart, by the case.

**Montreal.**

Live Stock.—Trade in the cattle market continued quiet last week, because of the fact that quite a little beef had been purchased outside of the city and brought in from the West. Supplies were light and demand limited, and for the most part prices were fairly firm. Choice steers sold up to 8c. per lb., ranging from 8c. up; fine sold at 8c.; good at 7c. to 8c.; medium from 6c. to 7c., and common down to 5c. per lb. Choice butchers' cows sold down to 7c. per lb., and lower grades down to 5c. Bulls ranged from 6c. to 8c. per lb. Spring lambs were in very good demand, and the quality all that can be desired. Prices ranged from \$4 to \$8 each, according to size. Yearling lambs ranged from 8c. to 8c. per lb. Calves sold at \$3 to \$6 for ordinary, and up to \$10 for the best. The demand for live hogs was moderately active, but the range of prices was lower. Ontario hogs sold at 9c., and Manitoba at 8c. to a fraction higher, weighed off cars.

Horses.—Buying has fallen off, and some think that the outlook for the hay crop is partly responsible. Horses weighing from 1,500 to 1,700 lbs., sold at \$275 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$275 each; broken-down, old animals, \$75 to \$127, and choicest saddle and carriage animals, \$350 to \$400 each.

Poultry.—Prices continued unchanged. Turkeys, 22c. to 24c. per lb.; ducks, 16c. to 18c.; chickens, 19c. to 21c.; fowl, 16c. to 18c., and geese, 14c. to 16c.

Dressed Hogs.—There was practically no change in the market during last week. Abattoir-dressed, fresh-killed hogs, sold at 12c. to 13c. per lb.

Potatoes.—Prices of potatoes continue to advance week by week, owing to light offerings. Green Mountains, in car lots, were quoted at \$1.20 to \$1.25 per bag of 90 lbs., while Quebec stock was quoted at \$1 to \$1.05. In a smaller way, prices ranged from 15c. to 20c. higher.

Honey and Syrup.—Maple syrup was 60c. to 65c. in small tins, and up to 85c. for 11-lb. tins. Sugar was 9c. to 11c. per lb. White clover comb honey, 14c. to 15c. per lb.; extracted, 10c. to 11c.; dark comb, 12c. to 13c., and strained, 6c. to 8c. per lb.

Eggs.—Demand was very active, and the market held firmer. Quotations continued firm, at 22c. to 23c. for wholesale lots of straight-gathered eggs, and 26c. for single cases of selected stock, with No. 1 stock at 23c., and No. 2 at 21c. to 21c.

Butter.—Drought has affected the quality of the grass and the make of butter, and prices were firm. Choice creamery was 23c. to 23c. per lb., while next grades were about 1c. below these prices, and seconds 1c. below. Manitoba dairy was 17c. to 18c., and Ontarios, 19c. to 20c.

Cheese.—The market for cheese was fairly steady. Western colored was 12c. to 12c. per lb., and white, 12c. to 12c. Eastern cheese sold at 11c. to 12c. per lb.

Grain.—The market for oats was easier last week, and prices declined another 1c. No. 2 Western Canada oats were quoted at 43c. to 44c. per bushel, ex store, in car lots, and No. 3 at 42c., and No. 2 fed at 41c.

Flour.—Manitoba first - patent flour, \$5.60 per barrel, in bags; patents, \$5.10, and strong bakers', \$4.90. Ontario winter-wheat flour was firmer, at \$5.25 to \$5.50 for patents, and \$4.70 to \$4.90 per barrel for straight rollers, in wood.

Millfeed.—Millfeed prices were quite firm. Bran sold at \$23 per ton, and shorts at \$25 in bags, while middlings were \$28 including bags. Mouille was \$30 to \$32 per ton for pure, and \$28 to \$29 for mixed.

Hay.—Lack of rain has brought out predictions that the price of hay will be very high unless a change comes shortly. No. 1 pressed hay, car lots, Montreal, track, \$16 to \$16.50 per ton, while No. 2 extra good was \$15 to \$15.50, and No. 2, \$14 to \$14.50.

Seeds.—Demand was steady.— Prices were: Timothy, \$10 to \$11.50 per 100 lbs., Montreal; red clover, \$20 to \$24 per 100 lbs., and alsike, \$20 to \$24 per 100 lbs.

Hides.—Beef hides were 13c., 14c. and 15c., for Nos. 3, 2 and 1, respectively; calf skins were 16c. and 18c. for Nos. 2 and 1, and sheep skins were \$1.35 to \$1.40 each, and lamb skins 15c. each, with horse hides ranging from \$1.75 for No. 2, to \$2.50 each for No. 1. Tallow sold at 1c. to 3c. for rough, and 5c. to 6c. for rendered.

**Buffalo.**

Lower cattle market the past week, shipping steers going off from 15c. to 25c., some plain and not well-finished Canadian weighty steers showing the full decline. There were 43 cars of Canadians offered, mainly shipping kinds of steers, but including butchering, and some stock and feeding cattle. The total Monday supply was 4,625 head, and with Chicago 21,000 and a bad trade on weighty steers, together with the fact that the big killers have been buying liberally of late distillery cattle in the country, the effect produced a very bad trade. Top weighty steers ranged from \$8.90 to \$9, Canadians showing a general range of from \$8.10 to \$8.65. All of the eastern order buyers were in the deal, but realizing that there were ample numbers to go around, were in no hurry to fill their orders. Killers of weighty steers now are protesting against the heavy fill of water steers are taking on, and they are showing their disapproval by getting in the buying late in the session at western points, maintaining that they desire to give cattle time to "shrink out," as nine-cent. water by the ton proves very expensive. In the handy butchering cattle line here, trade was not so bad, the decline in this division figuring from around a dime to fifteen cents. Best handy steers sold on a range of from \$8.35 to \$8.50. A single yearling heifer brought \$9. A load of short-twins, running to the yearling order, steers, averaging above a thousand pounds, sold at \$8.75. A bunch of weighty triple steers made \$9.50. Light, fat heifer stuff, and fat cows, sold at about steady prices, demand being good for both kinds. Stock and feeding cattle continue to bring high prices, ap-

parently out of line with finished cattle. Monday, tippy, fleshy feeders, sold up to \$8.10 to \$8.15, and \$7.80 to \$7.85 took some lightish kinds of stockers. Very little in the light heifer line running below \$6.25. Demand strong for all grades of feeding cattle. Bulls sold steady, but this is the season when big, heavy ones, are apt to take a slide at any time. Milker and springer trade has been the same for the past few weeks, large, good milk-producing kinds being ready sale. Sellers are advising shippers to keep springers on dry feed at least ten days before shipment, to prevent staggers, which grass and hot weather produces often. As the weather becomes warmer, handier cattle get more popular. Lighter cuts are demanded. However, sellers think that there will be demand right through the summer for some prime, weighty cattle, but not very many, as the big killers prefer the handier kinds during the summer months. Yearlings are selling high, and will no doubt continue to bring big money. Light, good quality and well-finished heifers are fetching strong prices, and will no doubt continue good sale. By reason of the demand for short-fed stock and feeding cattle, there is rather a scarcity of half-finished butchering grades, and these have shown some improvement of late. Receipts the past week were 5,175 head, as against 4,325 for the previous week, and 4,300 head for the corresponding week last year. Quotations follow:

Best 1,350- to 1,450-lb. steers, natives, \$8.75 to \$9; best 1,200- to 1,300-lb. steers, natives, \$8.40 to \$8.65; best 1,100- to 1,200-lb. steers, natives, \$8.10 to \$8.25; coarse and plain, weighty steers, natives, \$7.75 to \$8; fancy yearlings, baby beef, \$8.50 to \$9; medium to good, \$8 to \$8.25; best Canada steers, 1,350 to 1,450 lbs., \$8.40 to \$8.65; best Canada steers, 1,150 to 1,250 lbs., \$8.10 to \$8.25; choice handy steers, 900 to 1,100 lbs., \$8.25 to \$8.50; fair to good steers, 1,000 to 1,100 lbs., \$8 to \$8.15; extra good cows, \$7 to \$7.25; butcher cows, \$5.50 to \$6; best heifers, \$8.25 to \$8.50; medium butcher heifers, \$7.75 to \$8; stock heifers, \$6.25 to \$6.75; best feeding steers, dehornes, \$7.85 to \$8.10; best stock steers, \$7.50 to \$7.75; common, light, stock steers, \$6.75 to \$7; extra good bulls, \$7 to \$7.25; best milkers and springers, \$75 to \$90.

Hogs.—Receipts were liberal the past week, 84,880 head, as against 84,400 for the previous week, and a year ago 31,040. Monday, it was generally an \$8.85 market for best grades, pigs selling up to \$9, and the market for the next few days was a little stronger. Thursday packers paying up to \$9 for some of their kinds, with pigs and lights reaching \$9 to \$9.05. Friday's trade was 5c. to 10c. lower. Receipts included 33 decks of Canadian hogs the past week, and they sold from \$8.75 to \$8.90, four decks Friday moving at \$8.80.

Sheep and Lambs.—Heavy receipts Monday resulted in a break of a quarter on lambs, tops selling mostly at \$8.50 to \$8.60. Tuesday, prices ranged from \$8.50 down; Wednesday's market was steady; Thursday, top lambs reached \$8.65, and Friday, values dropped back to \$8.50, good tippy ones selling as low as \$8.25. Cull lambs the past week ranged from \$7.75 down. Sheep were scarce and firm all week. Top for ewes was \$6, and some handy wethers reached up to \$6.65 to \$6.75. Heavy sheep were dull, and undersold the handy ones by from 50c. to 75c. per hundred, some heavy wethers selling at \$6, while heavy ewes landed down to \$5 to \$5.25. Receipts the past week were 28,200 head, as against 25,600 for the previous week, and 28,200 a year ago.

Calves.—Values the middle part of the week reached as high as \$11 for tops, and before the week was over, buyers got tippy ones down to \$10 to \$10.25. Cull grades \$9 down, and feds \$5 to \$6.50. No Canadians here the past week. Receipts were 4,225 for the past week, 3,700 for the previous week, and 3,225 for the same week last year.

Butter.—Demand light; steady to easy. Creamery, prints, 28c.; creamery, extra, tubs, 27c.

Cheese.—Trade fair; steady. Fancy, old, per lb., 19c. to 20c.

Eggs.—Trade good; steady. White, fancy, 22c. to 23c.

**Chicago.**

Cattle.—Beeves, \$7.40 to \$9.30; Texas steers, \$7.10 to \$8.20; stockers and feeders, \$6.40 to \$8.55; cows and heifers, \$8.70 to \$8.75; calves, \$7.50 to \$10.50. Hogs.—Light, \$8.25 to \$8.50; mixed, \$8.20 to \$8.52; heavy, \$8.10 to \$8.50; rough, \$8.10 to \$8.20; pigs, \$7.50 to \$8.80; bulk of sales, \$8.40 to \$8.50. Sheep and Lambs.—Native, \$5.25 to \$6.15; yearlings, \$6.10 to \$7.15; lambs, native, \$6.25 to \$8.35; spring lambs, \$6.75 to \$9.60.

**Cheese Markets.**

Madoc, 11 18-16c.; Peterboro, 12 1-16c. and 12c.; Brockville, bid from 11c. to 12c. (on the "Street" 11c.); Vankleek Hill, white, 11c., and colored, 11c.; Kingston, colored, 11 15-16c., and white at 11c.

**Trade Topic.**

IMPORTANT ANNOUNCEMENT REGARDING CANADIAN PACIFIC CHANGE OF TIME, MAY 31st.

In connection with the coming change of time on the Canadian Pacific Railway, effective May 31st, many improvements in train service have been made, notable among these being the inauguration of solid de luxe trains, carrying compartment-library-observation car, electric-lighted standard sleepers, together with standard dining-car service between Montreal-Toronto-Detroit-Chicago, via Canadian Pacific and Michigan Central Railroad, commencing westbound May 31st, and eastbound June 1st.

These palatial trains will be known as No. 19 and No. 22, the former leaving Montreal 8.45 a. m., arriving Toronto 5.40 p. m.; leaving Toronto 6.10 p. m., arriving London 9.15 p. m.; leaving London 9.23 p. m., arriving Windsor 12.10 a. m.; leaving Windsor 12.25 a. m., arriving Detroit 11.85 p. m. (central time); leaving Detroit 11.55 p. m., arriving Chicago 7.45 a. m.

Train No. 22 will leave Chicago 9.30 a. m. (central time), arrive Detroit 3.55 p. m.; leave Detroit 5.05 p. m. (eastern time), arrive Windsor 5.15 p. m.; leave Windsor 5.25 p. m., arrive London 8.10 p. m.; leave London 8.18 p. m., arrive Toronto 11.20 p. m.; leave Toronto 11.40 p. m., arrive Montreal 9.00 a. m. These two trains will be operated through the Michigan Central tunnel between Windsor and Detroit.

The new Toronto-Winnipeg-Vancouver service should be greatly appreciated by the travelling public. No. 3, now leaving Toronto 10.20 p. m., will leave at 5.40 p. m., running through solid to Winnipeg and Vancouver, carrying only the highest-class equipment.

New train known as No. 7, will leave Toronto 10.50 p. m., running through solid to Winnipeg, carrying standard sleeping cars, dining car, tourist sleeping cars, colonist cars, first-class coaches, etc. Equally good service returning from the West. Particulars from Canadian Pacific ticket agents, or M. G. Murphy, District Passenger Agent, Toronto.

**Gossip.**

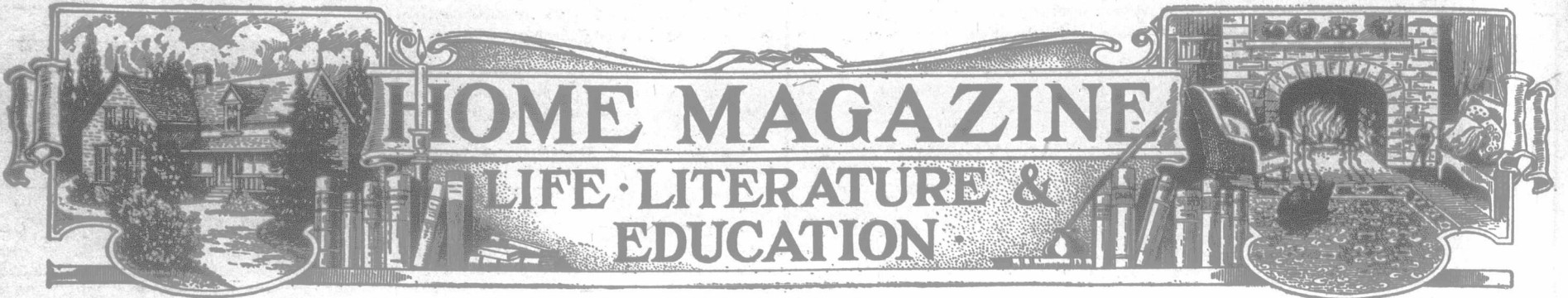
Attention is directed to the advertisement which appears in this issue of Holsteins and Clydesdales, the property of R. M. Holtby, Port Perry. The Clydesdale stallions are rising two years of age. This good stock should meet with ready sale.

The Ormstown Ayrshire Sale to be held at Ormstown, Quebec, on June 5th, is being contributed to from the leading Ayrshire herds throughout Canada. On June 3rd and 4th, the stock will be on exhibition and prospective buyers will have a good opportunity to make their selection. Write J. G. Bryson, Ormstown and get a catalogue of the event. The sale offers an opportunity to breeders that should not be neglected.

"Learn anything at school, Tommy?"  
 "Yes, grandpa. Teacher told us that shoes are made from all kinds of skins."  
 "What about banana skins?"  
 "Oh, they often make slippers."

As ye sew, so shall ye rip.





### Spring's Minstrels.

Little laughter of the grass,  
Clippings of soft, tiny hands,  
Fleeting forms that come and pass  
In relays of fairy bands,  
And the birds upon the wing  
Tell the secret; it is spring!

In the woods the Dryades  
Hear the sounding pipes of Pan,  
Leave their temples of the trees,  
And return to haunts of man;  
This, the song they sweetly sing:  
Ave! Ave!—It is spring!

Flare of sapphire in the sky,  
Haze of opals on the hills,  
Brown of brook that, rushing by,  
Calls to its companion rills;  
These, their notes of welcome bring:  
Hail! all hail!—for it is spring!

R. W. NORWOOD.

### Browsings Among the Books.

#### AM I STEALING?

[From "Lay Morals," a series of fragments by Robert Louis Stevenson, published after his death, by his wife.]

We have a sort of blindness which prevents us from seeing anything but sovereigns. If one man agrees to give another so many shillings for so many hours' work, and then wilfully gives him a certain proportion of the price in bad money and only the remainder in good, we can see with half an eye that this man is a thief. But if the other spends a certain proportion of the hours in smoking a pipe of tobacco, and a certain other proportion in looking at the sky, or the clock, or trying to recall an air, or in meditation on his own past adventures, and only the remainder in downright work such as he is paid to do, is he, because the theft is one of time and not of money,—is he any the less a thief? The one gave a bad shilling, the other an imperfect hour; but both broke the bargain, and each is a thief. In piece-work, which is what most of us do, the case is none the less plain for being even less material. If you forge a bad knife, you have wasted some of mankind's money for your trouble. Is there any man so blind who cannot see that this is theft? Again, if you carelessly cultivate a farm, you have been playing fast and loose with mankind's resources against hunger; there will be less bread in consequence, and for lack of that bread somebody will die next winter; a grim consideration. And you must not hope to shuffle out of blame because you got less money for your less quantity of bread; for although a theft be partly punished, it is none the less a theft for that. You took the farm against competition; there were others ready to shoulder the responsibility and be answerable for the tale of loaves; but it was you who took it. By the act you came under a tacit bargain with mankind to cultivate that farm with your best endeavor; you were under no superintendence, you were on parole; and you have broken your bargain, and to all who look closely, and yourself among the rest if you have moral eyesight, you are a thief. Or take the case of men of letters. Every piece of work which is not as good as you can make it, which you have palmed off imperfect, meagrely thought, niggardly in execution, upon mankind who is your paymaster on parole and in a sense your pupil, every hasty or slovenly or untrue performance, should rise up against you in the court of your own heart and condemn you for a thief. Have you a salary? If you trade with

your health, and so render yourself less capable for duty, and still touch and still greedily pocket the enrolment—what are you but a thief? Have you double accounts? Do you by any time-honored juggle, deceit, or ambiguous process, gain more from those who deal with you than if you were bargaining and dealing face to face in front of God?—What are you but a thief? Lastly, if you fill an office, or produce an article, which, in your heart of hearts, you think a delusion and a fraud upon mankind, and still draw your salary and go through the sham manoeuvres of this office, or still book your profits and keep on flooding the world with these injurious goods,—though you were old, and bald, and the first at church, and a baronet, what are you but a thief? These may seem hard words in an age when the spirit of honesty is so sparingly cultivated that all business is conducted upon lies and so-called customs of trade, that not a man bestows two thoughts on the utility or honorableness of his pursuit. I would say less if I thought less. But looking to my own reason and the right of things, I can only avow that I am a thief myself, and I passionately suspect my neighbors of the same guilt.

And yet all this time you (we) had the eighth commandment! and, what makes it richer, you would not have broken it for the world.

### Little Trips Among the Eminent.

#### Canadian History Series.

##### SIR HOVENDEN WALKER.

For many years following the events last recorded in these pages, the history of Canada is but a kaleidoscopic shifting of scenes of desultory fighting, the French inciting the Abenakis to wreak destruction among the towns of New England, the English, in turn, inciting the Five Nations to make raids upon French Canada,—with glimpses of the faces of the more eminent men of the time appearing fitfully in the background Vaudreuil (the most eminent French governor) and Ramesay, Subercase and M. de la Ronde Denys upon the one hand, Schuyler and Nicholson, Vetch and Dudley on the other. But those who would read the long series of harassing if minor catastrophes of the time, must seek it elsewhere, nowhere better than in Parkman's "Half Century of Conflict," in two volumes. Here but the more spectacular of those events and characters may be touched upon, and so we come to Sir Hovenden Walker and his colossal failure, eminent, indeed, through that failure.

During the reign of Queen Anne, Parkman tells us, there were fears abroad in England that the New England colonies, and particularly Massachusetts, were not properly submissive to the crown. England was in no mood to be patient to North American republicanism, and so, with the double object of impressing her own American subjects and of bringing the French posts on the St. Lawrence under conquest, armaments were prepared during 1709-10.

This, at least, was the interpretation of the situation that obtained among the French, and so in 1710 La Ronde Denys was dispatched to Boston to offer the colonists complete respite from French hostility if they would promise

to give no more aid to Old England in her designs on French Canada. Distrustful, however, of French motives, the emissary's vessel was seized and moored under the guns of the town, whence Denys himself was compelled to watch preparations then afoot for an onslaught upon Canada.

In the meantime, tired of the long and costly Continental War of which Marlborough had been the leading light, England was becoming ready to look to new fields for conquest. America presented the greenest of these fields, one, too, that promised gain for England, and so a Canadian expedition was planned and placed under command of Sir Hovenden Walker, and one "Jack Hill," brother of the Queen's favorite, Mrs. Masham.

On the 24th of June, 1711, the fleet reached Boston, somewhat to the consternation of the Bostonians, who were ordered to supply it with provisions for ten weeks. "When the troops were disembarked," says Parkman, "and the tents pitched, curious townspeople and staring rustics crossed to Noddle's Island, now East Boston, to gaze with wonder on a military pageant the like of which New England had never seen before." But there was little enthusiasm among the populace, who were by no means appeased by the overbearing demeanor of the newcomers. Nor were the British officers better pleased with the Puritanical Bostonians. You'll find in my Journal," wrote Colonel King, "what Difficulties we met with through the Misfortune that the Coloneys were not inform'd of our Coming two Months sooner, and through the Interest of ill Nature and Sowerness of these People, whose Hypocrisy and canting are unsupportable."

Nevertheless the Bostonians, through their Assembly, arose to the occasion. All business was suspended, bills of credit for £40,000 were issued to meet the needs of the expedition, warrants were sent out for impressing pilots and laborers, and provincial troops were raised and quartered upon the citizens. If sullenly, the citizens submitted.

On the 30th of July, after a grand review of the troops, the expedition set sail, nine ships of war, with about sixty storeships and other vessels, carrying a complement of nearly 12,000 men in all.

