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Blacklegoids afford the latest and best method of vaccination against blackleg—simplest, safest, surest. They are always ready for use; no filtering, measuring or mixing is necessary. Accuracy of dosage is always assured, because each Blacklegoid (for pills) is exactly sufficient for one inoculation. Administration with our Blacklegoid Injector is easy. The operation need not consume one minute. Blacklegoids are sold by druggists; ask for them.

Our newly printed eight-page folder on the "Cause and Nature of Blackleg" is of interest to stockmen. Write for it, it is free.

PARKE, DAVIS & CO. WALKERVILLE, ONT.

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THE RIGHT PAINT

THE WAY TO PAINT RIGHT.

TO paint YOUR HOUSE inside and out with just the right touch of color for freshness, beauty and strength.

TO keep YOUR HOUSE cheerful and bright throughout summer and winter.

TO brand YOUR HOUSE with a quiet elegance amongst its fellows.

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All lateral wires highcarbon spring steel, a better grade of wire than hard steel wire.

Stays No. 11 in size, of hard steel wire and fourteen inches apart.

Can be erected with ease, and from five to six times as many rods can be stretched per day, as of hand made fence.

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The Ideal Cook Book

Is the Best of Its Kind Ever Published

A most notable feature is the latter portion of the book, which is devoted exclusively to Sick Room Cookery and the treatment, before the doctor arrives, of persons suddenly taken ill or meeting with an accident.

The book contains over one thousand recipes. Bound in substantial oilcloth cover for the kitchen.

FREE to any address for one new subscriber.

Regular Price, One Dollar

THE FARMING WORLD • • • Toronto

PUBLISHER'S DESK

The business in labor-saving haying machinery promises to be very large this year, and manufacturers find themselves extremely busy. Our friends D. Maxwell & Sons are making a specialty of hay loaders, side delivery rakes and hay tedders, and have difficulty in supplying the demand.

Attention is drawn to the advertisement of the A. Arnott Institute for the treatment of stammering. Being under medical supervision, this treatment differs from that of schools elsewhere. Dr. Arnott treats the cause, not simply the habit. Those who have met with failure elsewhere would do well to investigate the work done at his institute. Dr. Arnott was at one time a severe stammerer himself, and he has made a study of this affliction from the standpoint of a physician. His treatment has been very successful indeed. The Institute is fitted up in a homelike and comfortable way, and everything possible done to make the surroundings comfortable.

Mr. D. Forsyth's advertisement appears in this issue. Mr. Forsyth's name has long been identified with Association football. He is the Secretary of the Ontario Football League, and he has done as much for the game as probably any other man in Canada. If any one knows a football, surely he does; and he is likely to supply anything but a thoroughly good article.

We are asked to mention in this column that *Jeyes' Sanitary Compound Co.*, of England, has re-engaged the services of Mr. H. Bragg, to superintend their Canadian branch at Montreal. The sanitary compounds manufactured by this firm have gained 105 medals at different exhibitions throughout the world. Some years ago, when the Rinderpest scourge played havoc in many of the cattle districts of Cape Colony, the Colonial Government used tons upon tons of *Jeyes' Fluid* by means of which large districts were kept free from infection. In the hospitals and asylums there, as in many other parts, it is in extensive use. Besides its thorough disinfectant and deodorant properties, *Jeyes' Fluid* is non-poisonous and very economical.

In a recent article in *The Maine Farmer*, Dr. G. M. Twitchell argues against arsenical spraying preparations as more or less injurious to plant development, particularly in the case of potatoes. As an unprejudiced individual, he tenders his emphatic testimony in favor of Bug Death as a safe and effective agent. Not only is it safe, he says, but it actually promotes healthy growth. It is non-injurious to bees. The sale of this insecticide increases by leaps and bounds which in itself is a standard recommendation.

Messrs. Gourlay, Winter & Leeming ask us to mention that although they are not with us this issue, they have still several of the piano bargains recently advertised in our columns. Evidently *The Farming World* readers are not slow to grasp a really price-worthy opportunity, for Messrs. Gourlay have made a number of new friends, not only through some of the lines advertised, but for brand new instruments which they handle. Our readers are perfectly safe in the hands of this old and highly-reputable firm.

Our Alabastine friends of Paris, Ont., report an excellent business in

It is Worth While

investigating the advantages offered to settlers on the **CROWN LANDS IN NEW ONTARIO**. The climate is all right; the land is rich and well watered; railways serve each district opened for settlement, and the local market for timber, in most cases, enables the cost of clearing to be more than met by the crop of trees now on the land.

If You have any Curiosity

as to Ontario's advantages in this regard, and desire to better your position, write for information to

HON. E. J. DAVIS

Commissioner of Crown Lands, TORONTO, ONT.

It isn't often...



that any machine receives the success and endorsement that "**MAGNET**" SEPARATORS have, as being the **Hand Cream Separator for the farmer**.

THE PATHE MFG. CO., LTD.,
Guelph, Ont.

Ottawa, April 9th, 1903.

Gentlemen—I am pleased to inform you that the Magnet Cream Separator which I bought from you several months ago, has been in continuous use in my dairy of forty cows. It has been very carefully and severely tested, and I am glad to inform you that it has given perfect satisfaction.

It runs very lightly, skims well, and separates beyond the capacity guaranteed by you. I have no hesitation in saying that Canadian farmers would find it to their interests to buy machines made in Canada, rather than those imported from foreign countries and assembled in Canada. The reasons are obvious and need no explanation.

Yours very truly,
F. W. HODSON (Live Stock Commissioner).

Don't do yourself the injustice of ordering a Cream Separator without first having thoroughly investigated how strong and well made Magnet Separators are. No worm gearing, but all cut gears. They turn easy, skim clean, and are easily cleaned.

A Catalogue for the asking

PETRIE MFG. CO. GUELPH, ONT.

THE WONDER OF THE AGE

ALL EYES ARE ON THIS INVENTION

Patented 1885-6 and 1901.



The Genuine Tilton Pea Harvester With New Patent Suncher at Work

1. Harvesting in the most complete manner from eight to ten acres per day.
 2. Harvesters to suit all kinds of sowing.
- Every Machine Warranted. Our Motto: "Not how Cheap, but how Good."
No drilling holes in Mower Bars or Inside Shoes. A wrench is all that is required to attach it to any mower. Give your orders to any of our local agents, or send direct to

TOLTON BROS., Guelph, Ont.

WHEN WRITING ADVERTISERS, PLEASE MENTION

response to their ads. in our columns. We have just seen a home painted throughout with Alabastine. The effect was clearly highly artistic, and eminently cheerful.

The attention of our readers is specially directed to "The Home World" in this issue. It will be noticed that the new departments, recently added, are well presented. No effort will be spared to make these features of The Farming World of interest to every member of the Farm Home.

The appreciation of the windmills manufactured by the Ontario Wind Engine Co. is not merely confined to Canada, although a home demand is evident. The firm in point is at present shipping regularly both to South Africa and South America, and the demand from these places increases with a rapidly altogether encouraging. With the former country, there can be little doubt that its agricultural expansion and future importance is very largely a question solvable by the introduction of an immense number of wind motors. By and by we shall have Canadian windmill watering the country in which Canadian soldiers suffered the horrors of thirst.

The Nordheimer Piano and Music Co. is advertising the Chase & Baker Piano Player in the present issue. This is a most extraordinary contrivance. By means of it any one can play on his or her own piano any class of music, and play it with the finished technique of an accomplished performer. There is no shade of expression, he it ever so delicate, nor is there any intricacy of composition beyond the scope of Chase & Baker's Piano Player. Through it, the best music may be introduced into any home, and played by any one who very few could hope to play even after many years of strenuous study. Recently we listened with the greatest pleasure to the performance of one of Chopin's most exquisite nocturnes through the medium of the piano player. No wonder Messrs. Nordheimer are doing so large a business in these!

Special attention is directed to the two advertisements of Messrs. Southcombe, Viel & Ramsden, in this issue. The lack of a good fire extinguisher, when a man's house is ablaze, means an ever present regret for the man throughout the remainder of his days. And when one weighs the cost of an efficient extinguisher with the probable cost of a domestic conflagration, no careful person will be found wanting one. With each extinguisher, the makers furnish receipts for extinguishing solvents, the ingredients of which can be procured at any drug store. Their preparation is simplicity itself.

The Uncle Sam Sprayer is a thoroughly good little machine, and is protected by thirteen patents. The demand for these is very considerable. For spraying cattle there is nothing better in the market. Of course, it can be employed with equal satisfaction in all other kinds of spraying. The Weather Forecasts Prepared by Sillington, the one pupil of the late Prof. Rice, have achieved great popularity among farmers all over Ontario. These forecasts are based on the electro-planetary theory. They tell what the weather is going to be for each day in the year, subject to slight variations for any given locality. These forecasts are an invaluable feature of our calendar for 1903.

We have still a few of these calendars on hand, which can be secured for 25 cents each, or free with one subscription to The Farming World at \$1.00. Address Farming World, Toronto, Ont.

THE FARMING WORLD.



HEY, THERE! JUNK MAN!

I want to know how much you will give me for one of those separators that claim to be "just as good" as the

DE LAVAL CREAM SEPARATORS

I put in one of them last year because the agent claimed it was "just as good" as a DE LAVAL machine and was \$10.- cheaper. I have looked about and gotten some separator experience since then and I find now that I could have bought a DE LAVAL machine of greater actual capacity for less money in the first place, while I have lost money every day through the imperfect skimming of this machine, aside from hard running and trouble of all kinds from infernally poor construction.

I am going to have a DE LAVAL machine now if I have to "junk" this old one for scrap-iron. I know it will save its cost the first year of use and should be good for twenty years. I find all well-informed dairy farmers are using DE LAVAL machines and that there are over 400,000 of them.

A De Laval catalogue may save this experience.

MONTREAL
WINNIPEG
NEW YORK
CHICAGO
SAN FRANCISCO
PHILADELPHIA
POUGHKEEPSIE

THE DE LAVAL SEPARATOR CO.
77 YORK STREET,
TORONTO.

E. B. EDDY'S NEW Indurated Fibre Ware,



Tubs, Pails, Etc.

Insist on getting **EDDY'S**.
For sale by all first class dealers.

**SUPERIOR
TO ALL OTHERS**

Our Free Trial Costs You Nothing— We Pay the Freight

The following letter, dated May 14th, from Mr. H. A. Baldwin, Canfield, Ont., shows why we are willing to send our Windsor Cream Separators out on free trial before we receive any pay. It reads: "I enclose find two express orders in full payment for the two No. 3 Windsor Separators sent on trial to Mr. G. Hedley and myself. We are very well pleased with them." This is only a sample letter such as we receive daily. If our separator is only given a trial, its work and ease of operation will do the rest. To make it an additional inducement to try our separators, we will pay the freight to your town. Give us a week's trial, and if not satisfied, it may be returned to us and you are not a single cent out. Our price for the No. 1 Separator, capacity 120 lbs. milk per hour, is \$48.75; for the No. 2, capacity 240 lbs. milk per hour, \$67.00; and for the No. 3, capacity 360 lbs. milk per hour, \$85.00. Write for catalogue explaining all. We send our separators out for a week on Free Trial.

WINDSOR SUPPLY CO. - - - WINDSOR, ONT.

WHEN WRITING ADVERTISERS, PLEASE MENTION THE FARMING WORLD.

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The Farming World

And Canadian Farm and Home

VOL. XXII

TORONTO, JUNE 1, 1903

No. 9

The "Farm School" Idea

ELSEWHERE we give a brief outline of the Department of Education's plan for giving instruction in agriculture in the rural schools of Ontario. This announcement has come none too soon. For several years the teaching of agriculture in this province has been at a standstill. In 1897 a text-book on agriculture, specially designed for the public and high school, was authorized by the Department. And here the matter ended. Nothing was done either to encourage a study of it or to induce teachers in the rural schools to teach it. This same text-book has since that time been republished and authorized in several states of the union and adapted for use in the Western provinces of Canada. And yet in Ontario, where it was first authorized and made part of the public and high school curriculum, nothing has been done by the Department or by those in authority to encourage its use even in our rural schools. And the proposed plan for "farm schools" will meet with the same fate unless it is pushed with vigor by the Department and made a vital force in our national educational system.

The announcement that only graduates of the Ontario Agricultural College will be employed to instruct at these farm schools will be favorably received. It is time something were done to connect this great agricultural university with the public school system of this province. For years its brightest graduates have been taken to fill responsible positions in the United States and elsewhere at high salaries, while in their native land there have been few, if any, suitable openings other than engaging in practical farm work, which many are unable to undertake because of lack of capital. In "farm school" instruction, if this new scheme is properly pushed, there should be suitable openings for a large number of graduates.

However, we should not congratulate ourselves upon being the first to make use of agricultural college graduates in public school work. In Japan, as is shown by Mr. Doherty elsewhere in this issue, the graduates in agriculture from the Imperial University are in immediate demand as teachers in what are called the middle schools of that country. In fact the supply can hardly keep up with the demand, so great is the desire for instruction and information on agricultural subjects. The sooner,

therefore, the graduates of the college are put to work in our rural schools the better, lest some other land not so enlightened even as Japan has shown herself to be, lead us in the march towards higher and better education of the youth of the country in the principles of agriculture.

As to the merits of the "farm school" idea we have little to say. If properly carried out and pushed by those responsible for its success, we believe it will do much, not only towards inducing better farming methods, but also in furnishing a system of mental culture and development that has been too long absent from the rural schools of this country. There may be some difficulty experienced in reconciling this "garden plot" idea with the long summer holidays. Who is going to look after the weeding and caring for the garden during the six weeks or two months' holiday season? The pupils will not be there, and if the instructor takes it in charge he will have no pupils to instruct. In Germany and France, where the farm school idea has been so successfully developed, we understand that the teacher is usually a married man, who resides at or in the school. He is teacher, janitor, caretaker, gardener, etc., combined, and is consequently in a position to keep the school garden in shape whether the pupils are there or not. But this objection need not block the wheels of progress in Ontario. No doubt a satisfactory way will be found of overcoming the holiday difficulty. It is unfortunate, however, that the long holiday should come at a time when the garden will need most attention and when instruction on the growing and ripening plants can best be given.

Want Corn Duties to Remain

There are two points in our British market correspondent's letter in this issue deserving of special mention. He states that there is strong opposition on the part of the farmers, millers and dealers in England, to abolishing the corn duties. This opposition is so strong, that even yet sufficient pressure may be brought to bear on the government to induce it to allow the duties to remain. Of course a continuation of the duties unless, a preference is given to Canada, will not benefit the Dominion any. But this opposition to abolishing the duties, may be the forerunner of a preferential tariff in favor of the colonies.