On the 18th of August the ships ran into the Bay of Gaspé, and two days later, while still above Anticosti a fog and the presence of breakers on every hand threw the sailors into confusion. There was not a pilot aboard any of the vessels, who could be trusted. Indeed, when at last the fog lifted it was discovered that eight transports, one storeship and a sloop had been dashed to pieces. "It was lamentable to hear the shrieks of the sinking, drowning, departing souls," wrote New England Commissary, Sheaf. Later it was learned that nearly 900 soldiers and sailors had been lost.

On the 25th Walker held a council of war, with "Jack Hill," and with the colonels and captains of the men-of-war. "Many a man of pleasure and fashion," remarks our historian, "when put to the proof has revealed the latent hero within him; but Hill was not one of them. Both he and Walker seemed to look for nothing but a pretext for retreat, and when manhood is conspicuously wanting in the leaders, a council of war is rarely disposed to supply it. The pilots, when examined, all professed themselves but poorly acquainted with the St. Lawrence, and the decision was finally made that it was impossible to go on to Quebec. "So discreditably a backing-

out from a great enterprise will hardly be found elsewhere in English annals."

In the face of a vigorous opposition from the brave Vetch, commander of Port Royal, now Annapolis Royal, the fleet turned back, nor does it appear that Walker and Hill ever reproached themselves for the gigantic fiasco. "Had we arrived safe at Quebec," wrote Walker in his Journal, "our provisions would have been reduced to a very small proportion, not exceeding eight or nine weeks at short allowance, so that between ten and twelve thousand men must have been left to perish with the extremity of cold and hunger." Terrible the cold which his imagination conjured up as possessing Quebec, for he writes further, "The ice in the river freezing to the bottom would have utterly destroyed and bilged the ships as much as if they had squeezed between rocks."

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In the meantime news of the retreat was sent to Nicholson who, with a force of about 2,300 men, Indians included, was marching by way of Lake Champlain to make a simultaneous attack on Montreal. The party had reached Wood Creek, at Lake Champlain when the messenger arrived. Nicholson in a paroxysm of rage tore off his wig and threw it on the ground, stamped upon it and cried, "Roguery! Treachery!" but nought remained for him to do but to march back to Albany.

Hearing of his retreat, though not the cause of it, the French forces at Montreal, which had been feverishly preparing for the onslaught of Nicholson, speedily repaired to Quebec which, as yet unaware of the catastrophe which had overtaken the English, was awaiting, under great excitement the coming of the fleet.

On the 15th of October two ships were despatched, making way up the river, and were believed to be the van of the squadron. Presently, however, alarm was turned to joy, for French colors were flying from the mast heads.

Wonderful, indeed, was the news which they brought. They had, they declared, found the wrecks of seven English ships along the shore of the Isle aux Oeufs, and had seen "fifteen or sixteen hundred dead bodies on the strand hard by, beside dead horses, sheep, dogs and hens, three or four hundred large iron-hooped casks, a barrel of wine and a barrel and a keg of brandy, cables, anchors, chains, planks, boards, shovels, picks, mattocks, and piles of old iron three feet high."

Great was the rejoicing in Quebec, and great the satisfaction with which the spoils from the scene of disaster were brought back to the city by vessels sent for the purpose. Nor was Heaven forgotten in the general jubilee; thanksgiving services were held in the churches and a solemn mass was ordered for every month during a year to be followed by the song of Moses after the destruction of Pharaoh's army in the Red Sea.

In the meantime the English remnant was proceeding homeward, nor was ill-fate yet at an end. After entering the Thames one of the chief vessels, the "Edgar," was blown up by some carelessness in regard to the powder magazine, and five hundred men were lost.

So ended one of the most disastrous expeditions on record. In punishment Walker was removed from command, and eventually made his way to the Barbadoes, where he died some years later. Hill, on the other hand, through the influence of Mrs. Masham with the Queen, was given honors and offices. Assuredly graft and favoritism are not fungi of the latest day.



## Hope's Quiet Hour.

### The Art of Appreciation.

Consider the lilies of the field.—S. Matt. vi: 28.

That is a direct command, isn't it?—a command given to each of us by our Master. Are we making any attempt to obey it?

John Kendrick Bangs tells us of a man who knew nothing about science, art or poetry, but whose ears were opened to the music of the birds and the seas, who found the joy of winter as well as of summer:

"And he could joy in arching trees.  
In heavens blue or starlit,  
And in the cold, crisp autumn breeze  
That paints the country scarlet.

And he could joy in day and night,—  
Heart full of pure thanksgiving—  
I am not sure he was not right  
In using life for living."

We so soon get used to the lilies of the field—and other things which are evidently intended by our Father to give us pleasure. We get used to them, and fail to appreciate them—forget their existence, very often, and remember only the things which are unpleasant. So we deliberately spoil our own happiness by our outlook on life, and at the same time do much to make life harder for other people than it need be.

God sometimes takes away some of the everyday blessings, which we have received without considering them at all—then we learn to value them. One who has been blind for a few months is filled with thankfulness for sight restored; one who has lived alone, in the midst of strangers, is filled with joy when the home-people welcome him in their midst once more—though he may have left home because he was tired of its commonplaceness.

Dr. Richard Cabot says:

"Every day you and all of us pay cool insults to the clouds, the trees, and the cities, to pictures and books, to fire, rain and nightfall. You turn upon them the ignominy of your neglect and upon yourself that ignominy returns a thousandfold. With shame, you discover that the picture on your wall is practically invisible to you after the first few months. Just with the tail of your eye you brush across its surface now and then. Yet it has done nothing to deserve such treatment. It has not degenerated. It is you who have degenerated, your color and freshness that have faded, your mental structure that has collapsed. Part of you has been killed to avenge the slur you cast upon an artist's child."

Yesterday was my birthday—an old story enough, one might think, considering my gray hair. Yet, from morning until evening, fresh tokens of affection were showered upon me. How ungrateful I should have been if they had been accepted carelessly as a matter-of-course. Perhaps if birthdays and birthday gifts were everyday events, one might grow used to them, and enjoy them as unconsideringly and unthankfully as we often do our Father's gifts of health and sunshine, of home and friends—and the wild flowers which no human hand has planted.

Do you know any person who has cultivated that great accomplishment, the art of appreciation? I do. I know a sunshiny girl who never, never says an unkind thing about anybody. She is always looking out for everyone's good points—and always finds some of them on the spot. They are there, you see. Everyone we meet has good points as well as faults. If we set out to find them, we shall get the good of each day as it comes, and live happy lives. We shall learn humility by seeing the goodness of other people, and they will—for very shame—cultivate the virtues we give them credit for.

Now, I am not preaching to you so much as to myself. I am greatly given to overlooking the lilies in others' gardens, considering only the thistles. It

is a very bad habit, and I mean to watch, pray, and fight against it. Will you?

How terrible a thing it is to let our religion of love antagonize other loyal servants of the Prince of Peace! We disagree with many Christians over matters of religious opinion. That seems to be inevitable, we are not likely to see spiritual things—any more than physical—exactly as others do. When a woman is making a dress, she "considers" the dresses of all the women she sees, when she owns a brand-new baby (the first one) she "considers" all the babies in the neighborhood. A man will probably pass dresses and babies without consciously seeing them. We can't see exactly what others do, but we can appreciate the virtue even of people who differ from us in religion and politics.

Many years ago the rector of St. George's Church, Bloomsbury, was accustomed, almost every Sunday morning to meet the minister of the Baptist Church, which stood on the opposite side of the street. The rector's weekly salutation was: "The Lord be with you." The answer received was, "And with thy spirit."

conditions seem far from ideal, to begin with. The wolf and the lamb do not naturally choose to make their home together.

What if you find yourself called to live with someone who seems to you as cruel as a wolf or overbearing as a lion. Don't give up in despair. Consider the good points in his character. He is no more entirely bad than you are absolutely saintly. If we took St. Paul's wise advice and "put on"—as our everyday garments—"kindness, humbleness of mind, meekness, long-suffering; forbearing one another, and forgiving one another, if any man have a quarrel against any"—we should find plenty of lilies of the field springing up where least expected.

Why should the divorce court be the miserable refuge of those who find married life unbearable? Any married people can find thorns to prick them if they hunt for them. For that matter, so can the unmarried. Seek for the "lilies," and "consider" them. Put out of your mind the unkind words you have heard, the want of consideration which has been shown towards you. Why should you deliberately spoil your own happiness by considering these unpleasant things which

and they blossomed into fairer beauty in the sunshine of her lovely presence. It was one of love's triumphs. Have you the chance to win such another? If so, don't throw the great opportunity away. The most beautiful statues were once shapeless blocks of marble. The patient skill of the sculptor revealed to the world beauty which else would have been lost. We are all expected to be fellow-workers with God—Who calls the lilies out of the dark, unsightly soil. Why should we be discouraged if we can see no beauty—yet? Sunshine can bring out unsuspected beauty; so give hearty appreciation instead of continual fault-finding, and give smiles instead of black looks of disapproval.

That reminds me—I have not yet thanked "two well-wishers" for their gift of two dollars for my needy friends, which reached me several days ago. It is waiting for some especially urgent call, and I gratefully accept it on behalf of Christ—in Whose Name it has been given—and will spend it on one or more of His brethren.

The Master-Gardener scatters everywhere His wild-flowers, or other beautiful gifts, because He loves us and them. Are we so ungrateful and unappreciative that we do not see them, but plod on our weary way without even noticing the glory of the dandelions against the vivid green of the spring grass? He clothes the grass of the field with beauty:

"So still, dear Lord, in every place  
Thou standest by the toiling folk  
With love and pity in Thy face,  
And givest of Thy help and grace  
To those who meekly bear the yoke,  
The lives which seem so poor and low,  
The hearts which are so cramped and dull,  
The baffled hopes, the impulse slow,  
Thou takest, touchest all—and lo!  
They blossom to the beautiful!

DORA FARNCOMB.

### Gifts From Readers.

A "Reader of the Quiet Hour" has sent me two dollars for work among the poor; and a "Puslinch Friend" has also sent two dollars for the same purpose. Someone has said that a lot of good might be done in the world if only people did not care who got the credit of it—my opinion is that a great many of our "Advocate" readers are of this type. They seem determined to keep their left hand ignorant of the good the right hand is doing.

This afternoon I spent most of the four dollars on various articles needed by three families, where sickness, as well as poverty, has to be contended with. The thanks of the receivers go out to the givers. Someone said to me to-day: "It is strange that so many people trust their money to you, when they do not know you." It is strange—but perhaps it would be still more surprising if they were personally acquainted with me. However, I have tried to be a faithful steward, feeling responsible to God as well as to my kind friends of "The Farmer's Advocate."  
HOPE.

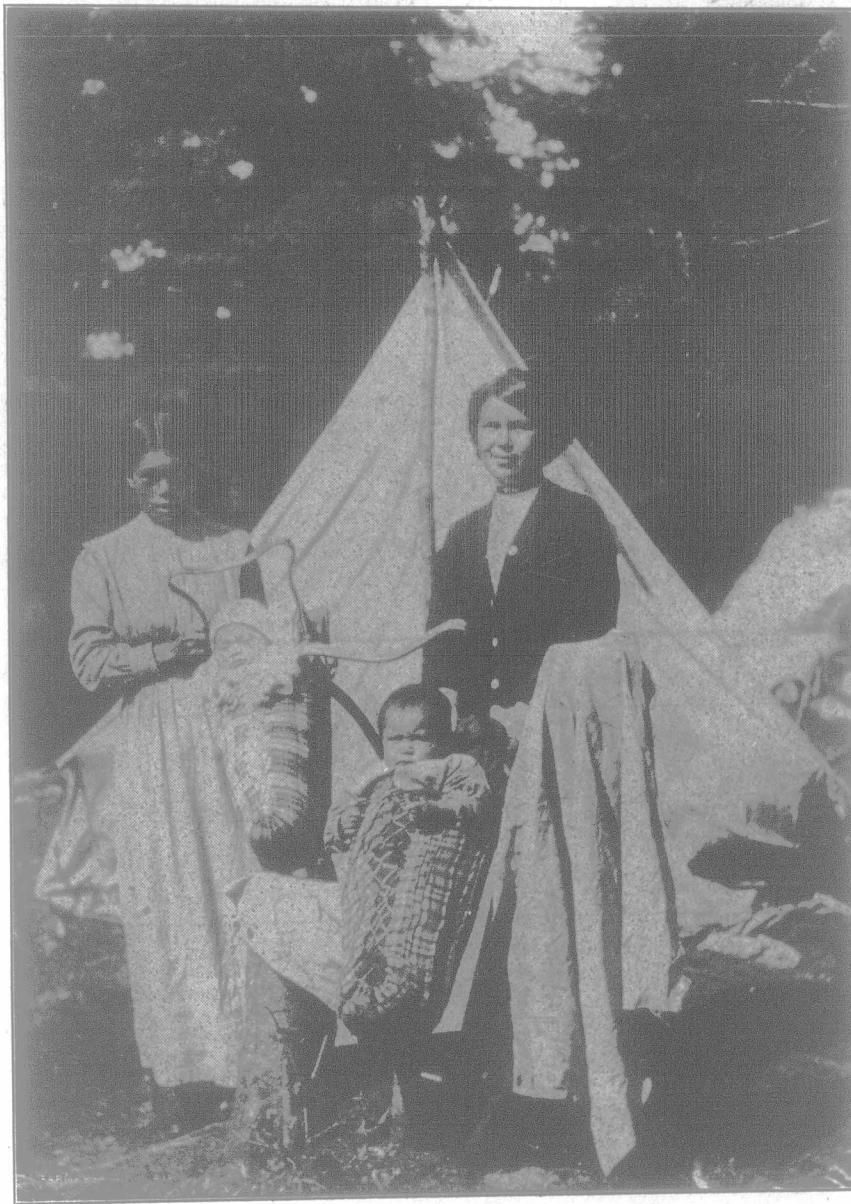
### Will the Lights Be White?

(By the late Cy Warman, the "railway poet," who died in Chicago a few weeks ago.)

Oft, when I felt my engine swerve,  
As o'er strange rails we fare,  
I strain my eye around the curve  
For what awaits us there.  
When swift and free she carries me  
Through yards unknown at night,  
I look along the line to see  
That all the lamps are white.

The blue light marks the crippled car,  
The green light signals, "Slow!"  
The red light is a danger light,  
The white light, "Let her go."  
Again the open fields we roam,  
And, when the night is fair,  
I look up in the stary dome  
And wonder what's up there.

For who can speak for those who dwell  
Behind the curving sky?  
No man has ever lived to tell  
Just what it means to die.  
Swift towards life's terminal I trend,  
The run seems short to-night,  
God only knows what's at the end—  
I hope the lamps are white.



Snapshots in Canada—Modern Indians.

Photo by Sallows.

Each of these servants of Christ was on the lookout for lily-like graces in the soul of the other. The lilies did not flourish alone. Probably there were weeds and thistles in plenty—there usually are—but Christ's command is, "Consider the lilies." He has promised to attend to the necessary work of rooting out the weeds. It is His place, not ours. We are not called to be judges of our fellows,—being on trial ourselves.

How can we make the home-relations a success? It is grandly worth while, and it is also a thing possible to accomplish. Shall we do it by finding perfect human beings to make a home with? That might be an impossible feat, and—if it were successfully performed—the experiment would probably be ruined by our crankiness. Don't let us wait for heaven—let us bring a little heavenliness into our earthly behaviour. The prophet Isaiah has promised that the wolf shall lie down with the lamb, the calf and the young lion and the fatling together, "and a little child shall lead them." Those

are better forgotten? Don't go over and over them in your own mind or in conversation, or they will grow as intolerable as a coddled fit of the blues.

People seem to think that a mother-in-law is necessarily a trying and "difficult" person. Naomi was not made beautiful by trouble, but complained bitterly of the way God had afflicted her. Ruth accepted the relationship which she might have cast off, accepted it so beautifully that the world will never forget her devotion. Those words of determined faithfulness, which have been often repeated by eager lovers, were first spoken by a young widow to her broken-hearted mother-in-law: "Intreat me not to leave thee, or to return from following after thee: for whither thou goest I will go; and where thou lodgest, I will lodge: thy people shall be my people, and thy God my God: where thou diest, will I die, and there will I be buried: the Lord do so to me, and more also, if ought but death part thee and me."

Ruth considered the virtues of Naomi,



### The Peel and Halton County Garden Competitions.

Mr. James Pearson, barrister, of Toronto, who has for the past three summers given prizes to the farmers' wives and daughters who succeed in having the best gardens in Peel County, wishes us to announce that the competition will be carried on this year as usual.

Mr. Cox writes that he has decided not to hold the competition in Halton County this year.

Mr. Pearson offers the following prizes for Peel County:

(1). \$30.00 or its equivalent for the best garden.

(2). \$20.00 or its equivalent for the second best.

(3). \$10.00 or its equivalent for the third.

All who enter must be subscribers to "The Farmer's Advocate."

Will those who purpose taking part in this very interesting competition kindly send their applications to this magazine as soon as possible, giving lot, concession and township as well as post office. Address all applications to "Junia," Farmer's Advocate and Home Magazine, London, Ont.

Kindly note that tastefulness in the arrangement of the gardens will be especially considered.

## The Beaver Circle

### Our Senior Beavers.

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

SAID BOBBIE TO JENNY.

Said little Bobbie Hemingway to little Jenny Rose:

"I'll whisper something in your ear that not a person knows,—

'Cept Mother, p'raps, and Auntie May, and Johnnie West, and Sue,

So, if you'll promise not to blab, I'll tell it all to you,

I know where there's a hornet's nest, And where the guinea lays;

And why the sun goes down the west, And where a screech-owl stays."

"What fun," said little Jenny Rose,

"I'll never, never tell A single soul, 'cept Uncle Jack, and Jane, and Mary Bell,

And Father, 'course, and Grandmother, and Nurse, and Cousin Dick;

Now listen while I whisper something to you very quick;

I know where there's a fairy ring Away back in the wood,

And what o'clock to see the elves,— If you've been very good.

"Oh, dear, I think that secrets are as nice as they can be,

I'm glad we've got such splendid ones— just between you and me."

—Cornelia Channing Ward.

### A Paper House.

Dear Beavers,—Do you know whose paper house the one shown in the picture is? Of course you do, for you are real country Beavers. "Why it's a hornets' nest!" I think I hear you say.

But do you know anything about the hornets themselves? From whence do they get the paper to make this house with its many floors? How do they put it together?—How many questions there are to ask!

To begin with one may tell you that only the "queen" hornet lives through the winter; all the others die in the fall.

When the warm spring days come, out goes this queen, and the first thing she does is to make a few cells which she attaches, by a gummy substance, to the branch or other support from which the nest is to be suspended. The walls of the cells she constructs by scraping off wood fibre from old fences and boards, mixing it with saliva, and kneading it into a sort of dough which she afterwards spreads out in a layer, so that, when it hardens it will be a firm gray paper.

As soon as the first few cells are

finished the queen lays her eggs in them. In a few days these eggs hatch into "larvae," tiny, white maggots, and now the queen is a very busy mother indeed, for she has to feed these little babies every day. In three or four weeks the larvae are full grown and are ready for the next great change which most flies and beetles, as well as butterflies and moths, undergo, so the queen caps the cells in which they lie and goes off to take a rest.

Now, a very odd thing happens to the larvae. They become very still, looking as though they were dead, but in a short time a sort of hard case grows about each one. Presently upon the case traces of head, legs and wings appear, and after a time this queer thing, this "pupa" as it is called, becomes completely changed into a full-grown wasp, which bursts from the cell and flies away.

All of these first wasps or hornets are "workers," and immediately they begin to add to the cells, putting on layer after layer until at last a dome-shaped house, sometimes as large as a pail, has been completed. Last of all they cover it all over with a smooth wall of paper, leaving a doorway by which to go in and out.

sea sick. In my last letter I said I should be delighted if any of the "Beavers" would write to me. Well, I have changed my address, and it is 33 Alvington Street, Berlin, now. If any of the Beavers write kindly say so in your letter to the Circle.

I'm going to school every day. If I were in America now I should be in the Sr. IV class. I failed in my music exam six marks, but my teacher allowed me to go on if I would promise to practice an hour every day. Since I came back I am taking violin lessons and find them considerably hard to what piano lessons were.

Several years ago I read a very interesting letter by "Bernice Breeze." I should be delighted if she would write another to your Circle. Say, Puck, may I join the garden competition next year, although I'm not living in Canada?

In my first letter I promised to tell you in my next about my home. Well, if I see this letter in print I will certainly tell you all about it, if any of the Beavers write to me, I will send them my picture if they will send me theirs.

I think the competition that the girls wrote on the boys showed their

Circle. I read the letters of your last competition with much joy, and think you Beavers did beautifully with your work in writing them. Roy Pierce certainly has the girls down to perfection, but, dear Roy, most girls are not like what you described them to be in your last paragraph. Howard Jamieson describes the girls as very beautiful; don't you Howard? But you told the truth when you said girls had two tempers, for I do believe they have. They are something like the boys. Say, Puck, would you allow me to write a composition to your Circle? The name of it is "The Course of St. Lawrence River." Do you know, dear Beavers, what I think would be a fine competition for the next one? Let the editor give us about five different titles or subjects to write a composition on, and whoever writes the best stories should get a prize. Don't you think it would be nice? Well, dear editor and Beavers, I think I will close for this time, hoping I can be allowed to write again.

A lover of the Beaver Circle,

VERNA I. HAMILTON,

Carlow, Ont. (Age 13, Bk. IV.)

We shall be pleased to have a letter about the St. Lawrence from you, Verna.



A Paper House.

(The side covering is torn off.)

In September the male and female hornets are hatched, and the old queen dies. The young queen, as has been already noted, hibernates in some cozy spot during the winter.

Hornets and other wasps live chiefly on small insects, but they like sweets too, and may often be seen sucking honey from flowers or the juice of fruit. By killing insects they are quite useful in saving crops, as they do not themselves tamper with either grain or vegetables.

Now, don't you think hornets are very clever and very interesting?—But whatever you do, do not try to form too close an acquaintance with them. For you that might be entirely too interesting—as you know.

### Senior Beavers' Letter Box.

Dear Puck and Beavers All,—As I saw my last letter in print I fully decided to write again, hoping to see this one in print. We arrived home in Germany the latter part of October. The Atlantic was stormy. One day I was a little

intelligence and how energetic they were. I would have liked very much to have tried myself, but it was impossible.