Our correspondent's remarks on what Russia is doing in pushing

her butter trade are perhaps of more importance. That the butter exports of "benighted" and "dark" Russia are expanding very fast should give our dairymen some concern. At present, Canadian butter is of a better quality than that from Russia. But it may not always be so. Russia is very quickly adapting herself to modern methods, not only of making butter, but of handling and conveying it to market. Her system of cold storage from the producer to the consumer in England is being perfected and a few years may see it equal to, if not superior, to that of any other country exporting to Great Britain.

Canadian fruit growers might well consider, as he points out, the advisability of putting apples on the British market during the Australian apple season. They will know, perhaps, better than anyone else, whether it is profitable to ship at this season or not.

More Farm Help Arriving

Mr. T. S. Southworth, Director of Colonization, Toronto, informs us that a great many more men are coming to Ontario looking for places as farm laborers than a few weeks ago. They are mostly from England and Scotland, and only a small proportion are farmers. They are chiefly mechanics who will take up farming for themselves later on. Their desire at present being to spend a year on an Ontario farm and learn something about farming here before starting for themselves. They are mostly unmarried men and men who have left their wives at home. Though mechanics they are not looking for work at their trades, but want to get on Canadian farms.

This large increase in the number coming to Toronto is due to the fact that the farm labor market of the West is pretty well supplied and the Dominion Immigration Department is directing immigrants, who are not going to take up land immediately, to Ontario. As many as 600 arrived in Toronto one day recently.

It is rather unfortunate that a portion of those now coming did not reach here a month or six weeks ago, when farmers were anxious to secure help. At that time the colonization department had thousands of applications for help from farmers all over the province. But it is difficult now to tell whether these have been supplied or not. Farmers still in need of help should notify Mr. Southworth at once. Wages are still high for competent men.

Manitoba and the West

The Calgary Show and Sale—Alberta Suffers from Storm—Spring Immigration Over

By Our Western Correspondent

The Live Stock Show and Sale held at Calgary on the 15th and 16th May were an unqualified success. Not only were the exhibits ahead of those of previous years, but the attendance and the interest shown by the class whom the Show is intended to help were also most satisfactory. Such is the opinion expressed by Messrs. Hodson and Day, who were in attendance, and by the members of the territorial government, Hon. Messrs. Bulyea and Elliott. Over fifty pure bred horses and three hundred head of cattle went before the judges. The weather was as nearly perfect as possible and the whole programme was carried out without a hitch, so far as could be seen from the visitors point of view. The sales, which were an important feature of the occasion, were very satisfactory. Some 270 head were sold. These included 178 Shorthorn bulls, which brought an average of \$95, and 95 Shorthorn females, which averaged \$100. Sixteen Herefords averaged \$150 and a small lot of Aberdeen Angus averaged slightly over \$90. The highest price paid was for the Hereford bull Bonnie Brae Hesold 2nd, \$300. Frost Creek Hero (Shorthorn) brought \$235.

The detailed prize list of the show appears elsewhere in this issue.

THE REGINA SHOW.

The fifth Spring Stallion Show, held at Regina on the 8th May, was the first of the series that can be called an entire success. The doughty horsemen who have year after year given time, money and energy to this enterprise, have at last been rewarded. Unlike the Calgary show, there was little competition in the light horses, but this was quite compensated for by the large entries in the heavy classes. In the first class—registered shires or Clydes—there were fourteen entries. Baron's Gem, owned by Messrs. A. and G. Mutch, was awarded first. Second to Ethiopian, recently sold to the Lumsden Horse Syndicate by Dalgetty Bros., London, Ont.; third to Prince Stanley, also owned by Mutch Bros. The class for three year olds and under included seven entries. First was at to Gordon Macneilgale, owned by Louis House; second, Royal Victor, owned by E. M. Boudin; third to Sandy McTavish, owned by the Regina Syndicate. In standard breeds only two were entered, of which Sunny Alto, owned by J. Churchill, V.S., won first place and Madwood owned by J. Forrester, second. Only one thoroughbred was shown, a stallion imported by Col. Dent some years ago, Rothervale, now the property of J. Churchill, V.S., of Regina. A class that offered

much cause for adverse criticism was that for heavy draft, not necessarily registered. In this the first went to Baron's Gem, already mentioned, and second to a massive cross-bred horse (Clyde and Shire) owned by Peter Horn of Regina.

THE GROWING TIME.

Without favoring rains and sunshine the most scientific methods of farming and the richest soils can produce nothing; but when fertile soil and favorable weather are combined it is doubtful whether the most barbarous methods of tillage could do more than limit the results. Manitoba farming is perhaps not always the wisest and most economical, but it is much better than is supposed. In conjunction with such favorable weather as has been vouchsafed, and with such soil as our worst detractors admit we possess, a combination results that cannot be beaten, and is seldom equalled. The whole grain-growing belt of Western Canada has for ten days been blessed with rainfall in the quantity and of the quality that most rejoices the farmer's heart.

DISASTER IN THE TERRITORIES.

We regret to turn over this bright page and refer to the disasters that have recently overtaken our friends in Western and Southern Alberta. It is impossible to say just how great will be the loss caused by the furious storm that raged through Southern Alberta and Northern Montana on the 17th, 18th and 19th May. Such a storm has probably never before been known at this season of the year. In some localities two or three feet of snow fell, accompanied by a fierce wind and a degree of cold that, for Alberta at least, was extremely severe. Young animals are reported to have died by hundreds. The stockers brought from the South and East and newly placed on the ranches, suffered most, range cattle, except calves, being better able to stand the storm. Full details are not yet to hand, as to the amount of losses, but the following are sufficient to indicate the probable extent of damage done. Of a trainload of 250 head en route from Texas to High River, 128 died from exposure. At MacLeod over 100 carcasses have been removed from the trains, being animals shipped from Manitoba.

COLONISTS WITHIN A COLONY.

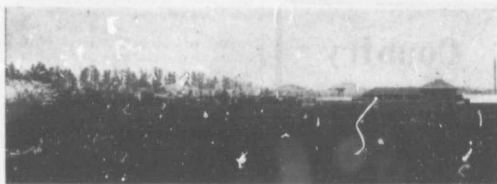
Almost all foreign emigrants coming to Canada are settled in "colonies" or "communities." This has its drawbacks, among them being the tardiness with which such

colonies become "Canadianized." This being the case, we might wonder at the system being continued. But the secret lies in the fact that these non-English-speaking races refuse to take up land except on such conditions. Luckily we have, however, been treated to the greatest of such anomalies—an all-British "colony." The Briton is fond of referring to "the colonies," and Canada comes within this classification. So now we have an all-British colony within a British colony. Such is the settlement recently led into the wide Saskatchewan valley by Rev. Mr. Barr. Imagine a party of whom but a small number have any knowledge of farming and of whom a certain proportion have barely sufficient money to take them to their destination, going forth under the leadership of a clergyman to start farming operations nearly two hundred miles from a railway. Such is the Barr all-British colony.

That trouble was in store for such an aggregation was certain. Before they reached Winnipeg, and before they had tasted the least of the hardships of a pioneer's life they had learned this for themselves. The chief indication of the internal wrath has been the deposition of the Rev. Mr. Barr from the leadership on the charge, so near as can be ascertained, of making exorbitant profits on goods sold at his store to the colonists. There seems to be a commercial side of the colonization scheme which may also be "all-British," but has at the same time certain Hebrew features. Whether or not the leader of the Barr colony has been guilty of the charges laid against him we are not prepared to say, but this we do believe, that a grave mistake has been made in permitting this "colony" to be formed, and further in permitting its location at such distance from railway communication. British emigrants are notoriously helpless, and in thus isolating them they were placed entirely at the mercy of any exploiter who might wish to take advantage of their situation. We look for a large harvest of grievances from the "Barr" Colony.

A BIT OF ADVICE.

Just a word of advice to the young man who may be thinking of coming to Manitoba. There has been an unusually large demand for farm hands this spring, yet the supply has been equal. It is fortunate that the spring flood of immigration is over this year, since the demand for farm laborers has ceased and will not again be active until the beginning of harvest. Young men who contemplate coming West will therefore do well to wait until the demand commences for harvest hands. The requirements of the country will probably, as in the past, be ascertained by the government, and well advertised in time to enable all who wish to come to make the necessary arrangements.



View of Farm of Central Experiment Station, Nishigahara, Tokio, Japan.

Agricultural Educational Work in Japan

At Nishigahara, near Tokio, Japan, is an Agricultural Experiment Station corresponding to our Central Experiment Station at Ottawa. There are now nine branch stations. Six of these are to be transferred to the local authorities, and only three retained under the control of the Central Station.

This Central Station has about fifty acres. The equipment, with good chemical laboratories and appliances for bacteriological work. A number of good experimental plots are arranged in the open air with a number of glass houses for experiments in pot culture under cover. These are well equipped with apparatus for conveying the pots in and out of doors quickly, so as to keep them entirely under control as to moisture, etc. There is also a veterinary bacteriological laboratory, where tuberculin is made and animals are kept for experimental purposes — including guinea pigs, rabbits, calves and pigs and also a few horses and cows.

There are extensive buildings well equipped for the study of the silk worm, the treatment of the silk, the raising of mulberries for feeding the worms, tea culture and curing and tobacco culture and curing. All these subjects are closely studied by experts.

The central government expends 150,000 yen (\$75,000) annually in the maintenance of this station, which has been in existence for about twelve years. \$15,000 is being expended this year in new buildings. A portion of the land belonging to the Station is devoted to rice culture.

On April 30th, the Hon Mr. Fisher visited this Station, and was shown through by the assistant director, Mr. S. Hori. On the staff are Prof. Adams, an American expert on tobacco, and Dr. Leowe, from Berlin, who are making a special study of the growth and the curing of tobacco, special attention being given to the effect of artificial fertilizers on the plant and the curing and treatment of the leaf so as to develop certain bacteria.

On May 1st, Mr. Fisher visited the facilities of agriculture of the Imperial University of Tokio. The buildings are most extensive and devoted to teaching work. There are 300 acres of land around them

on which all kinds of work are done for agricultural purposes. Extensive forestry and botanical plantations and field culture of all kinds suitable to the district are carried on.

The agricultural faculty consists of four branches: agriculture, chemistry, forestry and veterinary science. The students live on the property. There are about eighty now taking the full course for the degree of Bachelor of Agriculture. There are, in addition, about three hundred and twenty who take only one branch of the full course and get a certificate for that branch. The latter remain from one to two years; the former have to remain three years to get their degree.

The chemical equipment is very complete, and the staff very large. Dr. Oscar Teow, of Leipzig University, is at the head of the chemical department, and is making some exhaustive experiments on the effects on plant growth of certain mineral ingredients in the soil, on which he has written reports.

The veterinary branch is well equipped and is in charge of Dr. K. Tanaka, who has a very fine collection of anatomical specimens. The other branches have new buildings, substantial and extensive, and remarkably well lighted on all sides.

The establishment throughout is a credit to the educational department of the country, and shows by its extent the importance which the Japanese Government attach to agriculture. Nearly all the students who obtain their degrees in agriculture are now wanted immediately for the teaching of agriculture in the middle schools, or at the various agricultural stations managed by the local districts, which are to be seen everywhere throughout the country.

Keville Doherty.



View of Glass House, Central Station, Tokio, Japan.

Instruction in Agriculture

The announcement by the Ontario Department of Education that the study of agriculture in an experimental and practical manner will be introduced into the rural public schools is of great importance to the agricultural interests of this province. These schools will be divided into groups of six or seven each. One school in each group will be selected as a "farm school," at which from two to three acres will be worked by the pupils. Travelling instructors who shall be graduates of the Ontario Agricultural College, will be engaged to visit these "farm schools" once each week, and give instruction to the pupils in attendance, who will comprise the senior pupils from the surrounding schools. The course of instruction will include elementary forestry, elementary horticulture, entomology, physics, the chemical analysis of soils, the science of agriculture, etc., and will be made as practical as circumstances will allow. The instructors will be engaged by the counties, each instructor serving from 25 to 30 school sections by visiting five central "farm schools" each week.

Already a few counties are preparing to take advantage of this new legislation. Carleton county is taking the initiative, and will employ two travelling instructors. The salary of a third will be paid by Sir Wm. C. Macdonald, Saltfleet township, in Wentworth county, is making arrangements to engage a travelling teacher of agriculture with a special reference to fruit culture. Other counties are said to be organizing for the work. If it, therefore, receives sufficient encouragement from the department we may look for quite a number of counties falling in line in the next year or two. Provision may also be made for competitive exhibits of the products of these farm schools. A sum will likely be placed in the supplementary estimates at this session of the legislature to aid such counties as wish to take advantage of this new departure in agricultural education.

For Weed Competitors

The number of competitors in our weed competition is growing very fast. By the first of the month we hope to have as many as we can manage.

In the prize announcement it was not stated definitely, as it was not thought necessary, that the roots should accompany the selections. Dr. Fletcher informs us that specimens, everything else considered, count for more if the roots are attached. Competitors should therefore govern themselves accordingly. A plant is not complete without the roots, though they are not essential to their identification.

Chinese as Farm Help

I have been reading with interest the articles in the "Farming World" on Chinese as farm help. We, in the Maritime Provinces are beginning to feel the scarcity of farm help, too. Young men are going west, and help is becoming scarce every year. Wages are \$20.00 per month and board. While for the haying season men get from \$1.25 to \$1.50 per day and board.

Of course we prefer white help if we can get it, even at a higher wage, but if we can't we will have to do the next best thing, and I am not so sure that the next best is not the Chinaman.

I spent three years in British Columbia, and lived and worked amongst Chinamen, and my associations with them gave me a chance to study them that few men in Eastern Canada have had. Although the Chinese are not as strong physically as the whites, when they work they keep "everlastingly at it." As gardeners they are experts. The earliest vegetables and green stuff brought into the Pacific coast towns and cities are brought in by Chinamen. They also do excellent work at digging ditches and clearing land.

I knew a few who were farming for themselves on the Fraser River Delta. Than one in particular which I remember, a smarter man was hard to find. In the summer of '08 he had planted twenty acres of potatoes and was fattening a large number of pigs and some poultry.