How many of the Beavers have roller-skates? I learnt in Kingston, Ont., and bought three pairs to take home with me, one pair each for my two chums who are, Misses Pearl Klopp, and Eulece Schweitzer. They are lovely girls. Pearl has dark hair and hazel eyes, and Eulece has golden curly hair and blue eyes. She wears glasses. They are both twelve years old and in my class. Pearl is Mr. Klopp's daughter, and Eulece is a lawyer's daughter. Well, I will have to close, or none of the others Beavers' letters will be in print.

From your far-off Beaver,

COLEINE EUNICE TREACY,

33 Alvington St., Berlin, Germany.

P. S.—Some of the Beavers please do write to me.

Certainly you may join the Garden Competition, little German Beaver.

Dear Puck and Beavers,—I thought I would like to write to your charming

Dear Puck and Beavers,—This is my first letter to your Circle. We have taken "The Farmer's Advocate" for a long while, and I have been a great reader of your letters, which I enjoy very much. I would like to become a member of the Beaver Circle. I enjoy working in a garden, and should like to become a member of your Garden Competition if it is not too late. I go to school every day and am in the fifth class. Our school is about a mile away so I go regularly. Our teacher's name is Miss Sterling; we like her fine. She is giving prizes to the classes. The contest closes at Easter. We have a little calf and six little lambs. Hoping to see my letter in print, and wishing the Circle every success I remain your friend,

MYRTLE SKAKEL.

R. R. No. 4, Thamesville, Ont.

(Age 14.)

We have added your name to the Garden Competition list, Myrtle.

Dear Puck and Beavers,—As I have seen my other letters in print I will take the courage to write again, if Puck does not think I have written too many letters. Do you think so, Puck?

I enjoy getting the Advocate. It is a very nice paper, and I enjoy reading it and so do my father and brother, for there are lots of good things in it. I enjoy reading the Beavers' letters. I liked that competition on "Boys" and "Girls."

How many of the little Beavers like reading? Well, I do anyway. I have read a great many books and love reading, too. My favorite books are the Elsie Books. I have read "Elsie's Girlhood," "Elsie's Children," "Grandmother Elsie," "Nettie's Mission," "Dora Thorne," "Melbourne House," and other library books.

Well, I guess this letter is long enough, and if I write any more Puck will be likely to throw it into the monster of a w-p. b. I will close now, wishing the Circle every success. Bye-bye.

CHARLOTTE POTTER.

Loyal, Ont. (Age 11 years.)

### Our Junior Beavers.

[For all pupils from the First Book to Junior Third, inclusive.]

### Junior Beavers' Letter Box.

Dear Puck and Beavers,—This is my first letter to the Circle. My father has taken "The Farmer's Advocate" for a number of years; he likes it fine. We have a dog; his name is Mark. He is cross with strangers. He would bite people if he thought they were going to touch us. I go to school every day, but stayed at home some days that were very cold. Our teacher's name is Miss Mullin. We like her fine.

JESSIE RIDDLE.

Georgetown, Ont.



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 County.....  
 Province.....  
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 Measurement—Waist, ..... Bust, .....  
 Date of issue in which pattern appeared.

Dear Puck and Beavers,—We have taken "The Farmer's Advocate" for about fifteen years, and like it fine. We live about a mile and a half from Lake Huron. There are thirty-three cottages here. In the summer campers come from quite a distance. When the hay is over a few neighbors get up a picnic and go down to the lake. The children take their bathing suits and go in the water.

How many of the Beavers like reading books? I do. We have a library at school, and I have read quite a few. For pets I have a little white kitty named Suke. I will close now, wishing the Beavers every success.

DORA CLEMENS.

Ravenswood, Ont.

(Age 10, III. Class.)

Dear Puck and Beavers,—I wrote once before, but did not see my letter in print. My father has taken "The Farmer's Advocate" for as long as I can remember, and we all like it fine. I live on a farm of one hundred acres. Three years ago we moved our barn nearer the house, and put it on a cement foundation.

I have a sister, twelve years old, and one six months old. Their names are Edith and Marion. It is only a five-minute walk to our school. I go to school nearly every day. I got a prize at Christmas time for attendance and conduct. Our teacher's name is Miss Irving. We all like her fine. As my letter is getting quite long I will close, hoping this will escape the hungry w. p. b.

DELL ROBINSON.

Cookstown, Ont., R. R. No. 1.

(Age 11, Jr. III. Class.)

Dear Puck and Beavers,—My father has taken "The Farmer's Advocate" for a short time. I enjoy reading the letters of the Club, so I decided I would write. I live on a farm in Muskoka, and only go to school in summer. Our school is closed during the winter, for the snow gets too deep for us to go. I am in the senior third at school, and like going very much. For pets I have a gray kitten and call him Tabby, and a dog which I call Rover. We have great fun together. I will now close with best regards to the Club.

GLADYS CHARLTON.

Millar Hill, Ont. (Age 10 years.)

P. S.—Will some of the Beavers near my age please write?

Dear Puck and Beavers,—My teacher's name is Miss Edgar. I go to school every day, and I am head of my class nearly all the time. The school I go to has fourteen rooms in it. I would like to join the Garden Competition, but the worst of it is I live in the prospering town of Preston and we have no garden at the back of our house. I like farm life better than town life, and if I lived on a farm I would have a garden and write about it. My father keeps hens. We have four different kinds. Altogether we have about 25 hens. In February we got 107 eggs. I think that is pretty good for a winter month. I will close, as I have written too much now. Hoping to see this letter in print. Every success to the Circle.

LILLIAN HOLTZHAUER.

(Age 11, Jr. III. Class.)

Preston, Ont.

P. S.—I would like some of the members of the Circle to write to me.

Dear Puck and Beavers,—This is my first letter to your Circle. I enjoy writing to you. I am nine years old and like going to school. I live on a farm, and my father takes "The Farmer's Advocate." We have two cats and one dog; his name is Grit.

Our home is built on a hill; we have a good time sleighriding and skating down the hill. My grandma is visiting with us. Bye-bye.

OLIVE McEWEN.

Wingham, P. O., R. R. No. 4.

"Does your daughter play the piano by ear?" "No," replied the father, "she uses both hands and both feet. But I don't think she has learned to use her ears."



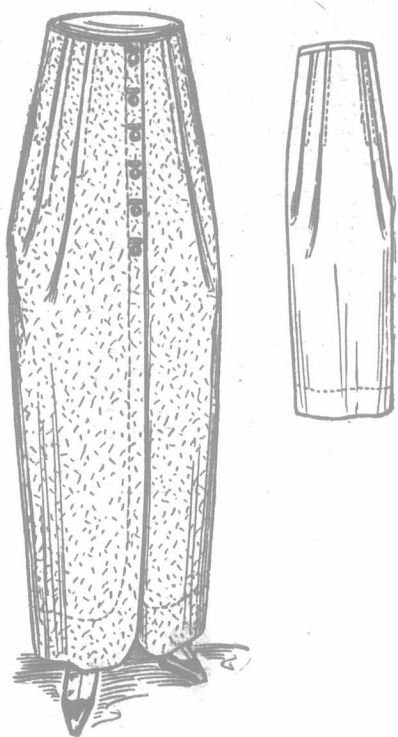
DESIGN BY MAY MANTON.  
8176 Semi-Princesse Gown,  
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7486 Princesse Slip for Misses and Small Women, 14, 16 and 18 years.



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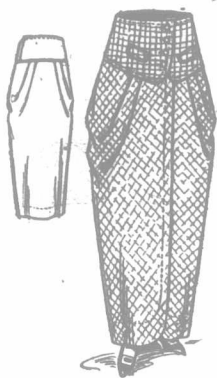
DESIGN BY MAY MANTON.  
8163 Semi-Princesse Gown, 34 to 42 bust.



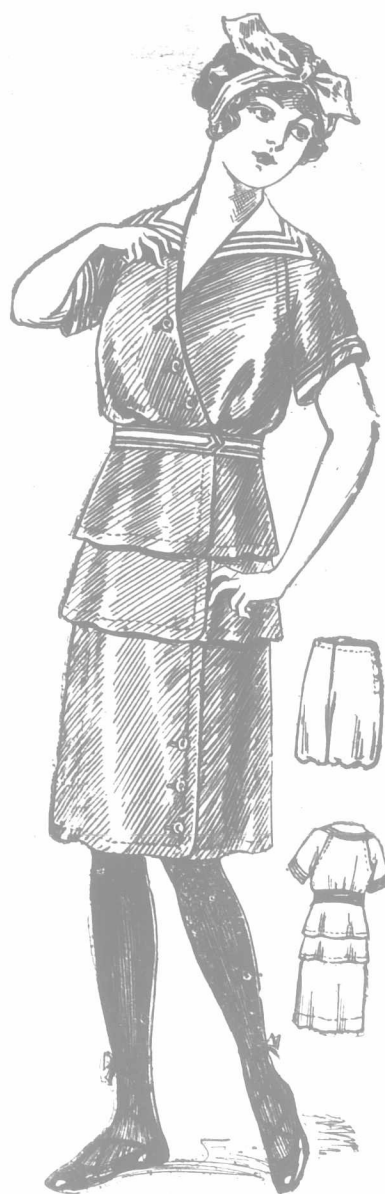
DESIGN BY MAY MANTON.  
8206 Tunic Dress for Misses and Small Women, 16 and 18 years.



8243 Kimono Blouse for Misses and Small Women, 16 and 18 years.



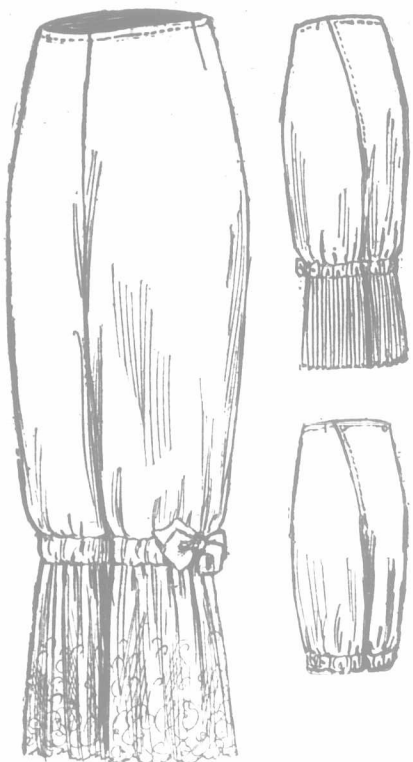
8252 Skirt with Yoke, 22 to 32 waist.



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8254 Bathing Suit, 34 to 42 bust.



DESIGN BY MAY MANTON.  
8057 Fancy Blouse, 34 to 44 bust.  
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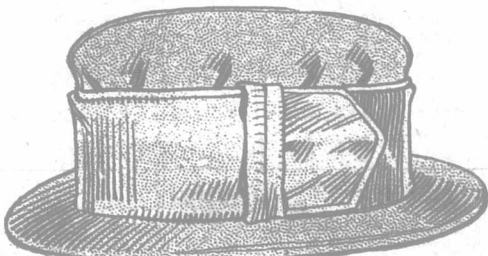
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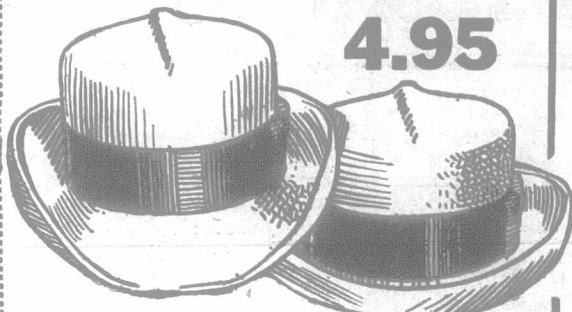
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30-A61. Interesting news to men who shave. One hundred and fifty first-class Razors going at a greatly reduced price. We are simply clearing out overstocked lines. Every blade is concave, made of extra fine quality steel, well tempered and evenly ground, assorted style handles. Every man needing a razor should grasp this opportunity. **69c**  
Clearing greatly reduced price, each.



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THE JUNE BRIDE

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HANDSOME DAMASK  
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48-A61. We offer this beautiful Scalloped Satin Damask Cloth and Napkin bargain to those who intend giving wedding gifts, or subscribing to linen showers. It is made from extra fine linen yarns, and has that beautiful smooth satin finish that only good linens have. Order now, as this offer only lasts for ten days. † (only) Cloth, size 2x2 yards round; 1/2 dozen Napkins, size 16 1/2 x 16 1/2 square. Set **3.65**

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MISSES'  
DRESSES  
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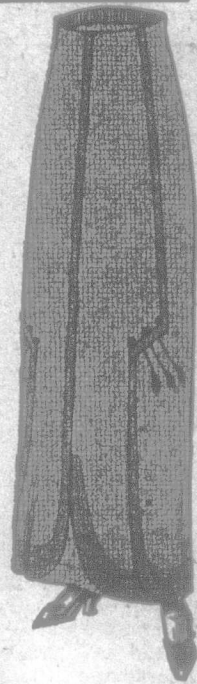
56-A256. One of the best and most serviceable Dresses shown this season for the young girl of 13, 15, or 17 years. Deep girde and collar of silk in contrasting shades, Black and White; or Navy and White check. Bust size 30 has skirt length 30 inches. Bust 32 has skirt 32 inches. Bust 34 has skirt 34 inches. **2.45**  
Bargain price, each



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WOMEN'S  
STYLISH SKIRTS  
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FINE ALL-  
WOOL VOILE

AWAY BELOW HALF-  
PRICE

82-A255. Dressy Skirts, beautifully finished, cut in six gores, with plenty of walking room, measuring about 60 inches around the lower hem. Waistband sizes 22 to 28 inches. Lengths (front) 37 to 42 inches. **3.95**  
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### The Windrow.

Beiliss, the Russian Jew who was acquitted after a two-years' imprisonment on a charge of ritual murder, has gone to Palestine to live, at the invitation of the Jewish people of the Holy Land.

By the new Chinese constitution prepared under the direction of Yuan Shi Kai, the President is made virtually an autocratic dictator. The Cabinet is to be responsible to the President, and not to Parliament; also the President will have power to convoke, suspend, and dissolve Parliament, as well as to declare and conclude war as he chooses.

A "Women's Educational Union" has been founded in Egypt, to promote education among women, the abolition of the veil, and emancipation of women generally.

Mrs. Parsons, one of the organizers of Women's Institutes in Ontario, writes us that she has organized a very enthusiastic branch at the town of Cochrane, Northern Ontario. One of the first steps taken by the new organization will be to establish medical inspection of schools.

Mr. S. R. Crockett, the noted Scottish writer, and a member of the famous

Kailyard school of fiction, died recently at Avignon, at the age of fifty-three. He wrote about thirty novels, the latest of which, "Silver Sand," was issued by the publishers on the same day on which the report of his death reached England.

A remarkably fine exhibit of American art, embracing the work of American painters in London, Paris and America, grouped separately, was recently shown at the Anglo-American Exposition at Shepherd's Bush, London, Eng. Sixty-one artists were represented with works valued at \$250,000. Among the exhibits was a picture, "Plowing," appraised at \$15,000, by the distinguished son of

Canada, Horatio Walker. Sargent, Dougherty, Hassam, Henri, Alexander, Benson, Dangerfield, Melchers, Garber, Harrison, Reid, Redfield, and other famous painters, were represented.

In Germany, precautions are being taken to so insulate high-tension wires that the slaughter of wild birds resting on them will be prevented.

There is an old adage which declares that great men are absent-minded, while an equally hoary saying describes genius as "an infinite capacity for taking pains." Perhaps in no man who can lay claims to genius are these two oppo-



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Mrs. James Bell, writes:

"My last year's spring suit was reseda green. Last spring that was fine, but for this season I wanted something different. I was going to buy a new suit when my sister told me to dye my old one.

"I sent for your DIAMOND DYE ANNUAL and DIRECTION BOOK and bought some black DIAMOND DYES for Wool or Silk. The material re-colored beautifully. I trimmed it with new taffeta and made some alterations. I think it very smart. It certainly represents a great saving."

### Diamond Dyes

"A child can use them"

Simply dissolve the dye and boil the material in the colored water

Miss Virginia King writes:

"I send you my picture. The gown I am wearing was a light tan silk, made with an overskirt. I dyed the material purple and draped the overskirt."

"DIAMOND DYES have always given me splendid results and I recommend them strongly."

"It seems too good to be true that I can get results that equal those of professional dyers."

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There are two classes of fabrics—animal fibre fabrics and vegetable fibre fabric. Wool and Silk are animal fibre fabrics. Cotton and Linen are vegetable fibre fabrics. "Union" or "Mixed" goods are usually 60% to 80% Cotton, so must be treated as vegetable fibre fabrics.

It is a chemical impossibility to get perfect color results on all classes of fabrics with any dye that claims to color animal fibre fabrics and vegetable fibre fabrics equally well in one bath.

We manufacture two classes of Diamond Dyes, namely—Diamond Dyes for Wool or Silk to color Animal Fibre Fabrics, and Diamond Dyes for Cotton, Linen or Mixed Goods to color Vegetable Fibre Fabrics, so that you may obtain the Very Best results on EVERY fabric.

Diamond Dyes Sell at 10c. Per Package Valuable Book and Samples Free

Send us your dealer's name and address—tell us whether or not he sells Diamond Dyes. We will then send that famous book of help, the Diamond Dye Annual and Direction Book, also 36 samples of Dyed Cloth—Free.

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Tan Silk Gown Dyed Purple

site qualities of greatness better exemplified than in that modern perpetrator of paradox, G. K. Chesterton. For, infinite as are his capacities for taking pains in the literary sense, his wife, to a very large extent, acts as his "business conscience," and it is said that she accompanies him on almost every journey, performing such small but necessary duties as the getting of tickets and the consulting of "Bradshaw."

It is recorded, however, that on one occasion visitors arrived, and Mrs. Chesterton being called upon to play the part of hostess, was unable to accompany her husband. With the words, "Now, Gilbert, you know where you are to lecture and what your subject is?" Chesterton went to the railway station. Arriving there, he banged down a sovereign at the booking office, and said, "A ticket."

"Where for?" asked the astonished clerk.

"Free Trade Hall," replied Chesterton. "Oh, Glasgow then?" said the clerk, and Gilbert, assenting, received a ticket for that station.

Stepping into the street at Glasgow, he was hailed by a friend: "Hullo, Chesterton, what are you doing here?"

"Oh, I'm lecturing at the Free Trade Hall."

"Oh, no, you're not," said the friend.

"Oh, yes, I am," protested Chesterton. "I booked the engagement some months ago."

"But you cannot be," maintained the friend, "for the place is being renovated and the painters are in."

It slowly dawned upon Chesterton that he was at the wrong place, and he, further to justify his claim to greatness, sent a telegram to his wife: "Am here. Where ought I to be?"

It is always said that no one enjoys a joke more than Chesterton, and, even when the joke tells against himself, he never fails to be heard laughing above the whole company. It is related that a certain man told of an act of politeness he had witnessed. He had seen a man give up his seat in a tram-car to a lady. "That's nothing," said one of the company. "What about old Chesterton here? I saw him get up and give his seat to three ladies." The company roared, but louder than the others was heard the jovial laughter of Chesterton. It is in more respects than one that Chesterton lays claims to "greatness."—T. P.'s Weekly.

### News of the Week

Diplomats from Germany and Japan, joined the ambassadors from the United States and South America who have been sitting in conference on the Mexican situation at Niagara Falls during the week.

Extensive bush fires have been raging in Muskoka, and in the districts adjoining Cobalt and Charlton.

The Welsh disestablishment bill passed its third reading in the House of Commons on May 19th, by a vote of 328 to 251. In a subsequent debate on the home rule bill on May 22nd, the House was suspended, and the debate held over until May 25th.

A force of marines from the international fleet landed at Durazzo on May 19th for the protection of William of Wied, King of Albania, who accepted the rulership of the country in February.

The largest mobilization in the history of Canada will meet at the Petawawa military camp during the latter part of June.

Thirty women, including Mrs. Pankhurst, were arrested last week for causing a disturbance in an attempt to present a petition to the King. Subsequently, two suffragettes damaged five masterpieces in the National Art Gallery, and one in the Royal Academy. Both women were arrested.

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# Ormstown, Quebec

## JUNE 3rd, 4th, 5th,

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IMPROVED 6-BRICK MACHINE**

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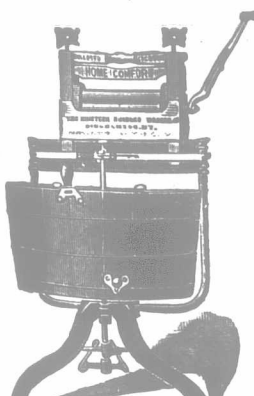
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"1900" Gravity Washer **H. H. MORRIS**, Manager, "1900" Washer Co., 355 Yonge Street, Toronto, Can. Please mention "The Farmer's Advocate."

**The Ingle Nook.**

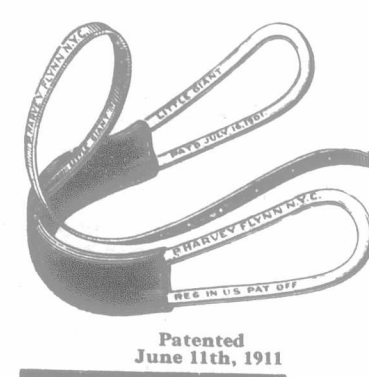
[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope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

Dear Ingle Nook Friends,—There is a great old character in Stewart Edward White's book, "The Cabin." Old "California John," he is called, and, like many another trained not within the walls of a school-house but in the great school of the world, he is something of a philosopher in his way. One day he speaks of work, and this is what he says: "A man don't want to give a cuss whether a thing gets done or not, but just whether he keeps workin' along at it. If he does that it's BOUND to get done, and without worryin' him. And he ain't so plumb feverish all the time! . . . Any job's got a lot of fun in it if you ain't in too devil much of a hurry to finish it. . . . Everything's important. I don't believe one thing's more important than another, IF A MAN'S DOING WHAT HE LIKES."

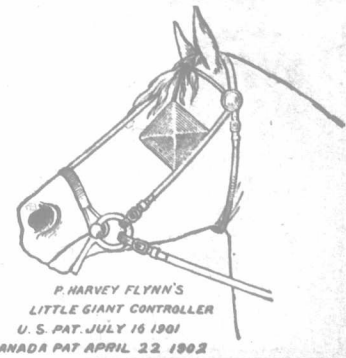
Perhaps no other time of the year could be more opportune than this to use the above quotation as a text. . . . "I'm sick and tired of housecleaning." . . . "I'm completely tired out." . . . "I haven't had time even to see the spring." . . . "There's so much to do, with the gardening and spring sewing and all,"—thus the chorus that you and I have heard, not once but a dozen times during the past few weeks, and so, pausing to think about it, one begins to wonder if there is not somewhere something wrong. Is it right for women to be so desperately tired, even at a time of extra "rush"? Is it right for them to miss the whole of the spring? Is it right for them to be "sick and tired" of things? Is it not just possible that, as Gilbert K. Chesterton says, one of the crying mistakes of the time is our proneness to exalt the minor, at the expense of the major things of life?