I see no reason why Chinamen could not be taught to do any kind of farm work. They send most of their money home to China, and as the purchasing power of money is so much greater there than here, and they live so much more cheaply than we do, they will work for lower wages. I suppose a great many would object to them from a social standpoint. They are rather repulsive in appearance and they regard white men as "devils" who will try to cheat and steal from them all they can, and they act accordingly. But if you use a Chinaman right and once gain his confidence, he is your friend and would die before he would cheat or steal from you. I believe the Chinamen have been a great help to the farmers of British Columbia, and I say by all means give them a chance here.

W. R. McCready,
Jacksonville, N.B.

Two Orchard Pests

Mr. A. McNeill, Dominion Fruit Inspector, recently investigated the injuries caused by two orchard pests near Banda, Ont. In Mr. Fleck's young orchard the trunks and branches were thickly covered with scars not unlike the wounds made by hail, but occurring on the under side of the branches as well. Mr. McNeill reports that

Country Roads— City Pavements

We know of no more useful thing on the farm than a good reliable bicycle. Such a wheel is the—



"Massey-Harris"

It is built of good material by experts of acknowledged ability. It has all the big improvements, and one that is responsible entirely for the regenerating of wheeling—the

Hygienic Cushion Frame

that makes all roads smooth, that is to wheeling that the "Pullman" is to railroading.

In the country it turns the ordinary road into a city pavement, and saves the tires because it does away with a lot of friction.

A Bicycle so equipped puts your neighbor and the post-office at the turn of a pleasant spin.

Write for our pretty new booklet, "In Bicycledom."

Canada Cycle & Motor Company Limited

Head Office and Works
Toronto Junction

this injury is caused by the Buffalo Tree Hopper (*Cercos hubbals*). This insect, which looks not unlike an animated beech nut, makes its appearance about the middle of July and continues to live upon the juices of plants of various sorts till the end of summer. It seldom does much harm, although the scars made in the young wood for the deposit of eggs are somewhat unsightly. Dr. James Fletcher, Entomologist and Botanist of the Dominion Experimental Farms, says that there is no effective remedy for the Buffalo Tree Hopper.

The other injury appeared first as a dark discoloration on one of the larger branches. This discoloration extended and the wood died under the discolored bark. By the third year the limb was entirely girdled and the portion above the injury dead. This was undoubtedly a case of canker. The best remedy, if the limb be small, is to cut it off well below the injury and burn it. If a larger limb or the trunk of a tree be attacked, it is advisable to cut out all diseased parts, well into the healthy tissue; wash with the Bordeaux mixture, and when the wood is somewhat dry, paint with linseed oil paint. The wood should be kept well painted to protect it from the weather until the wounds heal over.

The Rape Crop.

A valuable crop on every farm where live stock are kept is rape. It is primarily a pasture crop. It is well suited for hogs and sheep and may be pastured advantageously by steers. It is not suitable for milk cows as the milk is tainted when any large quantity of rape is fed.

Rape may be sown almost any time during April, May, June and July. Good fall pasturage can often be obtained by sowing rape after the early grain crop is off. When sown early there is a longer season of pasturage.

Rape like other crops should be sown on rich ground if a big yield is expected. The best way to sow it is in rows twenty-six to thirty inches apart, using two or three pounds of seed per acre. When sown by this method the crop will, other things being equal yield more than when sown broadcast. The common practice, however, is to sow broadcast. The soil should be thoroughly prepared on the surface and four or five pounds of seed per acre used, after which the surface should be thoroughly harrowed so as to get a good covering.

After getting a stand of rape, it will generally pay to keep stock off for seven or eight weeks after the crop germinates as this will induce a strong growth of top as well as root. When once the root is well developed it will continue to send out leaves even after being cropped quite closely. It is a mistake to pasture rape too early.



New Dairy Building, Toronto Fair. To the rear of this will be built the new Lecture Pavilion

Dominion Exhibition Progressing

Everything is progressing satisfactorily for the great Dominion Exposition to be held in Toronto this fall. All the new buildings will be completed in good time, the grounds will be much improved in appearance and everything will be in readiness for the big show when it opens during the last week of August.

Special attention is being given to the arrangement of the prizes in the agriculture sections. Apart from the government grant the live stock prize list will be \$1,200 larger than at any previous Industrial Fair. This, with the \$4,000 from the government grant to be given for live stock, will make a total prize list larger than has been given at any fair in America, not excepting the World's Fair at Chicago in 1893 and the Pan-American at Buffalo in 1901. In addition to the specials given every year, the American South-western Association will give \$50 a specials for that breed. The prizes in the swine classes will be increased by \$600 and the other classes in proportion.

The prizes in all departments will be greatly increased. The dairy prizes will be increased by \$500. A special prize of \$100 will be given to the cheese instructor whose district wins the largest number of prizes in the cheese classes. A medal will be given for the best paraffined cheese, one June and one July. The new dairy buildings will be entirely given up to exhibits. The portion given up last year to butter-making and lectures will be devoted wholly to the cheese exhibit this year. A new lecture pavilion and demonstration building will be erected immediately north of the dairy building. The Ontario Government will contribute \$10,000 towards the erection of this building. Entries in the dairy classes are already in from Nova Scotia and New Brunswick.

An artistic illustrated prize list containing 125 pages will be issued the first week in June and the se-

cretary will be glad to send copies to anyone applying for them.

A Unique Horse Show

A rather unique horse show will take place at Toronto during the Old Home gathering. It will take place on the roadway in Queen's Park and will consist of 500 horses and carriages representing the best turn-outs in the city. An army of judges will make the awards and the judging will not occupy more than an hour. This show will take place on the afternoon of July 3rd.

Montreal Horse Show

The Montreal Horse Show held May 11th to 16th last, was a success. The entries were larger than usual, and there was a good attendance. Like Toronto, this show is largely a society affair and farmers were conspicuous by their absence. The exhibitors were chiefly from Montreal and its vi-

cinity. Toronto was represented by Geo. Pepper and Grow & Murray, and London by Mr. and Mrs. Adam Beck, who carried off a number of the best awards.

A Good Show

The Richmond Hill and Yonge Street Agricultural Society held a very successful show on May 25. There was a good turnout and a large exhibit of live stock. Among the chief exhibitors were J. and W. Russell, Jacob Brooks, R. D. Trick, J. W. Holman, J. G. Gooderham, W. Thompson, Simeon Lemon and L. Rogers.

Keep the Cultivator Moving.

From the time the root-crop begins to show itself above ground the cultivator should be kept going. Forty or fifty years ago the farmer cultivated corn and potatoes to kill the weeds that grew in them. Now-a-days the farmer cultivates for other purposes and incidentally to kill weeds. The good farmer of to-day knows that cultivation unlocks plant food, helps to conserve moisture and aerate the soil and at the same time kills the weeds. The liberation of plant food by cultivation is well shown when a grain crop follows a corn crop that has been well cultivated the season previous. Not only has plant food been unlocked, but moisture has been conserved and made to do duty the following season.

The advantages, then, of thorough cultivation of the root or corn crop are manifold. Not only is this year's crop made better, but food and moisture are stored up for the season following. There is, therefore, every possible reason for keeping the cultivator going. One horse, a man and a cultivator will earn good money in the root or corn field during June and early July.

Our Prize Essay Competition

Section 3.—For the best essays on, "Feeding and Fitting Cattle for Beef."

Section 4.—For the best essays on, "Breaking and Fitting Horses for Market."

The prizes in each section will be as follows:—

First prize, \$10.00.