True, things have to be done, and on a farm at this time of year their number is legion. But is it not so that, as old California John says, more emphatically than gracefully, we are in "too devil much of a hurry" to get through with them? We set for ourselves arbitrary rules,—the housecleaning and this and that and the other thing must be completed by a certain time,—and so we "set to" with an energy that is almost furious. We tire ourselves out; we become irritable and make everyone about us irritable also; we keep our eyes glued to the mop and scrubbing pail and whitewear work on the sewing-machine, and then before we are aware of it the tulips have merged into lilacs, and lilacs into June roses, and June roses have scattered themselves on the breeze, and the sweetest time of the year has passed. We have had none of it.

The trouble is that we are so constantly obsessed at such times with the idea that we must push the world. We forget that the world will still turn, even though housecleaning be a week late and the whitewear a few days overtime. It's the old mistake of magnifying the minor things until they quite obscure the major, of fastening the vision only to the material. Come to think of it,—isn't it better, instead of fixing the whole attention feverishly on the completion of any piece of work, just to amble along by comparatively easy stages, not hurrying to desperation, not worrying, interested in things as we go? Isn't it more important that a woman keep sweet and serene and not over-tired, even though something have to stand over once in a while, than that she accomplish the work within the given time too tired to smile, ready, perhaps, to cry for very weariness? —What if someone should come and "catch" one in the midst of a little upset? Sensible folk do not mind, and what odds about the others? I have seen my faultless friend, in the midst of a housecleaning, drop everything for an



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afternoon to entertain visitors from a distance, and set them down cheerfully to a supper of bread and butter and fruit and boiled eggs. I have seen another little woman—a very dear little woman too—flush pink with annoyance when so surprised, close her visitors up in the drawing-room and spend practically all of the time of their stay busily preparing a very fine "tea." It would be superfluous to say which proved to be the better hostess.

There's no use of inveighing against work—even manual—as an evil. Only the mismanagement of it is. Work is really one of the things that help to make life interesting. Many a farm woman has the idea that the woman of the city who is rich enough to keep servants and have nothing to do, must be absolutely happy. Perhaps had the envious farm woman a chance to exchange lots with this favored one for a while she might be more than willing to go back to her own life, and find in it the contentment she had heretofore missed. Idleness brings only ennui and gives time to hatch jealousies; social events in endless succession, if there be no deep purpose and usefulness of life as a background, soon pall; the farm woman has at least, at all times, the satisfaction of knowing that she is useful. Please do not misunderstand me. I do not mean to reflect in any way on the many fine, useful, intellectual women to be found in every city, but only upon the few who are contented to be parasites.

Work is not drudgery. Overwork is, and one's business is to eliminate the surplus. But if one thinks that ordinary work is drudgery, drudgery it is. It all depends on one's attitude of mind. The ideal will come, it seems to me, with a very widespread acceptance of and acting upon Tolstoi's idea, that everyone should spend part of every day in manual labor, and the rest of it in mental labor. So will manual labor be dignified, and the mental labor will be all the clearer and sharper because of it. JUNIA.

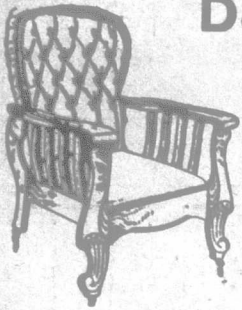
**WEDDING QUERIES.** Dear Junia,—What would be your suggestion as to an August wedding? Would you say a home wedding? If so would you kindly give full details of it, as to how the bride should be dressed and bridesmaid, if any, time of ceremony, how they should enter the rooms. Give the courses of an inexpensive but yet dainty supper or tea, as the case should be. If the bride should change her dress after dining, if so, what kind would be suitable for such? Or you could please give an outline of a wedding in a city as to dress, suit, etc.? Supposing the bride lived 12 miles from station, how could it be managed, as the train arrives at 7 p. m.? Would the couple go to the groom's home, which is only a few miles distant? Pontiac, Que. HELENE.

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Some prefer a home wedding, others feel that there is more sacredness about the event if the ceremony takes place in church. Personally, I think the church is the right place, providing that everything is not spoiled by an effort to be "fashionable." There is no sacredness whatever about a showy parade, and a crowded church with people standing on the seats to get a view.

White is, of course, the color for a young bride, the material depending on what she can afford. The lines of the dress should be simple and graceful, with no hint of over-dressing. A long veil is always a pretty adjunct. The bridesmaids should wear gown of some pretty light shade in the same or harmonizing colors. Invariably they wear hats.

When the bride changes her dress after the wedding breakfast she must, of course, don her "going-away" dress, usually a suit with a pretty waist.

The order for a wedding either in church or at home is as follows:

First enter the groom and best man, who wait near the chancel steps, or, if in the home, the spot where the ceremony is to take place. To the strains of the wedding march the bridal party enters, the ushers, walking two and two first, then the bridesmaids, also two and two, then the maid of honor, walking alone, and finally the bride on the arm of her father or whomever is to give her away. Arriving at the steps the ushers step to the right, the bridesmaids to the left, forming a semicircle, at the centre of which meet the bride and groom. As the bride meets the groom, who takes her hand, her father steps behind her or the maid of honor to await the moment for giving her away.

All this ceremony is not, however, necessary. At some very pretty weddings the maid of honor and the best man, are the only "extras."

A wedding may take place at any time that best suits the convenience of all concerned.

Here is a menu for a wedding breakfast as given by an authority:

- Consomme in Cups.
- Oyster Patties.
- Salted Nuts. Olives.
- Tongue in Aspic Jelly.
- Lobster Salad. Chicken Salad.
- Nut Sandwiches.
- Candied Fruit. Bonbons.
- Fancy Ice-Creams.
- Orange Ice. Lemon Ice.
- Fruit Cake.
- Chocolate. Coffee.

**"LADIES' AID."**

We are having a "Ladies' Aid" for the church here, and would like if you would kindly publish in your valuable paper something that would give us ideas to make it more interesting.

**ROSEBUD.**

Have you tried a bazaar? That seems to be the favorite form of Ladies' Aid entertainment here in the city. Articles of every kind are made by the ladies and sold at booths. A tea-room is arranged near by, and if an orchestra can be in attendance all the better. Of course, the rooms should be decorated as prettily as possible. For this nothing can be better than artificial apple blossoms made as follows: Get numbers of bare branches—those pruned from apple trees are good—and fasten to them with expressman's sealing wax; pink and white "apple blossoms" made of double circles of tissue-paper twisted together at the center to form frilly blossoms. When such branches are used lavishly the effect is very beautiful.

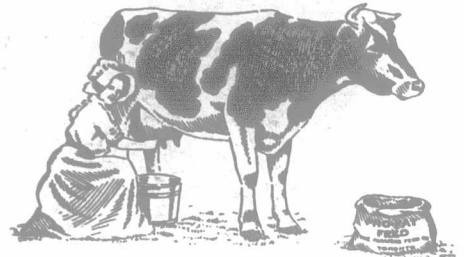
**Seasonable Cookery.**

**Popovers.**—Place in a mixing bowl 1 cup milk, 1 unbeaten egg, 1 cup flour, and a pinch of salt. Beat all together well, with a large rotary egg-beater if possible, for 3 minutes, put in hot buttered muffin rings or deep patty-pans, and bake in a moderate oven for half an hour.

**Baked Sliced Ham.**—Place in a baking-pan a slice of ham cut one inch thick. If the ham is not very "mild cured" it should be soaked in cold water for an

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	On the cob. Per bus. of 70 lbs. Bags free	Shelled. Per bus. of 56 lbs. Bags free
Early Imp'vd Leaming	\$1.60	\$1.50
Early White Cap Y. D.	1.60	1.50
Wisconsin No. 7	1.60	1.50
Compton's Early	1.85	1.75
Longfellow	1.85	1.75
North Dakota	2.00	1.90
Smut Nose	1.85	1.75

**Millets**

	Per bus. Bags free
Hungarian	\$1.60
Common	1.60
Siberian	2.25
German	2.00

**Buckwheat**

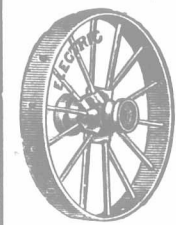
	Per bus. Bags free
Rye Buckwheat	\$1.35
Silver Hull Buckwheat	1.10

**Peas**

	Per bus. Bags free
Golden Vine	\$1.35
Multipliers	1.35

**Geo. Keith & Sons**

Seed Merchants Since 1866  
124 King St. E. Toronto



**\$18 PER SET**

F.o.b. Toronto

28-inch and 32-inch diameter, 4-inch by 3/4 tire. Built to fit any axle.

Write for Catalogue

**Electric Steel Wheels**  
With Grooved Tires

**NORMAN S. KNOX**  
47 Wellington Street E., Toronto, Ontario  
Electric Wheel Co., Quincy, Ill.

We repair and supply parts for any sewing machine, gramophone or lawn mower.

**J. JACKSON & CO., London, Canada**

Please mention "The Farmer's Advocate."



hour. Sprinkle on top a little powdered mustard, brown sugar, and 2 table-spoons vinegar. Add a little water, bake about 40 minutes, basting often. Add a little boiling water to the gravy but do not thicken.

**Rhubarb Short-Cake.**—Make a short-cake by any preferred recipe, either like a layer-cake or like a rich biscuit-dough. Split and butter it while hot, and spread with a filling made as follows: Cook together for 5 minutes 2 cups thick, stewed rhubarb, and 1 cup mixed stoned dates and raisins, chopped fine. Put the filling in hot, put the cake together, serve at once with whipped cream or with thick, sweet cream and sugar.

**Apricot Gelatine.**—Moisten 2 table-spoons gelatine with  $\frac{1}{2}$  cup cold milk, add  $1\frac{1}{2}$  cups hot milk, brought to the scalding point in a double boiler. Soak 12 halves of dried apricots over night in enough water to cover. In the morning boil for 5 minutes in the same water, with  $\frac{1}{2}$  cup sugar. Peel the apricots, mash, add 2 table-spoons lemon juice and mix with the milk and the gelatine. Put all in a mould to harden. To serve turn out of mould and pour around it on a platter  $\frac{1}{2}$  pint of cream, whipped stiff, to which has been added 2 table-spoons powdered sugar. Sprinkle with chopped nuts.

**Meat Loaf with Hard Cooked Eggs.**—Chop one pound each of raw veal and beef with one-fourth pound of salt pork. Add one-half teaspoonful each of thyme and marjoram, or one table-spoonful of poultry seasoning and one-half teaspoonful of onion juice, one table-spoonful of chopped parsley, and salt and pepper to taste. Mix it with one-half cup of bread crumbs and two well-beaten eggs. Butter a mold and fill half-full with the meat mixture. On this place lengthwise two whole hard-cooked eggs, then fill with the rest of the mixture. Place a table-spoonful of melted butter or beef shortening on top and bake in a slow oven one and one-half hours.

**Breast of Mutton with Tomatoes.**—Take three or four pounds mutton breast, season well, and cover each strip with bread or cracker crumbs. Put into a hot dripping pan in the hot oven, and when the meat commences to get brown pour over it one-half can of tomatoes to which have been added one onion and one green pepper finely chopped; return to oven and cook slowly until ready to serve.

**The Scrap Bag.**

**TO WHIP CREAM.**

To whip cream easily wrap the bottle of cream in a wet cloth sprinkled with salt and place on ice or in a cold place until ready to whip.

**USE OF OLD WHISK BROOM.**

Trim down an old whisk broom to a point and use for sweeping the corners of rooms, stairs, etc., difficult to reach with an ordinary broom.

**LEAVES OF RUBBER-PLANT.**

To keep the leaves of a rubber-plant green and glossy, sponge them once a week with a cloth wet in sweet milk instead of soap and water.

**A KNITTED "DARN."**

One who has tried it says that a good way to darn childrens' stockings at the knee is to take yarn to match and two knitting needles, and so knit a patch, which is afterwards sewn on with yarn.

**CHILBLAIN CURE.**

Vinegar,  $\frac{1}{2}$  pint; alcohol,  $\frac{1}{2}$  pint; muriate of ammonia,  $\frac{1}{2}$  ounce. Mix together and apply to the affected part with a small camel's hair brush.

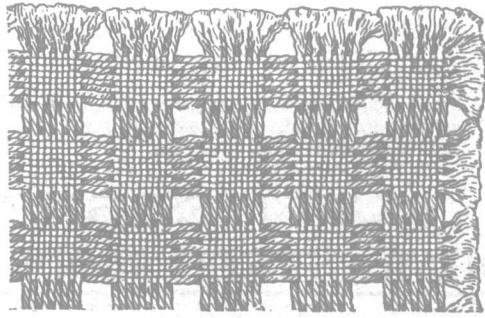
**HAMMOCK COMFORT.**

If you want solid comfort this summer, hang your hammock under the trees, then place another old hammock or pieces of canvas, stretched out flat, three or four feet above it. Sew on the "upper berth" mosquito netting, letting it hang to the ground. The ends of the netting may be held together with hat pins. Safe behind the screen, flies and mosquitoes will not bother you.

# How Goodyear Fights Loose Treads

After we ended rim-cutting we took up loose treads—another major tire trouble.

At the base of the tread in every tire there must be a breaker strip. In all tires save Goodyears this strip is made of closely-woven fabric. And road use often separates this breaker strip from the rubber.



Rivet Fabric

We bought the rights to a patent fabric which we picture here. It cost \$50,000, and it forms our breaker strip.

During vulcanization, hundreds of large rubber rivets are formed.

This lessens by 60 per cent the risk of tread separation. And no other maker employs it.

**Millions Saved**

That is one way in which we save tire users millions of dollars yearly.

Another is our "On-Air" cure. No-Rim-Cut tires are final-cured on

air bags, under actual road conditions. This saves the countless blow-outs due to wrinkled fabric.

This extra process adds immensely to our manufacturing cost. And no other maker employs it.

In these tires alone is rim-cutting ended in a satisfactory way. We control the method.

And these tires alone have our double-thick All-Weather tread—a smooth-running anti-skid.

**18 Makes Cost More**

No-Rim-Cut tires are the only tires embodying these costly features.

After years of tests on countless cars they have come to outsell any other tire in the world.

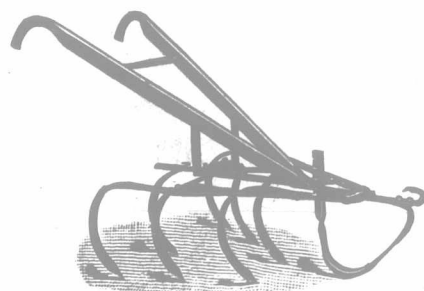
Yet there are 18 U. S. and Canada makes of tires which sell at higher prices. Some nearly one-half higher. Three such tires cost as much as four Goodyears. That's a curious situation.



**GOOD YEAR**  
AKRON, OHIO  
**No-Rim-Cut Tires**  
With All-Weather Treads or Smooth

**THE GOODYEAR TIRE & RUBBER COMPANY OF CANADA, LIMITED**  
Head Office, TORONTO      Factory, BOWMANVILLE

## One-Horse Spring Tooth Cultivator



HAS NO EQUAL.

Read the following testimonial:

The One-Horse Spring Tooth Cultivator I got from you will equal two others in cleaning out berry bushes.

J. INGRAM, Union, Ont.

If there is not an agent in your locality handling the One-Horse Spring Tooth Cultivator, write us to-day. Pleased to give you prices and particulars.

**The Hall Zryd Foundry Co., Limited**  
HESPELER, ONTARIO

MAKERS OF PILOT STOVES, RANGES AND FURNACES

**The Farmer's Advocate and Home Magazine**  
Published Once a Week. \$1.50 per Year in Advance.

**HOME STUDY**

The Arts Course may be taken by correspondence, but students desiring to graduate must attend one session.

**QUEEN'S UNIVERSITY**  
KINGSTON, ONTARIO  
ARTS EDUCATION MEDICINE      APPLIED SCIENCE INCLUDING ENGINEERING  
**SUMMER SCHOOL**  
JULY and AUGUST '22  
G. Y. CHOWN, Registrar, Kingston, Ont.

**PRESIDENT SUSPENDER**  
NONE SO EASY



# Buy My Flour and Get My Book



**Ye Old Millers' Household Book**

(Formerly Dominion Cook Book)

**FREE to Buyers of Three Bags of Flour**

This useful book contains 1,000 carefully-selected recipes and a large medical department.

Miss F. E. Martin, of Forestville, writes:

"Thank you for the recipe book. It is a prize worth while."

If you already have the former edition (Dominion Cook Book) you may select one book from the following list each time you order from us not less than three bags of flour. If you buy six bags you get two books, and so on. Enclose 10 cents for each book to pay for postage. Remember at least 3 bags must be flour:

Books by RALPH CONNOR:

Black Rock  
Sky Pilot  
Man from Glengarry  
Glengarry School Days  
The Prospector  
The Foreigner

Books by MARIAN KEITH:

Duncan Polite  
Treasure Valley  
Lisbeth of the Dale

By J. J. BELL:  
Whither Thou Goest

The farmers of Ontario are finding it very profitable to buy flour and feed direct from The Campbell Flour Mills Co. Many are sending letters of appreciation of

## Cream of the West Flour

the hard wheat flour guaranteed for bread

Ancil Locke, Secretary of the Matilda Farmers' Club, Dixon's Corners, Ont., writes:

"The flour and feed we have been handling from you have given satisfaction to all. We have had no complaints and we are waiting with orders for more flour and feed."

READ THESE SPECIAL PRICES:

### GUARANTEED FLOURS

	Per 98-lb. bag
Cream of the West Flour (for bread).....	\$2.90
Queen City Flour (blended for all purposes).....	2.50
Monarch Flour (makes delicious pastry).....	2.50

### CEREALS

Cream of the West Wheatlets (per 6-lb. bag).....	.25
Norwegian Rolled Oats (per 90-lb. bag).....	2.50
Family Cornmeal (per 98-lb. bag).....	2.25

### FEEDS

	Per 100-lb bag
"Bullrush" Bran.....	\$1.30
"Bullrush" Middlings.....	1.35
Extra White Middlings.....	1.45
"Tower" Feed Flour.....	1.60
"Gem" Feed Flour.....	1.75
Whole Manitoba Oats.....	1.50
"Bullrush" Crushed Oats.....	1.55
Manitoba Feed Barley.....	1.35
Barley Meal.....	1.40
Chopped Oats.....	1.55
Feed Wheat.....	1.65

PRICES ON TON LOTS: We cannot make any reduction on above prices, even if you purchase five or ten tons. The only reduction from the above prices would be on carload orders.

TERMS CASH WITH ORDER: Orders may be assorted as desired. On shipments up to five bags, buyer pays freight charges. On shipments over five bags we will prepay freight to any station in Ontario, east of Sudbury and south of North Bay. West of Sudbury and New Ontario, add 15c. per bag. Prices are subject to market changes.

**The Campbell Flour Mills Co., Limited**  
(West) Toronto :: :: :: Canada

## The New Public Health.

"The Farmer's Advocate" Bureau of Public Health Information.

QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by the Institute of Public Health.—The Public Health Faculty of Western University, London, Ontario.

Established and maintained by the Ontario Provincial Government.

[Questions should be addressed: "New Public Health, care of 'The Farmer's Advocate,' London, Ont." Private questions, accompanied by a stamped, self-addressed envelope, will receive private answers. Medical treatment or diagnosis for individual cases cannot be prescribed.]

### Methods of Getting Rid of Flies.

A fly's "diary," as published by the Indiana State Board of Health, is rather of interest.

JOURNAL OF A FEMALE HOUSE FLY.

1. Thursday, Nov. 2, 1911.—Went into winter quarters. Barely lived through the long, hard winter.
2. April 20, 1912.—Came out of winter quarters and laid my first batch of eggs—120 in number—in a manure heap.
3. April 21, 1912.—My first 120 eggs have hatched.
4. April 22, 1912.—Larvae have undergone first molt.
5. April 23, 1912.—Larvae have undergone second molt.
6. April 26, 1912.—Larvae transformed into pupae.
7. May 1, 1912.—One hundred and twenty full-grown flies, sixty of which are females.
8. May 3, 1912.—Laid my second batch—120 eggs—this time in the filth of an uncared-for privy.
9. May 13, 1912.—One hundred and twenty flies came from my second batch of eggs. Laid my third batch in a kind neighbor's garbage can.
10. May 20, 1912.—The boy at the house where I live is killing flies right and left. And to think—we have all been eating at the same table with him!
11. May 21, 1912. Laid my fourth batch of eggs. Left alone and unhindered; by Sept. 10, 1912, my descendants will number 5,598,720,000-000.

### METHODS OF COMBATTING FLIES.

Knowing how and where flies breed, their life history, habits; and then studying out for your own place just how your individual flies have settled themselves on you, the logical, scientific method is to upset their regular sequence of life in some definite way. Thus, find and destroy or make useless their breeding places; find and destroy the eggs, larvae (maggots) or pupae; trap and destroy the adult fly; prevent the adult from getting food; exclude them from breeding places, etc. Many ingenious and simple plans have been worked out.

### DESTROYING BREEDING PLACES.

Flies seem to breed in pretty much any damp, smelly place; yet it is true that in hot, dry weather they are most abundant; they prefer horse manure to all else apparently, and swarm about stables for this reason. One of the favorite places is under the boards of the horse-stall floor; because of the deposits which wash down through cracks or between the boards.

Cow manure will do if horse manure is not to be had; garbage is next, refuse meat and other decomposing organic matter. In some communities such material must by law be stored in bins, with fly-proof screen doors or lids. At one stage the young fly needs to burrow into the ground, and to prevent this and so kill them, anything

## POULTRY AND EGGS



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

A DOLLAR for fifteen Barred Rock eggs; Ontario Agricultural College laying strain. Mrs. Berry, Route 6, Guelph.

BARRED Rock eggs and breeding males at greatly reduced prices. Satisfaction guaranteed. Leslie Kerns, Freeman, Ont.

BARRED Rock eggs from well-bred, blocky, heavy-laying, prizewinning birds. Dollar for fifteen; two-fifty for forty-five. Chas. Hilliker, Norwich, Ont.

BARRED Rock and White Leghorn—All imported stock; bred for heavy winter layers; eggs \$1 a setting and \$5 a 100. Write for photo of finest plant in Canada. A. C. Baker, owner, Huron Specialty Farm, Brussels, Ont.

DUCKS—Records exist where Indian Runner ducks have produced 300 to 320 eggs in 365 days. True Indian Runner ducks, trios \$10, baby ducks 75 cts. each. Fertile eggs, \$2, \$3 and \$5 per setting. Mrs. E. C. Cattle, Weston, Ont.

FIFTY CENTS a dozen for hatching duck eggs. Hastings Bros., Crosshill, Ont.

FOR SALE—Single-comb Brown Leghorn eggs, from imported stock; bred to prize cockerels, and grand layers; price \$1 for 15, or \$2 for 45. W. C. Shearer, Bright, Ont.

## Indian Runner Ducks

—The kind that lay all year round; prize-winning stock; eggs \$1 and \$1.50 per setting.

'Phone Fingal, via St. Thomas. A. WATSON & SONS, R.R. No. 1, St. Thomas, Ont.

NEW Laid Eggs—Highest prices paid for New Laid Eggs by Riverdale Dairy Co., 247 Oxford Ave., Montreal.

SINGLE-COMB White Leghorn eggs that hatch; \$1 dollar setting; five dollars hundred. E. W. Burt, Paris, Ont.

UNFERTILE Eggs replaced free and safe delivery guaranteed. Eggs from high standard bred-to-lay Barred Rocks, White Wyandotte, Buff Leghorns, \$1.25 fifteen; large vigorous stock; extra heavy layers; pullets laying at 5 months old. Write for free catalogue which gives full particulars. Satisfaction or money refunded. Charles Watson, Londesboro, Ont.

WHITE Wyandottes exclusively—Eggs \$1 per 15. Good hatch guaranteed. Thos. F. Pine, R.R. No. 3, Ingersoll, Ont.

WHITE Wyandotte eggs from especially selected vigorous stock. Laying strain \$2.00 per setting. Weldwood Farm, Farmer's Advocate, London, Ont.

S. C. White Leghorns—Great laying and prize winning strains; eggs \$1 per 15, a hatch guaranteed, \$4 per 100. GEO. D. FLETCHER, R. R. No. 2, Erin, Ontario. 'Phone Erin.

An interesting advertisement for the

## Imperial Life

ASSURANCE COMPANY

will appear in next week's issue, entitled, "The Groom's Present to the Bride was —" which you can't miss.



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.

FOR SALE—Registered Scotch Collie, two years. Sire Otterburn Diamond (imported). Dam winner four firsts, Toronto. B. Armstrong, Codrington, Ont.

WANTED—Position as herdsman; beef breeds, Shorthorns, preferred; single. A. Marr, \$3 Pearl St., Hamilton, Ont.

## Amateur Photography

Cleaner, clearer prints from your films. No streaks, spots or marks from faulty finishing. Developing 10c. a roll. Postcards 5c. each. Other sizes proportional. Try the City Experts.

"FOTO FINISHERS"

6 Tower Avenue, Montreal

Italian Bees for Sale—Colonies that are first-class in every respect; ready for prompt shipment. In 10-frame Langstroth hives, \$10; in 8-frame Langstroth hives, \$8. Cash with order.

R. B. PETTIT, Guelph, Ont.





**St. Lawrence Sugar**

**Children Need Sugar**

Pure sugar is necessary to the health of young or old. Good home-made candy, sugar on porridge, fruit or bread—not only pleases but stimulates.

Buy St. Lawrence Extra Granulated in bags and be sure of the finest pure cane sugar, untouched by hand from factory to your kitchen.


Bags 100 lbs., 25 lbs., 20 lbs.,  
Cartons 5 lbs., 2 lbs.

**FULL WEIGHT GUARANTEED.**  
Sold by best dealers.

St. Lawrence Sugar Refineries, Limited, - Montreal.

**SPECIALLY MADE FARM FOOTWEAR**

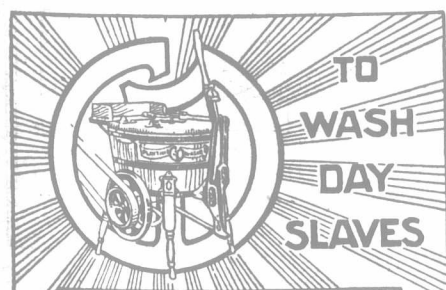
**\$3 Delivered to you**



Here is a light weight, durable and comfortable working shoe specially suitable for farmers, woodsmen, millmen, trackmen, laborers—all who require extra strong, easy footwear for working in. We make them of the splendid oil-tanned Skowhegan waterproof leather that has made Palmer's "Moose Head Brand" famous for almost forty years. No need to suffer with tired, sore, aching, burning feet. Get a pair of these and find ease and comfort. If your dealer doesn't carry them, send us his name, enclosing \$3, and we will ship you a pair, all charges paid, to any address in Canada or U. S. Remit (stating size) by postal or express order. Same style as shown, 8 eyelets high, \$3.50. Write for catalogue F.

**JOHN PALMER CO., Limited,**  
Fredericton, N. B., Canada. 18

**TO WASH DAY SLAVES**



Women were slaves once. Some of them have never gotten over it, particularly on wash day.

If YOU are still bound and shackled by wash day slavery, investigate the "Playtime" Washer. Do not confuse it with the old-fashioned Washers that you have heard of. As a power machine it is specially adapted for the country where gas, gasoline, steam engine or windmill power is available.

See the "Playtime" at your dealer's or send us for full information.

**CUMMER-DOWSWELL, Ltd.**  
206 Hamilton, Ontario

Please mention "The Farmer's Advocate."

which makes the ground impenetrable is useful. This applies especially to the ground under manure, garbage, etc. If the maggots are found, taking them out and burning them is the best method, but insecticides may be used as in the case of other insects. Adult flies may be killed by fumigation or smoke of various kinds. After a forest fire destroying two villages utterly, flies in my own experience, were totally banished—for a week or two! So burning down the whole premises might be tried, if no other method succeeds! This sounds like a very radical measure; but the fact is that getting rid of flies is by no means a task that is easy. It requires an immense amount of great study and persistence in following and finding the breeding and also the feeding places.

**PRACTICAL REDUCTION.**

While the campaign to abolish flies is proceeding, and remembering it may take several seasons to do it, fly reduction, enough for comfort, can be achieved by careful screening of windows, combined with use of fly paper or fly traps inside the house, and making everyone in the house remember to slip in and out through the screen doors only when the flies are not looking! On chilly days they make for the house more particularly, led by the warmth and the food smells; the kitchen and dining-room chiefly attract them of course. Screens are particularly needed when stables and barns are near the house.

Ques.—If pork is well cooked is it possible for anyone to fall a victim to trichinosis? Do you consider the Jews a particularly healthy race?

**CLOVER.**

Ans.—(a) Trichinae in pork are killed by thorough cooking; but when eaten raw, as in summer sausage, or when but partially smoked, without real cooking at all, as in the preparation of some ham, they may survive and infect.

(b) The Jews are often thought to be very exceptionally healthy; but there seems to be very little real evidence that they escape any more than any other race, living under the same conditions. There is one marked exception; Jew babies do not die off at the rate of Gentile babies, even in the worst slums. That is because a Jew mother always nurses her baby, and never goes out working, leaving the baby at home. Gentile mothers often refuse to nurse, leaving that to the cows; and they keep on at work when they ought to be at home taking care of their children.

H. W. HILL.

**The Ivory Snuff Box.**

By Arnold Fredericks.

(Copyrighted.)

Chapter XVIII.

"THE ROSARY."

The dull, heavy sleep into which Richard Duvall had fallen after Dr. Hartmann had left him was suddenly disturbed by the realization that some one had seized him roughly by the arms. He attempted to rise, struggling instinctively against the two men whom he dimly saw bending over him.

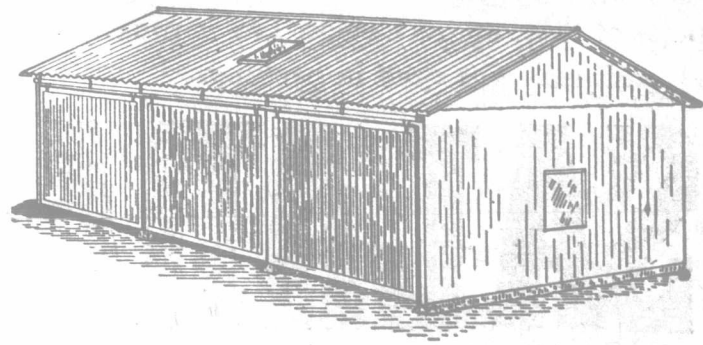
But his resistance was useless. In a moment the leather straps which encircled his wrists and ankles had been drawn tight, and he felt himself being lifted bodily and deposited on the floor in the center of the room. At first he cried out, cursing his captors loudly, but a moment's reflection showed him how profitless his remonstrances were, and he allowed himself to be bound to the floor in silence. In a moment Dr. Hartmann had switched on the violet light, and he once more felt its blinding radiance upon his face.

Hartmann opened the door.

"I shall be back again in a few hours," he said as he left the room. "I hope that by that time you will have quite recovered your senses."

The detective made no reply. He had definitely made up his mind upon one point, he was not going to purchase his freedom at the expense of his duty. He knew very well that the unfortunate situation in which he now found himself was entirely his own fault, and his de-

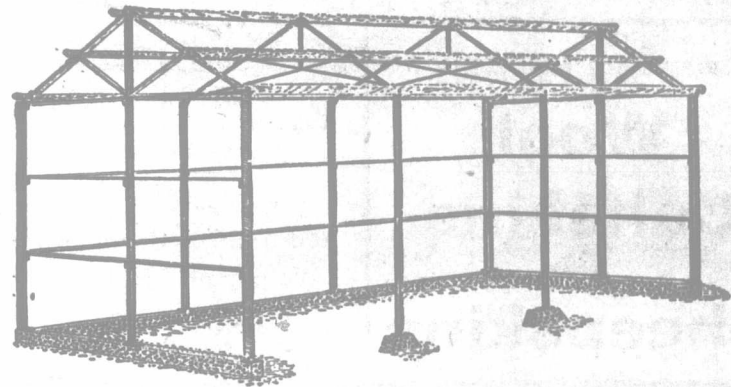
**Protect Your Implements**



**N**OW we offer the man on the farm Ready-Made Outbuildings, Ready-Made Implement Sheds, Carriage Houses, Storage Buildings—Buildings of Metal with Heavy Steel Frames.

Whatever you want a building for—or whatever size—we have one ready to ship to you, ready for you to erect, without help if you like. The parts are ready to put together. We do the cutting and fitting in our factories, numbering the pieces so that any man can put them in place and have an everlasting building of iron and steel, wind-proof, weather-proof—fire-proof and lightning-proof.

Sliding doors on double bird-proof tracks, open singly without disturbing the other doors. The whole



front of Ready-Made Buildings may be opened. Doors are sent you from the factory with all hardware in place. Wired glass and metal windows in roof and gable ends supply plenty of light. These windows are built in the sheets of corrugated iron, so that there is no trouble fitting them into the building.

Eaves and roof ends are completely covered in sealing the building tight against weather and dust.

**READY-MADE FARM BUILDINGS**

**Steel Frames Metal Covering**

Strongly bolted and welded Steel Frame. No chance of sagging or caving in with wind pressure. Whole front opens up.

The frames of Ready-Made Buildings are bolted to wooden blocks set in the concrete foundation. Corner posts, end and side posts are heavy 4-in. channel steel with strong angle braces. The covering is our famous Acorn Brand corrugated iron.

Putting together a Ready-Made Building is a neat, sturdy job—one that will do service for generations.

Write for a booklet with full explanation of how every part is made for strength, and how easily Ready-Made Buildings can be put up—and how quickly you can have a building on your farm after you decide to order.

The **Metal Shingle & Siding Co.** Limited

Head Office: PRESTON, ONT.

Associated with

A. B. ORMSBY & CO., Limited

Consolidated factories at:

PRESTON TORONTO MONTREAL  
SASKATOON REGINA CALGARY  
WINNIPEG EDMONTON

**COUPON**

The **Metal Shingle & Siding Co.** Limited  
Preston, Ont.

Please send your free book Ready-Made Buildings.

.....F.A.



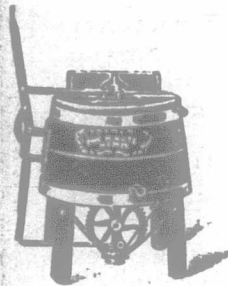
## The Island of Tea

The choicest tea in the world grows high up on the mountain-sides of Ceylon. The native purity and garden-freshness of this superb Ceylon Tea is preserved by the sealed lead packages used in packing.

# "SALADA"

Black, Green or Mixed

SEALED LEAD PACKETS ONLY.



## One Minute Washer

Best Machine Made—Easy to Operate  
Washes Clean—Moderate in Price

Write to-day for Catalogue

ONE MINUTE WASHER COMPANY, Toronto

We are paying high prices for

**Wool**  
**Calfskins**  
AND  
**Sheepskins**

Ship at once to

**E. T. CARTER**  
84 Front Street East  
TORONTO

and receive the high prices.  
We pay all freight charges.  
Write for tags if you require any.



## The Mill That Runs When Others Stand Still.

The value of a mill is in the service it gives you.

### The Toronto Mill

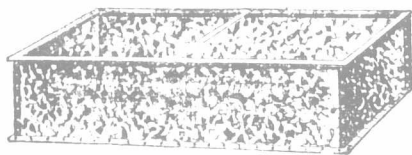
utilizes the light winds, pumping your water when it is needed most, and in this way increasing the value of your investment.

### The Mill with a Reputation

• Write for our catalogue and proposal. It will put you under no obligation and for your own information you ought to have it.

It pays to let the windmill pump your water. Time costs money.

Manufacturers of Windmills  
Gasoline Engines, Feed Grind-  
ers, Saws, Frames, Pumps, Tanks, Water  
Basins, Stanchions, Stalls, Well Drills,  
Pressure Tanks.



Write for Catalogue L.  
**Ontario Wind Engine & Pump Co.,**  
LIMITED  
67 Liberty St. - TORONTO, Ont.  
Factories—Dundas, Ont. and Toronto.  
Branches—Montreal, Winnipeg, Calgary.



When writing advertisers, kindly mention "The Farmer's Advocate."

sire to atone for his momentary carelessness made him determined not to accede to Dr. Hartmann's demands. He hoped that friends outside—Lablanc—Dufrenne—even Grace, might be able to come to his assistance. If he could only know that the snuff-box was safely in M. Lefevre's hands, the rest did not matter much.

These thoughts passed through his mind as he lay with closed eyes, his face quivering under the dazzling light which fell upon it. Its intensity was, he thought, greater if anything than it had been before, and the irritating effect upon his eyes was more pronounced. He did not open his eyes at all, on this occasion, for fear that even a momentary exposure would increase their sensitiveness.

Slowly the day passed. He concluded that it was afternoon when he heard, far off, a bell striking the hour of two, although it might equally have been two o'clock in the morning, for all he could tell. There was a faint hum of conversation in the laboratory above him, however, which convinced him that it was still day.

Presently his ear, acutely sensitive to the slightest noise which disturbed the stillness about him, became aware of a faint sound of music, which seemed to come to him from a considerable distance. It was a popular French march, and from a certain quality of the notes he concluded that it was being played upon a phonograph.

The strains of the music distracted him, took his mind from the things about him, and as he listened it seemed that the effort of keeping his eyes tightly closed grew sensibly less—that the blinding light came upon his face became appreciably easier to bear.

He knew that this was but a momentary relief, but he welcomed it eagerly. To lie in this terrifying silence, under the cruel glare of light, had become frightful. He wondered if, after all, his nerves and his mind could long stand this strain.

The music suddenly stopped. He found himself eagerly hoping that there would be more. In a few moments it began again, and he was listening to the familiar strains of "The Rosary." He had always liked the song, Grace, too, had been fond of it.

He wondered if she could be playing to him, trying to soothe his fast shattering nerves with music. It pleased him to think that it might be so, although he had no reason to suppose that Grace knew of the torture to which Dr. Hartmann was subjecting him.

After a time the final strains of "The Rosary" died away, to be followed by a German march, played by some military band. This, too, he was glad to hear, although he found himself thinking that he preferred "The Rosary."

As if in answer to his thoughts, it began again, and he found himself repeating the words to himself mechanically, and thinking of Grace.

The music continued for more than an hour. Duval noted with surprise that while there were many other selections, "The Rosary" was played almost every other time. So often, in fact, did its strains break the stillness that he became annoyed—in his nervous state this constant repetition of the song worried him.

After a time he shuddered when he heard it, hoping that each time would be the last. No one but an imbecile, he muttered to himself, could enjoy playing a piece over and over in that aimless fashion.

When at last the impromptu concert had ceased, and the silence about him was once more unbroken, he found himself puzzling in vain over the matter, as though it had become of vast importance to him.

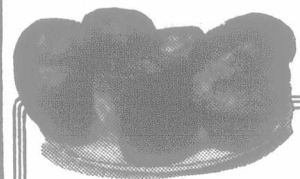
He fell to wondering whether Hartmann had been in earnest when he told him of the qualities of the violet rays. Could they in any way affect his mind? The mere thought stimulated his imagination to such an extent that already he was convinced that his senses were wandering, that his mind was becoming sluggish and dull.

As hour after hour passed, this thought became almost a certainty. His head began to ache terribly, his eyes seemed to swim in pools of liquid fire.



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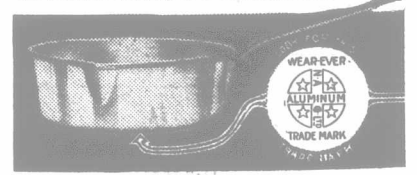
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Bright flashes of light darted through his brain, and at times it seemed almost on fire.

The pain which the constant effort to turn his head caused was becoming more acute as each minute passed. He felt constantly on the point of screaming out in terror, begging for release, agreeing to do anything they asked of him. Then with a mighty effort of the will he would calm himself, and closing his eyes tightly once more, determine to endure until the end.

After an interminable period the sounds of the music once more fell upon his troubled brain. This time the strains sounded more distinct and clear. Three times in rapid succession "The Rosary" was played, then sudden silence.

He waited in vain for more—dreading the recurrence of the song, yet expecting it as one expects the continuance of any oft-repeated sound. There was nothing further, however, and once more the silence became like the darkness about him, a grim and positive thing.

Hours later, when his brain reeled endlessly in a blazing redness, and his tortured eyes seemed bursting from their sockets, the cone of violet light vanished as though some silent hand had brushed it aside, and in the reaction he fainted.

He awoke again to find himself lying on the floor, with Hartmann bending over him feeling his pulse. In a fit of rage he struck out with his clenched hand, and missing, scrambled to his feet. The room was faintly lit by the single electric globe, and he saw Mayer and Dr. Hartmann confronting him, the latter with a revolver in his hand. Once more he realized the futility of resistance, and sank against a packing-box, his hand covering his burning eyes.

The latter appeared to be no longer in his former state of sardonic good nature.

"Are you ready to tell us what you have done with the box," he snarled.

Duvall made no reply, and this angered the doctor still further. "I'll give you an hour to think the matter over," he said furiously. "And if you don't come to terms by that time you shall stay under the influence of the light until you do." He turned toward the door, followed by Mayer, and in a moment they had left the room.

Duvall, in his pain and distress, realized that something would have to be done at once, within the next hour, in fact, or he would be obliged to give up. Physical torture he could stand, but to lie here silently, under that cruel radiance, and realize that his brain, his senses, were slowly giving way, he felt he could not endure.

Yet what was there that he could do? The walls of the room were of solid brick, and he could not hope to penetrate them. The door was of iron, a dozen men could not break through it.

He forced his shoulder against it, and laughed bitterly as he realized that with all his strength he could not even cause it to give the fraction of an inch. He determined to get the snuff-box—to examine it—reckless of his fear of being observed. In a moment he had snatched the opera-hat from the corner, torn out the lining, and held the box in his hand.

He paused for a moment, listening intently. Everything about him was still. There were no sounds from the laboratory above. He remembered now that he had not heard Hartmann and his companion ascend the iron stairway. Doubtless they had returned to the main building by means of the lower corridor.

In a moment he had hung the torn opera-hat over the knob of the door to prevent any one from observing him through the keyhole, and going directly beneath the bracket which held the electric globe, proceeded to examine the box carefully.

The first thought that came to his mind filled him with a strange feeling of hope. He had no more than glanced at the top of the box than he saw which he had previously failed to observe, that the circle of pearls upon its top formed a rosary, which was completed by the ivory cross in the center.

"The Rosary?" Why had this song been so persistently and continuously played? Was it for him, some message, indeed, intended to show him a way out of his difficulties? Yet if so, to what did it lead? There was a

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rosary upon the top of the box, it is true, but what of it?

Absently he began to count the pearls, hardly realizing what he was doing. One of them, he noted, the one at the very top of the cross, was larger than the others, and he started here, slowly counting around the circumference of the box. His eyes pained him frightfully and twice he lost the count and had to begin all over again, but on the third attempt he discovered that the pearls numbered twenty-six. Even yet, the significance of this fact did not occur to him—he began to count the pearls again mechanically.

Then suddenly in a flash the thing came to him. Twenty-six pearls—twenty-six letters in the alphabet. Evidently the box, in some way, might be used in correspondence, or in the preparation of important documents, yet how—how?

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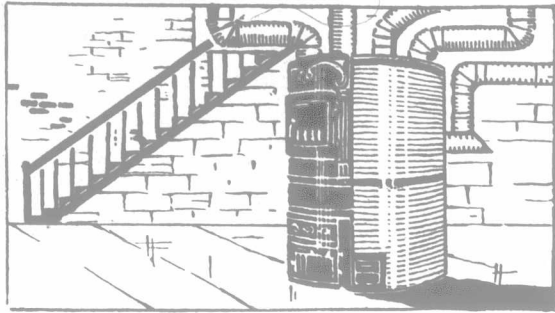
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With repressed eagerness he held the box more closely to the light, searching its surface for some further clue. At once he noticed the arrangement of the concentric circle of letters which made up the Latin prayer.