Second Prize, \$5.00.

Third prize, One year's subscription each to The Farming World and Canadian Good Housekeeping.

Two additional prizes, Choice of either one year's subscription to The Farming World or Canadian Good Housekeeping.

Essays must not contain more than 1,500 words. In awarding prizes, 25 points only will be allowed for composition and literary style; 35 points for the evidences of practical experience indicated in the essay; and 40 points as the judges may determine. Competent judges will make the awards in each section. All essays must reach the secretary of the Industrial Exhibition on or before (time to be fixed) in 1903. All essays winning prizes to become the property of The Farming World.

To emphasize the importance of educational attractions at fairs and to further the interests of the great Dominion Exhibition to be held in Toronto this fall, the Farming World has donated \$75 to the Industrial Fair Association of this city, to be given in prizes for essays on a series of practical subjects. All essays must be written according to instructions, printed in the prize list of the exhibition, copies of which may be had by applying to Dr. Orr, manager, 70 King street east, Toronto. In order that the readers of the Farming World may have an opportunity to compete, we reprint from the exhibition prize list the following particulars relating to our offer:

Section 1.—For the best essays on the question, "How may our Agricultural Fairs be Made More Educational Value to the People in the District in Which They are Held?"

Section 2.—For the best essays on, "Labor Saving in the Farm Home."

Canadian Produce in England

By Our Regular Correspondent

London, May 15.
Interest in farming circles at the present time is practically centred in the proposal to abolish the corn duties. The government's proposition has been received very badly by farmers, millers and provision dealers in general, for it is quite plainly seen that the slight duties imposed last year have not had the least effect upon the price of bread, while apart from any question of protection or preferential tariffs, changes at such short intervals, especially when it is understood that the tax will be permanent, is prejudicial to trade and causes lack of confidence. Great pressure is being brought to bear upon the government, and it is hoped that they will withdraw the proposition to repeal the tax and allow the duty to continue. To Canadians the duty on corn (wheat) and flour means perhaps more than they are aware of. It was confidently anticipated in a great many quarters that the imposition of the tax was a first step to a differential tariff whereby colonial produce would be admitted at lower rates than foreign-grown corn. As remarked above there is a widespread feeling that the tax should not be repealed, but time alone will tell whether the farmers' and millers' interests will gain the day.

Business in the provision markets shows no feature of overwhelming interest. There is a fair consumptive demand and business is satisfactory.

THE WORLD'S BUTTER SUPPLY.

The importance of the butter industry and the keenness of competition is not appreciated in Canada like it ought to be. Denmark, of course, is at the head of affairs both as regards quality and quantity, and 95 per cent. of their production comes to the United Kingdom. It is not so much, however, the European countries that have advanced during late years, but other parts of the world. In support of this it may be mentioned that, thanks to refrigeration wagons, Siberia now sends enormous quantities of butter to the English butter market or else to Denmark, whence it is re-exported to this country. The Russian government would appear to be fully alive to the importance of holding, as far as possible, the English butter market, for they have introduced the very moderate tariff of \$4.12 per ton for transit from Kourgane to London, a fifteen day journey. They have, moreover, purchased a further 470 wagons provided with refrigerating apparatus, making over a total of 1,000 wagons used for this purpose.

Canada has likewise become an important butter-producing coun-

try, sending by means of refrigeration large quantities of butter to Europe annually. As regards the butter received in this country from the Dominion it is not without interest to observe that whereas in 1895—at a time when artificial cold was not widely employed in the preservation of foodstuffs—only 1,655 tons of butter was exported by Canada. Refrigeration has now become so generally adopted as to permit of our receiving from the Dominion no less than 11,000 tons of butter yearly. To a certain extent Argentina also figures under the head of butter-exporting countries, and whilst in 1901 only 1,500 tons of butter was shipped from the port of Buenos Ayres, this figure rose to 2,653 tons for the first nine months alone of 1902. Other countries, such as Australia and New Zealand, also contribute, though to a smaller extent, towards the butter received in Europe.

THE BACON TRADE.

The killings of pigs continue to increase and supplies of bacon in general are fast outstripping the average requirements of the trade. Under these circumstances buyers have naturally been hanging back somewhat, watching the attitude of holders as to whether they would precipitate a decline for the purpose of hastening the clearance of the excessive quantities coming forward. All classes of bacon have been influenced by these considerations. Fortunately Canadian meat has been fairly well disposed of and arrivals have not accumulated to any great extent, but trade showed a general weakness in sympathy with other hands, and prices have fallen from 50 cents to 75 cents per cwt.

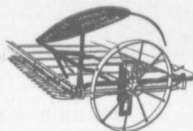
CANADIAN AND AUSTRALIAN APPLES.

Just a few samples of Canadian apples are to be seen, several parcels of Nonpareil have reached as high as \$7.50 per barrel just recently, but the American fruit has to be looked for as it is not put forward by the dealers. The fruit from Australia is in first-class form at present and prices realized at auction for all clean parcels are very uniform. Some good samples of Newtown Pippins are unnoticed. They have had their day and if Australian growers keep up their character for good produce they will have ought to fear from the prolongation by cold storage of the fruit from America. General opinion on the market is that it is waste of time for the Canadian and American growers and shippers to try and compete with this trade and that it would be much better to leave it to the Australians and be satisfied with their own season.

So that Canadians may form a reliable opinion as to the strength of the Australian trade I may men-

The Folding Dividers on the

Massey-Harris Binder



an be quickly and easily swung in over the platform :: ::

When in natural position they are very rigid.

See the "MASSEY-HARRIS"

The Happy Thought Milk Cooler



Cools the milk immediately with pure air only. No ice or water required. Post card will bring full particulars. Good 'live agents wanted for this and our Spray Pumps or Cream Separators. \$30 to \$50 per week earned easily.

Address the manufacturers,

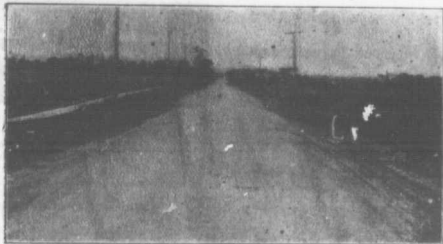
The Collins Mfg. Co.

34 Adelaide West,
TORONTO

tion that a well-informed authority estimates that South Australia growers will export between 40,000 and 50,000 cases. Assuming that each case contains on an average 120, this represents 6,000,000 apples. The season roughly extends from the middle of March to the end of May and the present promises to be an exceptionally good one.

Exports Increase

The aggregate foreign trade for Canada for the ten months ending April 30th, amounted to \$357,092,054, an increase of \$29,917,234 as compared with the same period of 1902. The exports of domestic products increased to the extent of \$13,667,847, the highest increase being made up of animals and their products which show a gain of \$8,605,372 as compared with the same period of last year.



A Nice Stretch of Country Road

Progress Towards Good Roads

No movement is making greater and more substantial progress in this province than that of good roads. It is now largely in the hands of the county and township councils, who are gradually falling into line and changing to more modern and common sense methods of improving the highways. Ten years ago there was hardly a township councillor in Ontario, let alone a county councillor, who would publicly identify himself with the movement for good roads, then first set on foot. Now it is the exception to find a municipal officer who will openly oppose it.