The words were so written that each letter stood opposite a pearl, and reading inward from each pearl, there was a row of letters six deep reading almost to the center of the box. Clearly here were six different ciphers, that is, six circles of twenty-six letters each, any one of which might constitute a working cipher. It was only necessary to call the big pearl at the top "A," and here were six different letters opposite it, any one of which, in a system of cipher-writing, might be used as the letter A.

Duvall, however, knew enough about ciphers to know that such an arrangement constituted no cipher at all; in other words, that ciphers so simple, so readily solved as this, would never be employed in any case where absolute secrecy was imperative. He felt that there was something more to the matter than he had so far discovered.

Suddenly he saw that just beyond each pearl was engraved on the ivory rim of the box a number. Starting with the large pearl at the top as number 1, the circle of numbers ran around the edge of the box until it returned to its starting point at number 26.

In his efforts to see these numbers, which were very small, he gripped the box tightly in his hands to hold it more steadily toward the rather dim light. In doing so he suddenly became aware of the fact that the rim or edge of the box containing the numbers, and the circle of pearls, was movable. It fitted so cunningly into the top of the box that the joint appeared not as a crack or perceptible space, but merely as a fine thin line, apparently a part of the engraving on its surface.

Holding the lower part of the box firmly in his left hand, he turned the rim of the top slowly about. At once the purpose of this became apparent. Not only had each pearl, representing a letter of the alphabet, six corresponding values from rim to center, in any one position, but by turning the rim around, twenty-six positions could be secured, making a total of 156 different alphabets from which a person desiring to use a cipher might choose.

Again, however, Duvall was conscious of a feeling of disappointment. One hundred and fifty-six different ciphers were no better than a single one, if only one were used. Evidently he had not yet reached the solution of the problem.

In employing such a system of ciphers, some combination, precisely similar to the combinations used on the locks of safes, would have to be used. It was absolutely necessary, in order to insure safety, to use not one cipher, but a large number, changing the arrangement of the letters with each line written—even with each word—in order to defy solution.

Yet such an arrangement being purely arbitrary, could not well be trusted to memory. For, once forgotten, the translation of the document written, even by the writer himself, would be absolutely impossible.

It occurred to him that as there were six different concentric lines of lettering, each constituting in itself a complete cipher, the obvious way to use the box would be to place the pearls in a given position, write six words, using a different alphabet for each word, and then shift the ring of pearls to a new position, and repeat the operation. This, of course, could be done indefinitely, although half a dozen changes would be sufficient to insure a cipher that would absolutely defy solution.

Where, however, was the key? That after all was the important matter. Without it the snuff-box would be as useless to M. de Grissac as it would be to his enemies themselves.

For many minutes Duvall puzzled over the matter, unable to reach any satisfactory conclusion.

Then he began to think of the song which had so clearly been repeated, over and over, as a message to him from outside. The words of the refrain began to run aimlessly through his mind, his eyes upon the box.

Suddenly he realized that the word cross, in its repetitions, its position as the final word of the song, must have a

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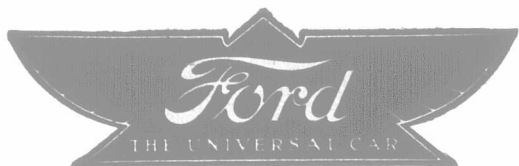


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definite meaning. Before his eyes he saw the cross, so delicately carved as to project scarcely an eighth of an inch above the thin and fragile ivory surface.

Instinctively he began to push at it, pressing it this way and that, to discover if possible any spring or other means whereby it might be made to turn up. As he did so his fingers unconsciously pressed upon the large pearl at the top.

In a moment the upper surface of the cross slid to one side, disclosing a tiny shallow cavity beneath it, some quarter of an inch in either direction, and no deeper than the thickness of a piece of cardboard. Within this lay a bit of tissue paper, tightly folded.

Duvall drew it carefully out and examined it. Upon it were written six numbers. 12-16-2-8-20-4. There was nothing else upon the paper, but Duvall realized that he held in his hand the key to the cipher.

At once M. de Grissac's agitation, the servant Noel's death, Hartmann's persecution of him, became clear. Evidently there were documents, somewhere, of some nature, which this cipher made intelligible, and which, without it, were proof against all attempts to read them.

What were these documents? Were they in Hartmann's hands? These questions he knew could not be answered now.

Immediately the question rose in his mind, what should he do next? By destroying the tiny slip of paper he could render the snuff-box valueless. Without the key no one could use it with success. But, the key once destroyed, how could M. de Grissac himself read the documents, for the preparing of which it had been utilized?

Possibly, if Hartmann had such documents, they were but copies, obtained through the corruption of some clerk, while the originals remained in De Grissac's possession. For these reasons he dared not destroy the cipher, at least until all other means of escape had been exhausted.

Then he realized, in a flash, that if he proposed to utilize the return of the snuff-box as a means of obtaining his freedom, he could not hope to do so if the key was removed. Doubtless Hartmann knew of its existence. In some way he had learned, possibly through the murdered man Noel, that the box contained such a key, and would examine it and satisfy himself that it had not been removed before he would allow him to leave the place. This would inevitably result in his being thoroughly searched, and the key concealed about his person found.

He stood in an agony of doubt, wondering which alternative he should take.

His reflections were rudely disturbed by the sound of footsteps in the corridor outside the door. In a moment he had replaced the tiny bit of paper in the recess beneath the cross, slid the box beneath a mass of straw which lay on top of the packing-case against which he had been leaning.

Then he turned toward the door and had barely time to hurl the opera-hat into a dark corner when the door opened and Hartmann appeared on the threshold.

(To be continued.)

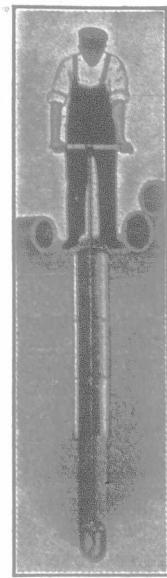
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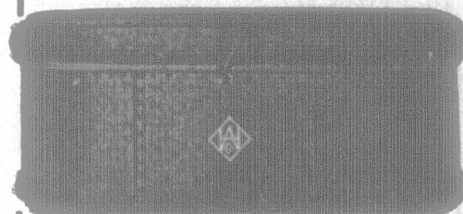


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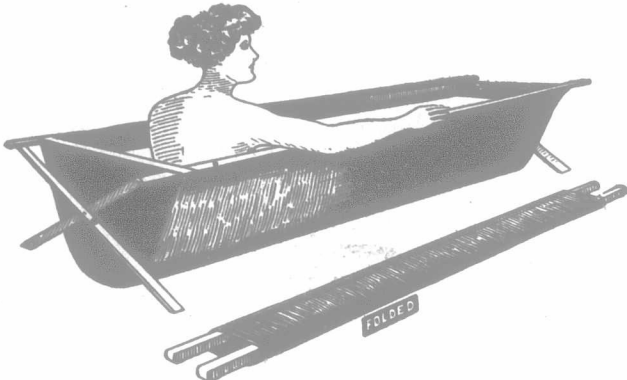
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Forty Insurance Companies in Ontario, reporting over a period of twelve years show that 66 1/4% of all rural barn claims settled were due to lightning.

Prof. Day of The O. A. C. says:—"Lightning Rods properly installed are almost absolute protection. Out of every every \$1,000 of loss to unrodded buildings by lightning, \$999 would be saved if those buildings were properly rodded."

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HESPELER "The Rod with a LOCK JENNY" ONTARIO

When writing advertisers, kindly mention "The Farmer's Advocate."

**Questions and Answers.**

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

**Miscellaneous.**

**Money for Drainage.**

I have been told that a farmer can borrow money from the Government for drainage purposes. Could you tell me how to go about it, and at what rate of interest one may procure the loan?

CONSTANT READER.

Ans.—You will be able to borrow money from the Government for this purpose, but it must come through your township council. You make application to them, and they will supply you with the proper forms upon which to make official application. This being done, the council passes a by-law for the purpose, and if circumstances are satisfactory, they will lend you money not exceeding \$1,000, and nothing less than \$100. The township issues debentures, which are purchased by the Government out of the Consolidated Revenue Fund. On each \$100, you return each year \$7.36, which clears you of all obligation at the end of twenty years, both interest and principle. The rate is 4 per cent. per annum, and this, with the sinking fund, repays the debt in twenty years. You are obliged to make application to your township council, who will then proceed with the matter.

**Cement Dairy Building.**

Kindly let me know the material required to make a cement milk-house 8x10 feet, inside measurement, using the barn wall for one length, with trough for six eight-gallon cans, cement floor, and shanty roof. Five and a half feet at lowest side of building.

SUBSCRIBER.

Ans.—The footings for such a building should be at the bottom of the frost line. However, if the lower part of the footings be made of gravel or small stones, with a small amount of cement, it will do for the foundation, but there should be about one foot of footings, 10 inches wide, for the foundation of the building. We understand this also, that the roof is to be made of cement, so the estimates for the whole building will include that portion. It will require 27 1/2 bags of cement, 62 cubic feet of sharp sand, and 113 cubic feet of gravel. If you do not wish to construct the roof of cement, deduct from this 5 bags of cement, 12 1/2 feet of sand, and 20 feet of gravel. These calculations are based on different mixtures, which are made up of different proportions of cement, coarse, clean sand and screened gravel or crushed stone. The footings to the depth of one foot, and 10 inches wide, are mixed in the proportion of 1 part of cement, 2 1/2 parts sand, and 5 parts gravel. The walls, 6 inches thick, are made of a mixture of 1-2-4. The floor, 4 inches thick, is made of a mixture of 1-2 1/2-4. The tank is figured as being 2 1/2 feet wide, 4 feet long, and 20 inches deep, 8 inches of which shall be below the surface of the floor. These proportions will accommodate two cans a-breast. It will require also about 100 feet of 1/2-inch round rods, and 300 feet of 1/4-inch rods for reinforcing. The building is estimated as eight feet high in front, with the end against the barn which should receive a thin coating of cement, but no provisions were made for it in these estimates.

Volume 36 of the Scottish Clydesdale Studbook, has been issued from the press, and a copy received at this office, by courtesy of Secretary Arch. MacNeillage, 93 Hope street, Glasgow. This volume contains pedigrees of mares numbered from 34135 to 36799, and stallions from 17568 to 18160; also portraits of The Dunure 16839, male Cawdor Cup winner in 1913, and Harviestoun Phyllis, female Cawdor Cup winner in 1913; also changes in ownership, dates of exportation, and corrections on pedigrees entered in previous volumes.

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Cream Separator"



Increases the butter yield 25% besides improving the quality.

Saves time and labour, space and utensils.

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You Can't Afford To Be Without a "MELOTTE"

**THE "MELOTTE" BOWL**

Unlike the top-heavy bowl in other makes the "Melotte" bowl hangs free on a ball-bearing spindle, hence the easy running of the machine and its consequent long life.

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Send for **FREE 1914 Catalogue**, for 90 pages of Bicycles, Sundries and Repair Material. You can buy your supplies from us at Wholesale Prices.

**T. W. BOYD & SON,**  
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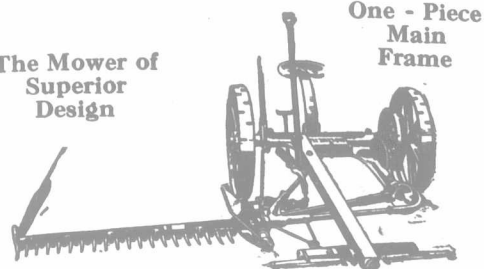
SEND for wholesale catalogue to Lancashire's Cheapest Drapery Warehouse, and learn how to increase income. Make money selling British goods, tablings, towellings, ready-mades, dress materials, ladies' overalls, pinafore muslins. Cochrane's Warehouse, Victoria Bridge, Manchester, England.



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## JOHN DEERE-DAIN VERTICAL LIFT MOWER

The Mower of Superior Design



Compensating Gears—that remove strain from the bearings and transmit instead of consume power.

Long Pitman Shaft—that has all end thrust removed, hence has no need of thrust bearings.

Alignment of Cutter Bar—seldom necessary, but easily, quickly and positively made.

Centering The Knives—so that they always register perfectly in the guards, insuring perfect work.

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Vertical Lift—a lift so easy to operate that an ordinary boy handles it readily

An Easy Foot Lift—so easy it's surprising, especially after using other kinds.

Adjustable Draft Hitch—instantly set to remove side draft in the most severe conditions of work.

Material and Workmanship—of the known John Deere-Dain standard proven by service, reliable and trustworthy.

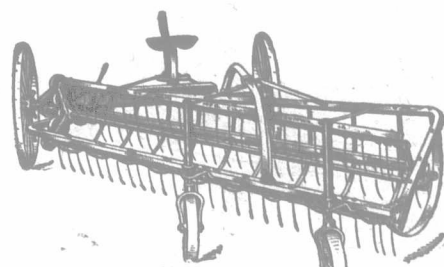
## Famous for Quality and Service

There is satisfaction in using high-grade implements. John Deere implements are noted for their lasting qualities and for doing high-grade work.

They are the result of years of experience in manufacturing farm implements.

When you get a John Deere you are assured of high-grade material, workmanship and efficiency in the field.

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Pays for itself by the increased value of the Hay

A great labor saver. By its use hay is cured quicker and gotten out of the rain. Works around the field the same as the mower, delivering two swaths of grass upside down in a loose, continuous windrow where it will be exposed to the warm atmosphere. Hay cures evenly and without loss of quality or color.

WELL BUILT. Special design of frame—

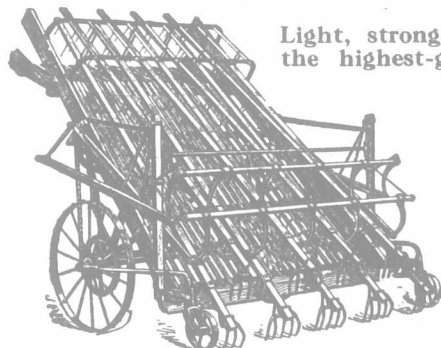
handles greater amount of hay than imitation machines.

Teeth can be raised or lowered and set forward or back.

An easy-running, durable machine that will earn its cost many times over by making hay quicker and better than can be made in any other manner.

Write for special descriptive literature on this machine.

## JOHN DEERE-DAIN HAY LOADER



Light, strong, and does the highest-grade work.

Wheels mounted underneath machine. Works close to fences or ditches

Easiest running and most popular loader of the rake bar type.

Mounted entirely on wheels—rear wheels caster—no dragging around corners.

Working parts hammock mounted—swing freely back and forth like a pendulum.

Strokes of rake overlap—practically raking the ground over twice.

Hay is gathered from the swath full width of the machine.

Rakes are malleable—have a spring trip—spring back and avoid breakage when striking obstructions.

Elevator adjusts itself automatically to light and heavy hay.

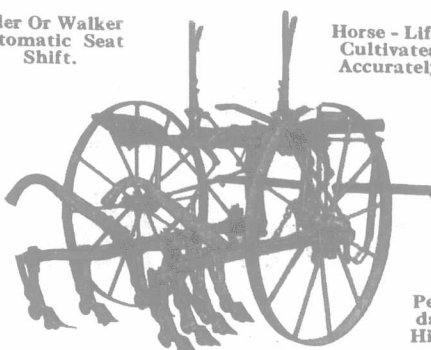
Automatic-adjustable throat opening prevents choking. No twisted or crossed chains, cog gears or long, crooked crank shafts.

There are many other superior features on this loader that we will be glad to tell you about, if you will write us.

## JOHN DEERE "J-112" SEAT SHIFT CULTIVATOR

Rider Or Walker Automatic Seat Shift.

Horse - Lift Cultivates Accurately



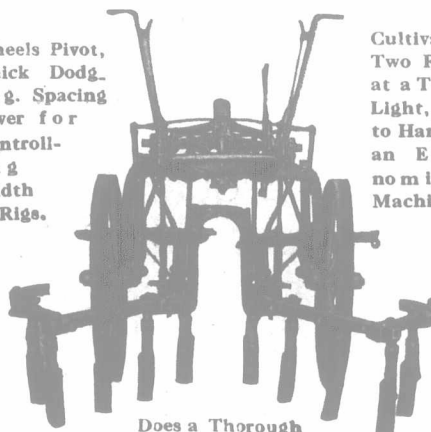
Pendant Hitch

Rigid, Adjustable Couplings, Convenient, Comfortable Dropseat. Write for fuller Description.

## JOHN DEERE "KA" TWO ROW CULTIVATOR

Wheels Pivot, Quick Dodging. Spacing Lever for Controlling Width of Rigs.

Cultivates Two Rows at a Time. Light, easy to Handle, an Economical Machine



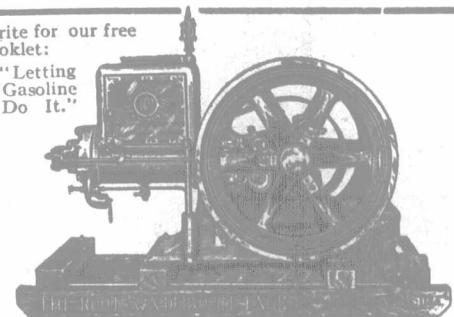
Does a Thorough Job

Outside shovels are on outside of wheels

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The engines that are safe around the house or buildings. Gasoline tank cast solid in sub-base. No danger of exploding.

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THE ENGINES THAT MAKE HARD WORK EASIER

R & V Engines are good ones. They are sold by the John Deere dealer doing business in your home town.

They are made with detachable cylinders in an expensive and superior design.

Main bearings are made of die-cast babbit. Replacement, if ever necessary, is very easy. Triumph Engines are all fitted with fly-ball governors.

They give close and smooth speed regulation.

Oiling of piston is always sure—tube from oil passes close to hot water in hopper. Oil will not thicken even in coldest weather.

All fittings on R & V engines are of the highest grade.

Before you buy any kind of engine it will pay you to investigate the Triumph.

We'll be pleased to send you further information, FREE

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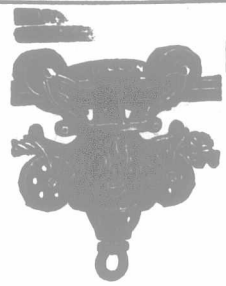
See your John Deere dealer about these machines

## Questions and Answers. Miscellaneous.

### Sugar Cane.

I purchased more sugar cane than I needed for pasture mixture, and would like to sow some for curing for winter feed. In reading Edgar M. Zavitz's article on sugar cane, April 2nd, he says to drill five to ten pounds per acre. Can that quantity be sown with ordinary grain drill, or what kind of drill would have to be used? How thick in rows should plants stand? E. M.

Ans.—In regard to Mr. E. M.'s enquiries, I would say that I always sow my sugar cane with my ordinary grain drill, which is the old David Maxwell drill, with the same tubes as I sow my corn, two tubes running, rows 40 inches apart, one or two seeds per foot in row. The reason I gave such wide margin in number of pounds per acre was that sorghum stools out so much when it has a chance. If sown thin it thickens up. If one seed grows every two feet, don't be alarmed, it may produce an abundant crop, as from five to eight or nine large stalks are produced from one seed, although so small. I should think the drill would need to be closed rather more than for wheat, judging from size and weight of seed. A grower must do a little experimenting, and use his observation and judgment. By making a note of how he sets his drill this year, and the results, and the germinating quality



## HAYING TOOLS FROM FACTORY TO FARM

Satisfaction Guaranteed Or We Refund Your Money

Hay Carriers for Wood, Steel or Rod Tracks.....	\$4.50	Slat Slings 5-ft. Set.....	\$0.25
Forks.....	2.10	Shir Pulley.....	1.75
Steel Track, per ft.....	.10	Floor Pulleys, each.....	.25
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Track Bumpers, each.....	.10	Hitch Hook, each.....	.20
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Short Slings 2-Rope Set.....	2.60	Hanger, Steel Track.....	.07
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		Bracket Nails, lb.....	.06

FREIGHT PAID IN ONTARIO

R. DILLON & SON, 110 MILL STREET Oshawa, ONT.  
ALSO LITTER CARRIERS, STALLS, STANCHIONS, ETC.

of his seed considered, he will be able to improve it if necessary next year.

EDGAR M. ZAVITZ.

### Hard Milking.

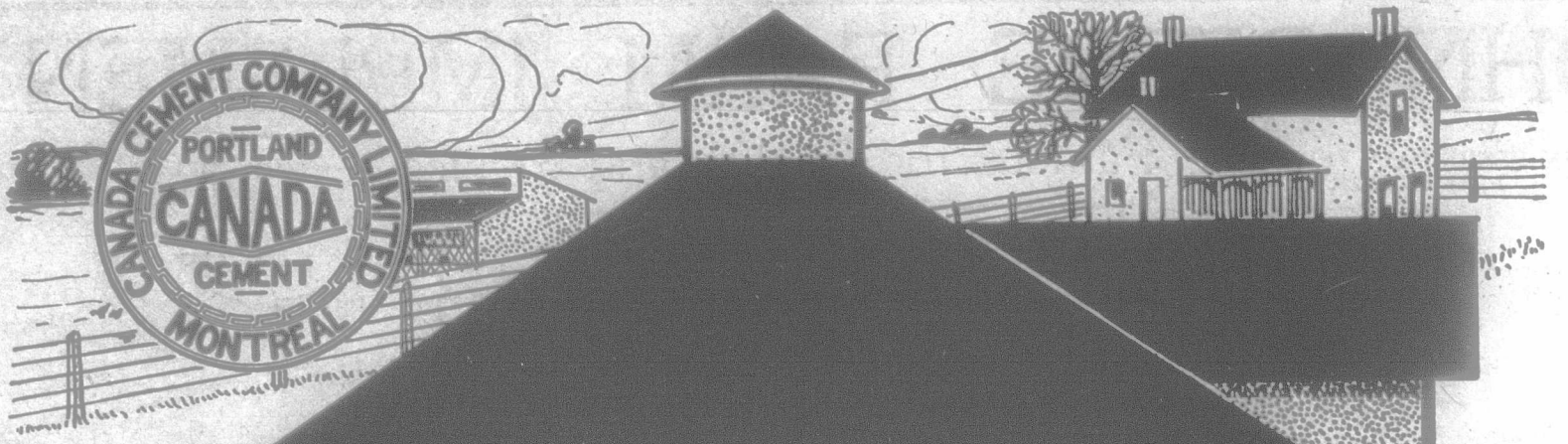
I want to know, through your paper, whether there is any cure for a cow that is hard to milk. Would it do to run something up the teat, or wash with something? She is only five years old. W. K.

Ans.—The passing of needles and such instruments in the cow's teats is dangerous. To enlarge the opening of the milk ducts, little gutta-percha plugs made especially for the purpose can be purchased from dealers in veterinary instruments, but in many cases even these fail to be effective. A correspondent some time ago reported success by nicking the end of the teats with a small, sharp pen-knife. If done, care must be exercised, and it may be necessary to plug to prevent the loss of milk through dripping.

### A SUCCESSFUL AYRSHIRE SALE.

On May 7th, the dispersion sale of the noted milk-record herd of Ayrshire cattle belonging to Robert Wilson, at Gills Farm, Dunlop, Scotland, took place. The highest price realized was 80 guineas, for the four-year-old cow, Auchenbrain Favorite Beauty, a daughter of Lessnessock Good Gift, purchased by Mrs. Houston-Granford. The second-highest price was 70 guineas for the five-year-old cow, Culcaigrie Cherry, taken by H. N. Mitchell. The average for the 55 head sold was £38.





## Build a Better Silo and Save Money

**B**UILD the kind that will keep your ensilage always at its best. Build the kind of silo that does not have to be repaired or painted every other year. Your dairy herd will show its appreciation in the additional quantity of milk it gives. The **best** silo, by keeping ensilage perfect, increases output and soon pays for itself.

### A Concrete Silo

is the dairyman's surest dividend payer. It keeps ensilage in just the right condition, and does not permit it to dry out or get mouldy. A concrete silo cannot leak, rot, rust or dry out. It has no hoops to replace. Requires no paint and needs no repairs during an ordinary lifetime.

Send to-day for this free book, "What the Farmer Can Do With Concrete." It tells how to build a concrete silo and many other things on the farm that will save you many dollars.

Farmers' Information Bureau

**Canada Cement Company Limited**

557 Herald Building

Montreal







**PURE BRED SIREs**

**THE LIVE STOCK BRANCH**

Dominion Department of Agriculture

**WILL PURCHASE** during 1914, a number of **CANADIAN-BRED** Stallions, Bulls, Boars and Rams.

Animals must be of right type, in good breeding condition and of the following ages:

- Stallions, three to five years.
- Bulls, not under one year.
- Boars, not under six months.
- Rams, not under six months.

All stallions will be purchased, subject to veterinary inspection and bulls subject to the tuberculin test.

Breeders in Eastern Canada having **CANADIAN-BRED** male animals for sale, filling the above requirements and registered or eligible for registration in the Canadian National Live Stock Records, are requested to communicate with the Live Stock Commissioner, Department of Agriculture, Ottawa.

The purchase of stallions and bulls will be made during the current spring months. The purchases of rams and bulls will be deferred until the autumn.

Communications must state age and breeding of animal offered and price asked.—60271.

# Lightning Protection

**WHAT** are you doing in the way of protecting the big outlay of money you have invested in farm buildings and live stock **AGAINST LIGHTNING?** Without protection you risk your investment in farm buildings and live stock in every lightning storm. You are carrying insurance; sit down and figure what your loss would be if you were burnt out by lightning after collecting your insurance money—also take into account the high cost of building material and stonemasons' and carpenters' wages.

The matter of lightning protection has been taken up by the Government Agricultural College at Guelph, Ontario, also by the Mutual Fire Insurance Companies of Ontario at their annual meeting in Toronto in January, 1914, and they strongly advocate all farmers to protect their buildings against lightning, and to see that the rods are properly put on, as the erection of the rod is one of the most essential parts. They advocate copper rods.

We manufacture the highest-grade copper rods and their equipment that can be put on the market, and are the oldest exclusive lightning rod manufacturers in Canada.

All our agents and their erectors are experienced men trained by the company, so that perfect installation of the rodding can be depended upon. Write us, and we will have our local agent make an estimate for you.

We want a few good live men for territory still open in Ontario, Quebec and Maritime Provinces.

**DOMINION LIGHTNING ROD COMPANY**  
DUNDAS :: :: ONTARIO



## "La-Lo" Animal Spray

Protects Cattle and Horses From Flies

ENDORSED BY

**Dominion Experimental Farm Authorities**

and **Prominent Dairymen** as being **Superior to all other products of its kind.**

**NO OBJECTIONABLE FEATURES:**

Does Not Blister—Will Not Discolor—Is Not Gummy—Has Agreeable Odor.

Dealers wanted in every town: Exclusive territory given.

**LA-LO MANUFACTURING CO. LIMITED.** - 365 Aqueduct Street, Montreal, Que.



## DIRK'S RED MITE KILLER

One application **KILLS** all Mites and prevents their reappearance during the season. Keeps fowls free from body lice. Makes scaly legs bright and clean. Keeps lard, pastry and sweets free from ants. Bedbugs will give no trouble where used. Write to-day for special trial price. Booklet free. **Marshall & Marshall, Niagara Falls, Ontario**

### Questions and Answers. Miscellaneous.

#### Power House—Calf Scours.

1. I would like to know what the cost would be to build a power house large enough for a pump, churn, separator, and washing-machine, and fit them all up with pulleys and shafting, and everything necessary for hydro-electric power?

2. What is a good thing to give young calves for white scours? M. P.

Ans.—1. Can any of our readers, with such a building and equipment, give us an answer to this question?

2. White scours in calves is a contagious disease. It is claimed that the germs that cause it gain entrance to the system through the raw surface of the new-born calf's umbilical cord. As a preventive, stalls should be kept clean, and the navel cord should be disinfected with carbolic acid, corrosive sublimate, or formalin, as so often recommended through these columns. Formalin has also been strongly recommended as a treatment for the cure of this disease. Try  $\frac{1}{2}$  ounce of formalin mixed with 15 $\frac{1}{2}$  ounces of distilled or freshly-boiled water, which should be kept in an amber-colored bottle to prevent chemical changes taking place. Add one teaspoonful of this mixture to each pound or pint of milk fed to affected calves, or as a preventive it may be mixed with the skimmed milk just after separating, and fed to all calves at such times as there seems to be danger of the trouble appearing, which may be prevented by noting the first signs of derangement of the digestive organs. It is good practice in treating scouring calves, to give from one to two ounces of castor oil as soon as the scouring is noticed. Give this in milk. After the castor oil has acted, commence the formalin treatment. It is always wise to isolate calves suffering from this disease, and after cleaning and disinfecting premises which have been occupied by affected calves, the walls should be whitewashed and the floors kept covered with clean, dry bedding.

#### To Preserve Shingles.

Kindly let me know your opinion on the following, through the Questions and Answers column. I am building a new horse-stable, 30 x 50 feet, and have purchased the best quality of B. C. shingles for roof, and would like to know whether it would pay me to use creosote on same. The creosote would cost me about 25 cents a gallon here. It is wood creosote. Which is the better, wood or coal creosote? How many gallons would it take for 25 squares, and what is the best method of application? H. M. R.

Ans.—This method of preserving timbers is used more generally where cheap materials are bought. This treatment renders them almost as lasting as the very best quality, and does not cost quite as much in the end. Coal creosote is generally used. The wood creosote, from beech wood especially, is used for medicinal purposes, and is much more expensive on account of its ingredients and properties. The creosote gotten through the distillation of coal is most commonly used, and does the work satisfactorily. Shingles are treated with considerable success, and it is generally believed that their life-time will be lengthened considerably. They may be treated by painting after they are on the roof, or by dipping them individually or in bunches in a large tank. A large barrel or tank could be made very cheaply, and a "U"-shaped pipe placed near the bottom. This should extend out 18 or 20 inches from the barrel, and a small blaze under the bent part will heat the material up to the required temperature. The shingles should absorb about 6 gallons to every 1,000 shingles, which would cost about \$1.50 per thousand, and that is not far out of the way, as the estimated cost runs from \$1.25 to \$1.50 per thousand. The most effective treatment is administered by allowing the shingles to cool off in the liquid. They should be heated to about 220 degrees Fahrenheit, and then allowed to cool down. In this way the liquid is forced into the cavities and interstices of the wood. If the liquid is applied after the shingles are laid, they should receive two applications with a large paint brush.

Warranted to Give Satisfaction.

## Gombault's Caustic Balsam



Has Imitators But No Competitors.

A Safe, Speedy and Positive Cure for Curb, Spilt, Sweeney, Capped Hock, Strained Tendons, Founder, Wind Puffs, and all lameness from Spavin, Ringbone and other bony tumors. Cures all skin diseases or Parasites, Thrush, Diphtheria. Removes all Bunches from Horses or Cattle.

As a Human Remedy for Rheumatism, Sprains, Sore Throat, etc., it is invaluable. Every bottle of Caustic Balsam sold is warranted to give entire relief. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars, testimonials, etc. Address: The Lawrence-Williams Co., Toronto, Ont.

## ABSORBINE

TRADE MARK REG. U.S. PAT. OFF.



will reduce inflamed, swollen Joints, Sprains, Bruises, Soft Bunches; Heals Boils, Poll Evil, Quittor, Fistula, or any unhealthy sore quickly as it is a positive antiseptic and germicide. Pleasant to use; does not blister under bandage or remove the hair, and you can work the horse. \$2.00 per bottle, delivered. Book 7 K free.

ABSORBINE, JR., antiseptic liniment for manking. Reduces Painful, Swollen Vets., Colic, Wens, Strains, Bruises, stops pain and inflammation. Price \$1.00 per bottle at dealers or delivered. Will tell you more if you wish. Manufactured only by W. F. YOUNG, F.M.F., 288 Lyman St., Montreal, Can.

## FARMS FOR SALE

Choice fruit, grain and stock farms for sale. We specialize in high-class properties, and aim at offering good values only. Should you have a farm to sell or buy, get in touch with us.

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Real Estate Department, 176 Bay St., Toronto.

### IMPROVE YOUR HORSES

Better condition, sleeker coat and steady health results from use of

**"MAPLE LEAF" Oil Cake Meal**

Write for sample and prices.

Canada Linseed Oil Mills, Limited  
Toronto, Ontario

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Will meet Importers at any port in France or Belgium and assist them to buy Percherons, Belgians, French Coach Horses. All information about shipping, banking, and pedigrees. Many years' experience; best references; correspondence solicited. P.S.—Nogent is in the heart of the Perche horse district.

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If you want to buy Percheron Horses and Mares, I will save you time and money and all trouble with papers and shipment. Will meet Importers at any landing port. I am acquainted with all breeders and farmers. 30 years' experience. Best reference. Correspondence solicited.

**Clydesdales, Imp., Stallions & Fillies**  
Stallions, prize-winners of highest quality, character and breeding; fillies, prize-winners in foal; also stock bull, Crown Imperial 60997, a high-class bull.  
**GOODFELLOW BROS.**  
R.R. No. 3, Bolton L.-D. Phone

**DR. BELL'S** Veterinary Medical Wonder. 10,000 \$1.00 bottles FREE to horsemen who will give The Wonder a fair trial. Guaranteed to cure Inflammation, Colic, Coughs, Colds, Distemper, Fevers, etc. Agents wanted. **DR. BELL, V. S., Kingston, Ontario**

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Horses, Shetland Ponies, Brown Swiss Cattle. Some nice young Hackneys and Shetlands for sale. Stallions, Mares and Geldings.  
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Please mention "The Farmer's Advocate"



**SAVE-NOW-While Working**  
**THE-HORSE**  
 Trade Mark Registered  
**TROY CHEMICAL CO., Toronto, Ont.**  
 Druggists everywhere sell Save-The-Horse WITH CONTRACT, or we send by Parcel Post or Express paid.

**Scratches and Stocking**  
 Are prevalent in cold weather irregular work and overfeed induces both. A system tonic and blood purifier, such as Fleming's Tonic Heave Remedy will prevent these troubles and when developed, with Fleming's Veterinary Healing Oil quickly ease them. Par. box \$1.00  
 Fuller information in FLEMING'S VEST POCKET VETERINARY ADVISER Write us for a Free Copy  
**FLEMING BROS., Chemists**  
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**Kendall's Spavin Cure**  
 The Old Reliable Horse Remedy

THOUSANDS of farmers and horsemen have saved money by using Kendall's Spavin Cure for Spavins, Curb, Ringbone, Splint, Bony Growths and Lameness from many other causes. It keeps horses working. A \$1 bottle may save a horse for you. Get a bottle the next time you are in town. Sold by druggists everywhere, \$1 a bottle, 6 for \$5, also ask for a copy of our book "A Treatise on the Horse"—or write to  
**Dr. B. J. KENDALL COMPANY**  
 Enosburg Falls, Vermont 80

**CURED A WIRE CUT**  
 Left no Blemish

Mr. H. A. Nelson of Ponoka, Alta., after having tried many other remedies for wire cuts, writes enthusiastically about Douglas' Egyptian Liniment.

"I have used Egyptian Liniment for curing a horse from a bad wire cut. It has left no enlargement on the limb and the hair has grown over the scar so that if a person doesn't know about it, he will not notice any scar.

I have tried other remedies for wire cuts but never found one to compare with Egyptian Liniment."

Results begin to show after the first application. Douglas' Egyptian Liniment stops bleeding at once and heals wounds like magic, without danger of blood poisoning.

Douglas' Egyptian Liniment can be had at any dealers for 25 cents

Free sample sent on request.

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**Questions and Answers.**  
 Veterinary.

**Operation for Lameness.**

Mare went lame last summer. My veterinarian recommended nerving, which was done. She still went lame for some months, and then again went lame on frozen ground, but is all right now.

1. Was it the nerving that cured her?
2. Was the lameness due to some other cause?
3. Will nerving hurt her in the future?

F. H. J.

Ans.—1. As your veterinarian diagnosed a lameness that was removable by the operation of neurotomy or nerving, it is quite probable that the operation removed the lameness from which she was suffering at the time.

2. The recent lameness on frozen ground was doubtless due to some other cause.

3. This is impossible to say. Horses that have been operated on, sometimes continue sound for years, but at any time are liable to become useless from rupture of the flexor tendon or fracture of the navicular bone, or other disease of the foot. As all sensation is removed from the foot, the animal will not show symptoms of disease of the foot until too late to treat. V.

**Miscellaneous.**

**Breeding Pigs.**

I have a pure-bred Tamworth sow that I bred to a Chester White boar. I have since bred her to a Tamworth. Will her pigs be all right to register? M. C.

Ans.—Provided the pigs in color markings meet the requirements of the Tamworth rules, they will register all right.

**Blackhead.**

Having read from time to time a great deal in your valuable paper re blackhead in fowl, and am especially interested, would like some information. I will tell you my experience. A year ago last March my hens commenced taking blackhead, and I lost about half of my flock. Last summer and fall I shut up my poultry-house and thoroughly disinfected house and yards twice. This spring I began in March to feed muriatic acid, and had no trouble until I set six broody hens, and at the end of eight days, all six took the disease, and four died. I had them all in clean boxes in a wagon-shed where hens never were before. Can you tell me if Plymouth Rock fowl are more subject to that disease than other breeds, and what caused the hatching hens to take it. All six had corn and wheat to eat, and plenty of clean, fresh water to drink. I would be very pleased to receive any information regarding this matter. If I can't do something to eradicate the disease, I will have to get rid of my flock. I am inclined to think Plymouth Rocks may be more subject to that disease. Will any of your readers that have been troubled with that disease, kindly answer if their fowls were Plymouth Rocks or another breed? R. J. L.

Ans.—We never heard of Plymouth Rocks being more subject to the disease than any other breed of fowls, and would not credit such a statement. It may be that the hens contracted the disease from germs left in the runs by the disease a year ago. Otherwise we cannot account for it. Clean up the premises. Put hens and chickens on new runs, and destroy all affected birds.

**Gossip.**

At an auction sale of Shorthorns the first week in May, the property of the brothers Hicks, at Sherborne, England, and chiefly of Scottish blood, the top price realized was 245 guineas, for the three-year-old cow, Queen Augusta, purchased by S. F. Edge. Beauty of the Meadow, three years old, sold for 210 guineas to Hon. C. B. Portman. Six other females brought prices ranging from 100 to 180 guineas. The highest for a bull was 220 guineas, for the red four-year-old, President of the Mint, purchased by Lady Gordon Cathcart. Thirty-seven head averaged £12 10s.



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 Grenville is midway between Montreal and Ottawa, C. P. R. and C. N. R. Three trains run daily from each of these cities.

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of that rare selection made in 1913. They are a combination of size and quality, with a good many of the mares in foal to noted sires. A visit to our stable, will be money in your pockets, as we have the goods and prices that cannot be duplicated elsewhere.

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 When in need of a high-class Clydesdale stallion or filly, or something that has won and can win again in Hackney stallions or fillies, visit our barns at Hudson Heights, Quebec  
**T. B. MACAULAY, Proprietor. Hudson Heights, Que. E. WATSON, Manager.**

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 For this season's trade we have Clyde Stallions and Fillies that were up to championship honors in Scotland, and the same honors in Canada. Breeding characters, quality and action unsurpassed. Visit our barns if you want the best.  
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**Imported CLYDESDALE Stallions**  
 Yes, they are here, our 1914 importation, and if you want a big young stallion with the best legs, ankles, feet, action, breeding and character you ever saw at a price a poor man can pay, come and see our lot.  
**BARBER BROS. GATINEAU PT., QUE.**

**BREEDING AND QUALITY** There never was a better bred lot imported, and their standard of character and quality is the highest and my price the lowest.

**Clydesdales** G. A. Brodie, Newmarket, Ont. L.-D. Bell 'Phone

**STALLIONS AND FILLIES** **TOPPERS IN CLYDESDALES AND PERCHERONS**  
 I have just landed a big importation of Clydesdales and Percherons, if you want a big ton stallion with the best of quality, come and see me, I can show you the best lot of stallions you ever saw.  
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 To the Clydesdale men of Canada we wish to say we have some of the best show material in this country. More size, more style, more quality, more character and better breeding than ever before, in both stallions and fillies.  
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 to remove the lameness and make the horse go sound. Money refunded if it ever fails. Easy to use and one to three 45-minute applications cure. Works just as well on Sidebone and Bone Spavin. Before ordering or buying any kind of a remedy for any kind of a blemish, write for a free copy of  
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**Questions and Answers.**  
 Miscellaneous.

**Sumac—Ducks.**  
 1. Have ten or fifteen acres of pasture land overrun with sumac. It is sandy loam. Does it spread from the seed or by root? Would you kindly tell us how to kill it?  
 2. How many ducks should run with one drake?  
 R. W.

Ans.—1. It spreads from root and seed. The only way to kill it is to dig it out or keep it cut below the ground.  
 2. Not more than four or five. Generally, not more than three are kept with one drake.

**Woodchucks.**  
 Will you please tell me, through your valuable paper, how to get woodchucks out of their holes?  
 E. H. W.

Ans.—We have seen woodchucks dug out and we have seen them smoked out by kindling a fire at the holes leading to their underground den. Better than either would be to get a little carbon bisulphide from your druggist. Pour from one to two tablespoonfuls of the material over some cloth or rags, and ram it into the hole as far as possible, and then pack the entrance full of earth. Where there are two holes, one should be closed before the operation begins. This will smother the woodchucks in their holes.

**About a Young Orchard**  
 1. Will you kindly publish in your paper how and when is the best time to plant an apple orchard? I have a hilly field, very steep; a kind of hog's back. It is very good clay loam. On one side it slopes north-west, and on another side it slopes south-east. On one side it is very cold. Would you consider this a good place for trees?  
 2. If so, what variety would you advise planting?  
 3. Where is the best place to get trees?  
 4. Would any other kind of fruit trees do well on this same land?  
 F. D. McC.

Ans.—1. A northern slope is desirable for an apple orchard, but one where seepage or hillside water makes it cold is not desirable. Of course, the excessive moisture can be drained away, but you say it is very steep, which condition might lead to considerable wash during spring freshets. Many orchards are planted on such soil with satisfactory results, but if the land is as steep as you lead us to believe, it might be advisable to select some other part of the farm for the orchard. The customary season for setting apple trees is in the early spring, when the land is warm and can be easily worked up. Any soil that has been previously prepared by leguminous crops or has not been depleted of soil fertility by excessive cropping, should be in good condition. The customary distance for setting standard varieties is 35 or 40 feet apart.

2. Standard varieties of apples now being set are Baldwin, Greening, Northern Spy, McIntosh Red, Snow, Stark, and many others with more or less virtues to commend them. It is wise in planting to select those varieties that have quality and appearance to sell them when the market is being overcrowded with inferior kinds. It is not likely that the market will ever become glutted with such apples as Northern Spy, McIntosh and Snow, and perhaps a limited amount of Greenings. These are things worthy of consideration in setting a young orchard. It should be remembered, however, that they are not the quickest to come into bearing, and often some varieties of the inferior qualities will bear early and abundantly enough to overcome the undesirable points regarding their quality. However, that is a matter for individual consideration, based upon nearness to markets and shipping facilities.

3. The most reliable nursery firms are the only source for young fruit trees. Many of them have been advertising in our columns, and by referring back a few numbers you will find the notice of several leading firms.  
 4. Pears and plums could be grown on this character of soil, but you will find it rather heavy and cold for peaches and cherries. Berries such as currants and gooseberries, might also be grown to some extent on that type of soil.

CONVENIENT ----- Burns coal, coke, or wood. Large feed doors make firing easy.

**McClary's**  
**Sunshine**  
**Furnace** Water pan is filled without removing.  
 See the McClary dealer or write for booklet.

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**DAIRY SHORTHORN BULL**  
 LYNNORE DUKE 91421; calved May 27, 1913; bred by Lord Rothschild, Tring Park, Tring, Herts, England. Dam, Fairy Duchess 34th. Sire, Anchorite. This bull is the product of special breeding of Shorthorns to obtain milk, and is of finest English milking stock. Also

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 From choice imported English stock. Particulars on application to  
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**Berkshires** From our prize-winning herd of large English Berkshires we have a particularly choice offering in young boars and sows, many of them now of breeding age. Order early and get a choice selection.  
**S. DOLSON & SON** - Norval Station, Ont.

I have twenty good Imported Bulls on hand 11 and 12 months, will deliver any of them to any place in Ontario or Quebec for \$135.00; also have a few good heifers 11 and 12 months old, will sell for \$110.00 each.  
**L. O. CLIFFORD,** :: :: :: :: :: Oshawa, Ont.