The latest reports show that 140 townships in Ontario have abolished statute labor and substituted the commuted plan by which the work of repairing and improving the roads is placed under the control of one or more commissioners. There are about 370 townships in all, so that fully forty per cent. have changed from the old to the new plan. In addition many more, while continuing the statute labor plan, have special commissioners instead of pathmasters to see that the work is properly done. There are grading machines in 97 per cent of the townships, and in many districts rock-crushers and other modern road-making machinery.

IN THE COUNTIES.

The movement in the counties centres largely around the "million dollars for roads" scheme and the best way to secure a share of this government grant. Owing to the act passed two years ago being unworkable, or better, perhaps, having limitations that prevented many counties from taking advantage of it, the applications for a share of the grant have not been large. But amendments to this act made at the present session of the Legislature will remove several of these restrictions and make it possible for many more counties to come in. By these amendments county councils are left free to select any road in a township and make a grant from the Government funds to the township to be expended on these roads. Heretofore many townships refused to fall in with the county assuming control of the main roads, thus

preventing advantage being taken of the act. Likewise in many counties, with back townships sparsely settled, the older municipalities refused to be put to the expense of maintaining and building roads in these back townships. These amendments make provision also for taking over toll and other roads in any county and using the government grant in payment thereof. Thus the objections raised to the original act have been removed and it is expected that fully \$250,000 of the million dollar grant will be taken up this year.

Some of the counties that have taken advantage of the act may be mentioned. Wentworth has taken over 140 miles of road, 60 miles of which is toll road, and raised \$120,000, thus securing \$20,000 of the government grant. This county has practical road-makers employed as commissioners and a complete outfit of road-making machinery, including a traction engine outfit that will draw at one time as much gravel as fifteen teams of horses. Simcoe has taken over 300 miles of road, raised \$150,000 and received \$50,000 of the grant. It sent a special committee this spring to New Jersey to investigate the good roads movement there. Lanark has taken over 128 miles of road, raised \$100,000 and secured \$12,000 of the grant. With the change in the act a number of other counties, including Hastings, Wellington, Lennox, Victoria, Oxford, etc., will

likely apply for their share of the grant this year.

Rural Free Delivery and Good Roads

As many of our readers are well aware rural free mail delivery in the United States is spreading very fast. At the present rate of progress it would seem as if rural delivery will be universal in every state of the union in a few years. But there are one or two obstacles in the way that may prevent rapid advancement.

The great obstacle to the general spread of rural free delivery is the very bad roads of the country. So far the system has only been extended to communities blessed with good roads. The number of localities passed by because of bad roads is increasing every year, and many see in this the beginning of a storm that may break some day in its fury and sweep away the rural free delivery system entirely. Of course those blessed with good roads and enjoying the advantages of rural free delivery, will say to those opposed: "Why don't you improve your roads and secure the blessings of free delivery?" Those opposed, and they are in the majority, reply that in improving their roads great obstacles have to be overcome and that they cannot be overcome unless national or state aid is given. This is not an unreasonable request, and may involve the people of the United States in the expenditure of not only millions of dollars for rural free delivery, but many millions more for road improvement, in order that all the people may enjoy free delivery.

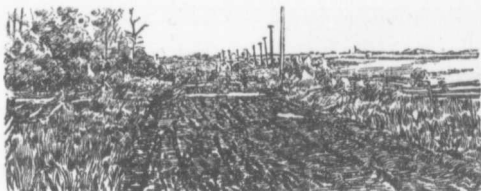
The good roads idea and rural free mail delivery are then very closely associated. Should rural free delivery be introduced into Canada and extended only to localities having good or suitable roads we are afraid there would be comparatively few districts that could take advantage of it. The moral of all this is, improve your roads so that you may be in a position to take advantage of rural free delivery when it does come.

National Aid More Prominently

The leaven of road improvement seems to be working in all parts



A Neat bit of Swamp Grading



Piece of road near Kempville, Ont., before the good roads train had visited that district.

of the United States. In far off Texas the people are taking hold of the idea with vigor. In Pennsylvania the state aid idea has taken firm hold. The plan recently adopted is for the state, the county and the township to co-operate in the work of building and improving the roads. The state is to pay two-thirds of the expense and the county and township in which the work is done each one-sixth of the cost. The state has made available for this purpose \$6,500,000 to be expended during the next few years.

The principle involved in the state aid plan is the same as that involved in the scheme for national aid, which has of late become so popular in the United States that road improvement is not merely a matter of local interest and responsibility, but a matter of interest and concern to the whole people is the fundamental idea of both, or to put it in another way, road building is coming to be viewed in the same class as river and harbor improvement. Another reason why national and state aid are becoming so popular is a realization that unless something of the kind is adopted bad roads, like the poor, "will always be with us." The expense of improving the roads in many localities is so much of a burden that unless state or national aid is afforded, nothing will be done. It is also believed that if such aid is afforded the people will do more for themselves.

Such is the situation and the attitude which the people of the United States are assuming towards road improvement. Are we in Canada as far advanced in our ideas? Are we willing that the weaker and poorer sections should receive extra assistance from the state for road improvement?



Road near Kempville, Ont., after being operated on by the good roads train.

A Striking Object Lesson

One of the more recent advanced movements towards good roads in Canada was the operation of the good roads train during the summer seasons of 1901 and 1902, under the auspices of the Eastern Ontario Good Roads Association. The machinery for road-making was supplied by the Sawyer & Massey Co. and operated by experts employed by them. The train carrying the outfit was supplied by the Grand Trunk Railway.

Stretches of roads were made at different centres under a schedule arranged by Mr. H. B. Cowan, Secretary of the Good Roads Association. The average cost of building these stretches of road was \$882.38 per mile. This is a pretty low average, considering that the worst pieces of road in the various districts were selected to be operated on.

The people in the districts where roads were built expressed themselves as being well satisfied with the work, which gives promise of being of a most permanent character. In addition to giving object lessons in practical road-making, lessons were given in the making of concrete culverts and in the operation of modern road machinery.

Major James Shepherd, representing the Sawyer-Massey Co., had charge of the road machinery. The Commissioner of Highways, Mr. A. W. Campbell, also rendered valuable assistance.

A most striking object lesson was given and the attention of the people of Eastern Ontario directed to the advantages of good roads in a way that could not be accomplished by any other means.

MELOTTE ...CREAM SEPARATORS

One of the reasons for the popularity of these separators is illustrated here. The bowl hangs on a hardened steel spindle which revolves in a socket fitted with ball bearings. Friction is thus reduced to a minimum, and the machinery runs smoothly as to necessitate the use of a brake, which is a feature of all the 1903 Melottes. A valuable result of this beautiful arrangement is that the bowl is self-balancing and thus the annoyance and expense of a bowl getting out of balance is avoided.



These invaluable features are possessed by no other cream separator.

For prompt delivery, please place orders with our local agent at once. Write us for illustrated booklet.

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579 & 581 ST. PAUL STREET.
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FIRE ! FIRE ! FIRE !

IS A GOOD SERVANT
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PROTECT YOUR HOMES

WITH A

BROOKS' PEERLESS ROCHESTER SPRAYER

With the possession of one of these sprayers ensures protection against fire, and a greatly reduced insurance premium. Fully covered by patents in the U. S. and Canada. Infringers will be prosecuted.