**Elm Park Aberdeen-Angus and Clydes**  
 We have for sale a few two-year-old heifers by imported bulls and out of imported cows bred to good bulls. We also have 3 three-year-old Clydesdale fillies, 2 two-year-old fillies and 2 yearling stallions. Five of them out of Lord Charming mares by King Seal, Imp. Address: **JAMES BOWMAN, Elm Park, Guelph.**

**"THE AULD HERD"**  
 We have a select lot of females of all ages, and of the best Scotch families for sale. Also a March bull calf, red, little white, an Orange Blossom by Broadhooks Ringleader.  
**A. F. & G. AULD, Eden Mills, P.O.** Guelph or Rockwood Stations

**R.O.P. Shorthorns -- R.O.P. Jerseys** For the first time we are offering for sale Shorthorn cows and heifers and Jersey cows and heifers with official R.O.P. records; with their official records is high-class individuality.  
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**Willow Bank Stock Farm** Shorthorns and Leicester Sheep. Herd established 1855; flock 1848. The imported Cruickshank Butterfly Roan Chief = 60865 = heads the herd. Young stock of both sexes to offer. Also an extra good lot of Leicester sheep of either sex; some from imported sires and dams.  
**Jamc<sup>r</sup> Douglas, Caledonia, Ontario**

**Maple Grange Shorthorns**  
 Pure Scotch and Scotch topped Breeding unsurpassed. A nice selection in young bulls, and a limited number of thick, mossy heifers.  
**R. J. DOYLE, Owen Sound, Ont.**

**Poplar Shorthorns** We have the best lot of young bulls for sale this spring we have ever bred, reds and roans, 10 to 18 months of age, Butterflies, Roan Lady's, Lavenders and Lovelys, all sired by the great Uppermill Omega Imp. Strictly high-class herd headers.  
**MILLER BROS.**  
 Route 2, Claremont, Ont.

**SHORTHORNS** I have ten young Shorthorn bulls, some fit for service now. Part of them are bred, and made so that they are fit to head the best herds in any country, some of them are of the thick, straight, good-feeding kind, that will produce money-making cattle; some of them are bred from the best-milking Shorthorns, and the prices of all are moderate. I have SHROPSHIRE and COTSWOLD rams and ewes of all valuable ages. Write for what you want.  
**Robert Miller, Stouffville, Ont.**  
 I can suit you in quality and price.

**100 SHORTHORNS IN OUR HERD. 100**  
 Our 1913 crop of 22 bulls are all sold, we have 20 extra bull calves coming on for the fall trade. For sale—25 heifers and young cows; those old enough are bred to Right Sort (imp.), or Raphael (imp.), both prize winners at Toronto last fall.  
**MITCHELL BROS.** Farm 1/4 mile from Burlington Junction **BURLINGTON, ONT.**

**Shorthorn Cattle** of the popular families for sale. 9 heifers just ready for breeding; 7 two-year-old heifers in calf; 10 young cows with calves by side or close to calving. 10 bulls ready for service, of good colors, at prices within the reach of all.  
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### CHOICE BULLS

Have two excellent bull calves left, which are 9 and 10 months old. They are both deep, low set calves, besides being good handlers, and their breeding is gilt edge. Also a number of heifers, all ages.

WM. SMITH, Columbus, Ont.

### SHORTHORNS

Bulls all sold; choice females for sale. One yearling Clyde stallion, one weanling Clyde stallion, big, best quality and breeding.

CARGILL LIMITED  
JOHN CLANCY Manager Cargill, Ontario  
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### Spring Valley Shorthorns

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

KYLE BROS., Drumbo, Ontario  
Phone and Telegraph via Ayr.

### Good Shorthorn Bulls

not all sold. I have 2 roans, 17 and 12 months, respectively; a dark red, 12 months; a white, 11 months; a red roan, 10 months; all straight, smooth, wide, fleshy, strong-boned bulls, showing breed character; some from heavy-milking dams; also five yearling heifers. Priced on easy terms for quick sale.

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### "OAKLAND" SHORTHORNS

60 head of good individuals to select from, 26 breeding females, headed by a fine roan 1st prize and sweepstakes bull. Just three bulls fit for service, all of high quality, and priced to sell.

Dual-purpose a specialty.  
John Elder & Sons - Henshall, Ontario

### THE MANOR Shorthorns and Lincolns

Bulls and rams all sold; a few females for sale. Inspection solicited.

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FLETCHER'S SHORTHORNS—Present offering: Two choice bulls, suitable for high-class herd headers, 8 to 11 mos., and females all ages. Present stock bull, "Royal Bruce" (Imp.) = 55138 =, George D. Fletcher, R. R. No. 2, Erin, Ont. Train Station, C.P.R. Long-Distance Phone

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Have some choice young bulls for sale; also cows and heifers of show material, some with calves at foot. Also choice Yorkshire sows.

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### Shorthorns "Trout Creek Wonder"

at the head of the herd, which numbers about 40 head. Heifers and bulls of the best quality for sale at reasonable prices.

DUNCAN BROWN & SONS, R.R. 2, Shedden

### Questions and Answers. Miscellaneous.

#### Repairing Fence.

A and B own farms adjoining. The line fence runs through a bush about half way across. A has always kept up the part of fence in the clearing, as he had cleared this half before B cleared his. B ran the fence through the bush part. A and B each pasture their part of bush. During a windstorm a number of trees from A's bush were blown across B's part of fence. Who is obliged to repair the broken fence?

Ontario. ENQUIRER.  
Ans.—A. See Section 17 of The Line Fences Act (Revised Statutes of Ontario, 1914, Chapter 259).

#### Leg Weakness.

What can I do for early spring chicks that lose use of their legs, and what is the cause of it? They eat fairly well, but stagger about, and finally die.

J. D. S.  
Ans.—Leg weakness may result from many causes, crowding, close confinement, and lack of fresh air in the brooder are common causes of this trouble. Overheating, with too little fresh air, is another cause, and the lack of sufficient mineral food is a common cause. Chicks should get plenty of grit, and fine, granulated, dry, raw bone. Give also plenty of fresh, green food.

#### To Promote Growth of Hoof.

Please publish the best and quickest way to make a horse's foot grow, and also soften? Please tell where to purchase the stuff.

N. H.  
Ans.—Blister around the hoof head with a blister composed of two drams each of biniodide of mercury and cantharides, mixed with two ounces vaseline. Tie so he cannot bite the parts. Clip off the hair around the hoof head. Rub well once daily for two days with the blister, and on the third day wash off and apply sweet oil. Let loose now. Oil daily until the scale comes off. Repeat in a month if necessary. Get the drugs at a drug store.

#### Communicable Diseases.

1. Is it legal or right for a doctor to placard a house and not state what the disease is—just stating, "this house quarantined"?
2. Is it legal or right to remove a patient from one house to another after being treated for over a week for some contagious disease not made known by the doctor or inmates of said house, said house being situated in a small village?
3. Who is the proper authority to ask in order to find out the nature of said disease, or are they in duty bound to tell?

D. A. G.  
Ontario.  
Ans.—1. No.  
2. No.  
3. The Medical Health Officer of the municipality.

#### Keeping Butter.

I have but one cow, and won't bother selling the butter if I can help it. Would it be advisable to pack the butter away for winter use? If so, how may it be done?

D.  
Ans.—It is believed by those who have practiced packing butter for winter use that the best time to do so is in the months of June and September, September preferred. Extra care should be taken in handling the milk and ripening the cream, it being necessary to have a good clean flavor to begin with. Butter to be packed should be washed twice, and salted about one and a quarter ounces to the pound. It should be given two workings, after this it is placed in a clean, well-glazed crock. Before being put in, the crock should be scalded two or three times with boiling, salted water. The butter should be placed in the crock in small pieces, and pounded in from the center towards the outside to have no holes or air spaces. Fill to within one-half inch of the top of the crock, and after levelling off and smoothing down, cover with parchment paper or cotton, and place over the top a layer of salt moistened with water to form a paste. Put on a cover and tie it down with several thicknesses of clean paper. The butter should be kept in a cool place with a steady temperature. When the cold weather comes in the fall, take the butter from the cellar and place it in a room where it will freeze.

## Raise Better Calves at Less Expense, with Royal Purple CALF MEAL

It is no longer necessary or even advisable to give your whole milk to calves. Use ROYAL PURPLE Calf Meal and get the good price for your whole milk that it will bring. ROYAL PURPLE Calf Meal is entirely different from most others, because it is nearly pre-digested. The ingredients which are hard to digest are roasted to render them easy of assimilation by the calves. The roasting also causes the grains to shrink over one-third, so that in using ROYAL PURPLE Calf Meal you are using a concentrated meal, containing pound for pound, more value than others. Equal to new milk at 5 cents a gallon.

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ROYAL PURPLE Solves the problem of what to feed young chicks to get best results. ROYAL PURPLE Chick Meal is just right, neither too coarse nor too fine. The ingredients hard to digest are partly roasted. No losses of chicks through indigestion when you use this splendid meal. If your dealer hasn't it, write us direct. Fifty per cent of the young chicks that die do so from indigestion due to improper feeding.

To raise fowl successfully you should have our poultry remedies, especially our Roup Cure. There is no reason why you should lose any of your young chicks or turkeys from disease.

FREE:—one of our 80-page booklets on the common diseases of stock and poultry and how to treat them.

**SPECIAL \$50 PRIZE OFFER.**  
We offer \$50 cash prize for the best calf raised in Ontario on our ROYAL PURPLE Meal, weight for age, shipped to us for the Toronto Exhibition. This calf will be shown in our exhibit, and after the exhibition is over will be returned to the successful contestant. Ask your dealer for full particulars.

**We will send 100 lbs. Calf Meal Freight Paid for \$4.25**  
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## Oil Cake Meal

A food to make cattle fat. Tones the system. Makes more butterfat. Try either pea size or coarse ground for sheep. If your dealer cannot supply you, write us for prices.

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### SHORTHORNS AND CLYDESDALES

We have seven yearling bulls and seven bull calves from 7 to 12 months. All reds and roans, and of choice breeding. We have some extra good imported mares for sale, also some foals. If interested, write for catalogue of their breeding.

**W. G. PETTIT & SONS, Freeman, Ont.**  
Burlington Junction, G.T.R. Bell Phone

### Springhurst Shorthorns

Shorthorn cattle have come to their own; the demand and prices are rapidly increasing, now is the time to strengthen your herd. I have over a dozen heifers, from 10 months to two years of age, for sale; everyone one of them a show heifer, and some of them very choice. Bred in my great prize-winning strains. Only one bull left—a red, 18 months old.

**HARRY SMITH EXETER STN. HAY P. O.**

—Herd headed by Gainford Ideal and Gainford Perfection, sons of the great Gainford Marquis. We are generally in shape to supply your wants in either sex.

**Salem Shorthorns**  
J. A. WATT, Elora G. T. R., C. P. R. Telephone and Telegraph

### BELMONT FARM, SHORTHORNS

We are offering 20 heifers from 1 to 3 years, daughters of the 1913 Toronto Grand Champion, Missie Marquis 77713, Scotch and Scotch Topped, several of them show heifers.

**FRANK W. SMITH & SON, R.R. No. 2, Scotland, Ont.**  
Scotland Sta., T.H. and B. L.D. Phone.

### Glenallen Shorthorns

We offer for sale some of the best young bulls we ever bred, Scotch or Booth breeding, low, thick, mellow fellows of high quality; also our stock bull Climax = 81332 = sired by Uppermill Omega.

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### Questions and Answers. Miscellaneous.

#### Lending a Rifle—Trespassing Cattle.

1. A borrowed a rifle from B. A returned rifle to B's agent. B says it is valueless to him. Can he collect part or full value from A, A being a boy under 14 years of age when he received rifle from B?

2. Would B be liable to a fine for loaning firearms to a boy of that age?

3. B's cattle and colts having broken into A's property several times, some of A's heifers getting with calf to B's bull, can A collect damages for pasture, and to heifers, B having been asked to build his part of fence several times?

Ontario. A SUBSCRIBER.

Ans.—1. It is not likely that he could do so.  
2. No.  
3. We think that A is entitled to recover damages from B.

#### Lost Dog.

I lost a dog some time ago, and heard that it was at a man's house three miles away, having apparently strayed there, or been picked up on the road. I called at the man's house and demanded the dog. He absolutely refused to give it up, giving at the time no reasons except that he had found it. Can I have him arrested forthwith and brought before a magistrate? Would the magistrate give me an order or warrant for his arrest?

Ontario. ENQUIRER.

Ans.—It is likely that the magistrate would decline to issue a warrant. He might, upon your laying a sworn information before him, charging the man with theft of the dog, grant a summons for service upon him requiring his appearance to answer the charge. But you would incur considerable risk in taking such proceedings. On the whole, it would probably be advisable to sue in the Division Court. A replevin action in that Court would be the appropriate form of suit. By such replevin proceedings, you ought to be able to recover your dog and damages for its detention.

#### Ditching.

A and B put ditch in last summer. A gives B outlet through bush. B has a tile drain half way through bush, and is letting water run over ground into A's outlet drain and is washing earth into tile. This ditch is an engineer's drain. B helped his share putting in tile. B's farm butts A's. This main ditch runs up to A's line fence, between his place and C's. B's outlet is a branch from main ditch.

1. Can B run water out of tile over ground into A's tile?  
2. Will the law allow a man to do this?  
3. Can a man be made to tile a ditch through bush?  
4. Can B be made to tile ditch down to outlet?

Ontario. A SUBSCRIBER.

Ans.—1 and 2. We do not see that he can be prevented from doing so.  
3. Hardly.  
4. Probably not.

#### Wife's Property Rights.

A man buys a farm, paying about one-third down. Has his name put on the deed, which is held by the seller, and also signs an agreement of purchase. His wife's name is not on any of the papers.

1. What hold has his wife upon the property?  
2. Has she any power legally, to stop the sale of the place if she is not willing that it should be sold?  
3. If he should die without a will, how would it be divided, there being children?

Ontario. STEVE.

Ans.—1. She has her dower—that is to say, the right to an estate for life in one-third of her husband's interest in the farm in the event of her surviving him.

2. Practically, yes; for he could only sell subject to her dower interest, and would find it difficult, if not impossible, to find a purchaser willing to buy in that way.

3. She could take her dower, and subject thereto the property would be divided equally between the children; or she could take a third of her husband's entire estate remaining after payment of debts and expenses, and the children the rest in equal shares.



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### Questions and Answers. Miscellaneous.

**Engineer's Papers.**  
Where can I obtain information concerning the getting of papers to run a steam threshing engine in the Western Provinces, Manitoba or Saskatchewan?

ENQUIRER.  
Ans.—This matter is under Provincial jurisdiction. Write the Minister of Public Works for Saskatchewan for application forms. We are not sure whether it is handled by the Public Works Department in Alberta or not, but if you wrote there, no doubt you would receive the necessary information, or be directed where to obtain it.

**A Horse Deal.**  
A owns mare in foal. In fall of year he trades her with B, no money being paid on deal just then, but B agreeing to pay next spring the price of breeding service of stallion to the amount of \$25 (or for colt). A has witness in his father to the whole deal. B trades mare with C, \$5 being paid between the horses and C agreeing to pay for colt. B does not deny agreeing to pay for colt, but C will not pay for it, therefore B says he will not pay A for it. There were no writings in these deals.

1. Can A legally collect this money from B?  
2. If A does not get his money from B, can A follow and take mare and colt?

SUBSCRIBER.  
Ans.—1. We think that A can collect from B, if he is worth it. B has no excuse because C does not pay him.  
2. We do not think A can follow the mare.

**Vinegar—Potatoes—Maple Sap.**

1. One year ago last fall I got cider made from mixed apples. It fermented, and with it I put about a quart of mother of vinegar. It is no good for vinegar yet. What would be the proper method of making vinegar?  
2. For potatoes, is spreading manure on the land and plowing it down and dropping the seed in the furrows at the same time, a good way?  
3. I have a sugar bush in which half of the trees are soft maple. Could I make good sugar and syrup by boiling the sap from the two kinds of trees together?

J. M.  
Ans.—1. Your method of making vinegar is all right, provided you had proper temperature and a clean container. It might have been better had you drained off the clear juice from the barrel and put it into a container that had previously been scalded. Some "mother of vinegar" and a little pure vinegar is good to start fermentation. This should then be kept at a temperature of about 75 degrees Fahrenheit. A cotton plug should be put into the barrel in order to retard evaporation, and at the same time allow for an interchange of atmosphere in the barrel. Possibly your storage has been at too low a temperature, and organisms detrimental to the making of good vinegar have increased more than they should. The temperature of 75 degrees Fahrenheit will encourage the reproduction of these organisms which cause the proper fermentation in the making of good vinegar.

2. This method is used with considerable success. It would be better, however, if the land were previously worked up, and then the potatoes dropped in every third furrow and plowed down about five inches deep. However, if this is the only method that the condition of your land will allow you to use at the present time, it is in no wise to be despised.

3. There is a general belief that the sugar made from soft maple sap is not as choicest, and not as good as that made from hard maple. As you know, of course, the sap from soft maple requires a lot longer boiling before it will arrive at the same concentration of sugar as that from hard maple. No doubt if the soft maple sap is boiled to the proper concentration, it will be found to be just as good as that made from hard maple. The only reason why it is not so generally used is that it takes longer to boil, and therefore costs more to produce. It is a matter of convenience, and not of quality.

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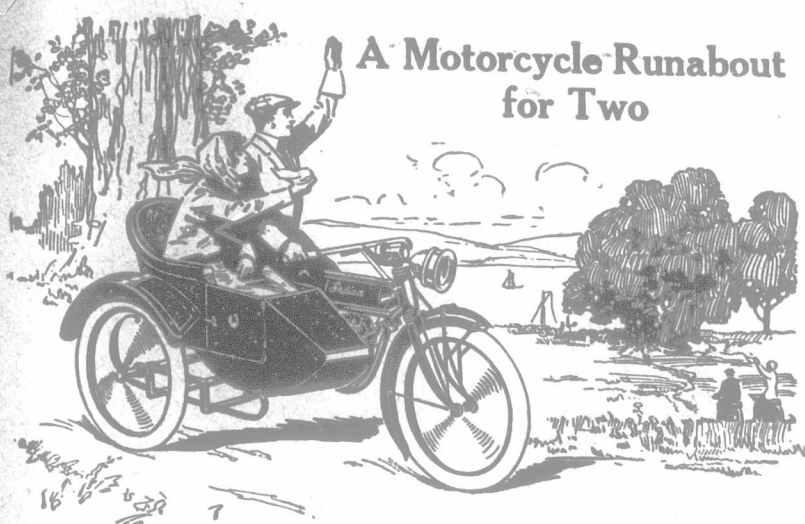
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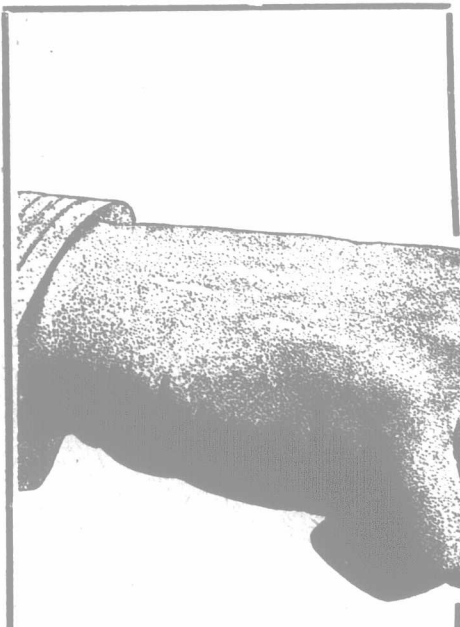


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I want to congratulate you on the excellent dance records issued; they are the best I have heard. I am using a Columbia "Grand" Grafonola and Columbia records at Castle House where they are attracting extraordinary attention; the records are played in perfect dance time and are frequently encored by our patrons.

VERNON CASTLE

Here are six double-disc records that are typical of the full thousand 85 cent records listed in the Columbia catalog—among them are two of the latest Columbia double-disc modern dance records:

1458 { Tres Chic. One step.  
85c. { He'd Have to Get Under Get Out and Get Under. One step.

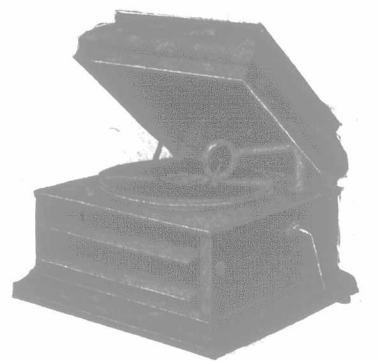
1467 { To my Manis. Tango.  
85c. { El Sanducero. Tango.

1496 { Camp Meeting Band. Vocal Duet.  
85c. { Buffalo Baby Rag. Peppers' Quartette

1387 { Endearment. Prince's Orchestra.  
85c. { Cupid's First Love. Prince's Orchestra

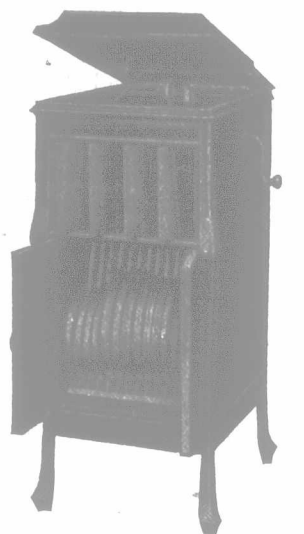
1494 { While The Rivers of Love Flow on.  
85c. { As Long as the World Goes Round.  
Tenor and Soprano

A1281 { Omena. Banjo Solo.  
85c. { Dream of the Rarebit Fiend.  
Accordion Solo



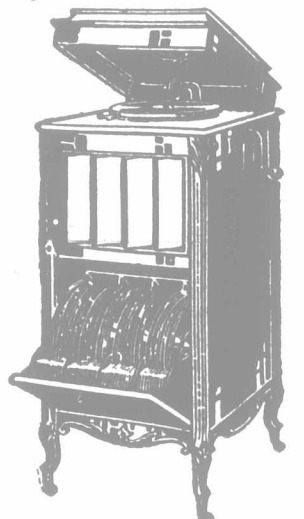
"JEWEL"

The best known and most successful instrument at its price. Equipped with the exclusively Columbia tone-control "leaves" which have taken the place of the old double-door idea. **\$45**



"LEADER"

A complete and completely enclosed upright Columbia instrument. Equipped with the exclusively Columbia tone-control "leaves" which have taken the place of the old double-door idea. **\$100**



"MIGNONETTE"

The highest type of upright Grafonola at its price. Equipped with the exclusively Columbia tone-control "leaves" which have taken the place of the old double-door idea. **\$130**