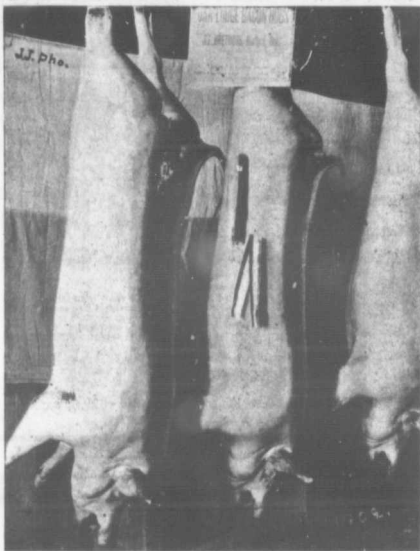
Read What They Say.

Mr. M. B. KEVNER, of Charlotte, N. Y., says, "I saved my dwelling house, which I value at \$5,000, by using a Brooks' Rochester Sprayer, and would not be without one at any price."

For sale by all Hardware Dealers, or send to
Southcombe, Viel & Ramsden
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We are looking for Live Agents. Write for our proposition.

WHEN WRITING ADVERTISERS, PLEASE MENTION THE FARMING WORLD.



Carcasses of Prize Bacon Hogs, Winter Fair, 1902. Note the length of side, neat hams and smoothness of finish and outline.

How the Prize Bacon Hogs Were Fed

The accompanying illustration represents the carcasses of three bacon pigs exhibited at the Provincial Winter Fair, Guelph, Ont., 1902. These pigs were first in class: "Pen of pure bred hogs most suitable for the export bacon trade," also winning the grand sweepstakes in best pen of three bacon hogs, any grade breed or cross, these pigs also won the same prizes in the dressed carcass competition. They were fed by J. E. Brethour, Burford, Ont., and were bred from his celebrated herd of Yorkshires. The system of feeding these pigs was as follows: They were allowed to nurse the dam until two months old, they were then fed on separated milk with a small quantity of wheat middlings added, this with the addition of a small quantity of vegetable food was their principal ration until they were four months of age, when they were allowed to run on stubble for about two months. At this time they were again put in the pen for the finishing period of about five weeks, the food given during this period was composed of equal parts of finely ground wheat, barley and oats with the addition of about one third of the total weight of wheat middlings. The carcasses of these pigs were pronounced by the packers who judged them as being equal to any they had ever seen. This is the fifth year in succession that Mr.

Brethour has won first on pen of pure bred bacon hogs at the Winter Fair.

The Polled Durham

This breed of beef cattle was started about twenty years ago, from a Shorthorn cow of the Gwynne family, which had very small horns and produced three calves that were hornless. Two of these were heifers and the other a bull. Some other Shorthorn cows were bred to this hornless bull, and a large percentage of them produced hornless calves. They were retained and bred from, the hornless animals being interbred with each other. That is how what are known as "double standard" Polled Durhams originated. They are called "double standard" because they can be recorded in both the Shorthorn and Polled Durham herd books. The single standard Polled Durhams trace back to a muley cow of no known breeding but a good milker, which was bred to Shorthorn bulls and the hornless calves saved as breeders. They were interbred with the hornless Shorthorns, and the continued use of pure bred bulls has left but little of the blood of the original muley cow in the breed. This branch of the Polled Durhams can only be recorded in the herd book of that particular breed.

Caring for the Young Colt

Upon the treatment, which the colt receives during the first year of its life will depend largely the kind of horse it is going to be. Neglect during this period may result in serious loss. A competent authority on the care of young colts gives the following advice:

The colt should be taught to eat as soon as possible after it is foaled. One way of teaching it is to mix chopped oats and milk in equal parts and offer it to it. It will nibble at it, especially if a little of the mixture is taken into the hand and held out to it. Repeat this for two or three days, once or twice a day, and it will soon be found eating with as much enjoyment of the feed as its mother. While the mare is being worked the colt should be left at home and not allowed to go to the field and follow the mare about all day, worrying itself, keeping the mare fretting and making a nuisance of itself by getting mixed up in the harness and implements. The mare will soon become accustomed to its absence, and if the colt is confined in a roomy box stall with a little feed to amuse itself with it will get along all right. About 10 o'clock in the forenoon and 3 o'clock in the afternoon it will be found to be a good practice to take the mare to the barn, feed her lightly, give her water and allow the colt to suckle. As it grows older its feed should be varied, and it should be taught to eat all kinds of grain. Timothy hay is not good feed for them, and



Side from one of the prize bacon hogs shown above. Note the even distribution of fat and lean meat. If all hogs marketed were of this quality packers would have no excuse to complain.

should not be given to them under any circumstances. After the colt is weaned its diet should consist of good clover hay, chopped oats, bran, oil meal and all the milk that it can be induced to drink. Sheaf oats cut up and mixed with bran is a standard feed with many breeders who make a speciality of raising good horses, and many of them put up sheaf oats and keep them through the winter for this purpose. Pure water is a necessity for the health and thriftiness of the young fellows, and it should be of that quality that the owner would not hesitate to drink himself.

• The Care of Working Horses

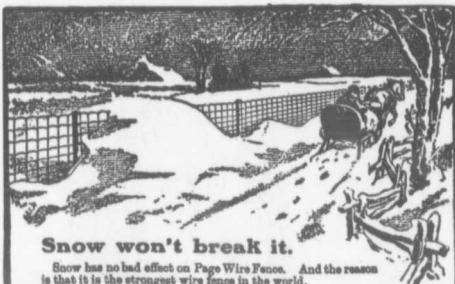
The teams need and deserves special care when work is the hardest. Like the man, the horse is at his best only when he eats and sleeps well, and feels comfortable in general. A team at heavy work requires liberal feeding. Oats and cracked corn is a good mixture for hard-working horses. Feed with good, mixed hay, and at regular hours, three times a day. A little green food given after work is over will do no harm. Add a little salt. A full hour should be allowed for the noon meal. Card and brush daily and sponge shoulders after the day's work. Chafed places should be washed and rubbed with vaseline or tar ointment. A piece of strong gum plaster will protect a sore place from further wear. The cause of saddle galls may be removed by side-padding and raising the saddle. Collars cause much strain when plowing and hauling heavy loads, and they should fit well and be fully padded. In case of sores under the collar, use instead a breast strap for awhile.

• Sheep Losses in Australia

Though the severe drought of the past seven years in Australia has caused the loss of 33,000,000 sheep, there are still 92,000,000 left. However, the losses and the poor condition of the sheep have contracted the exports remarkably and brought a marked increase in the price of wool, especially of the finer qualities. But the next returns from Australia are likely to show a greater reduction in the number of sheep, making the total in Australia proper probably only 60,000,000, or smaller than at any time since 1880.

• Big Cattle Breeding Test

Professors Kennedy and Marshal, of the Iowa Agricultural College, have completed arrangements for an extensive cattle feeding experiment on the Cook farm, Odebolt, Iowa. Five hundred head of cattle are being fed to test the following: (1) Acclimation test. (2) Light, medium, and heavy rations. (3) By-products of corn, flaxseed, cotton seed and dried blood. The results will be looked forward to with interest by cattle feeders every where.



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Practical Ideas for Dairymen

The Dairy Cow

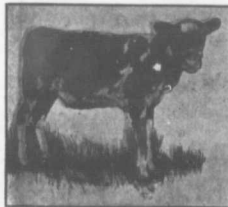
It is not necessary in the present day to dwell on the importance of dairying in Canada. It is a branch of farming that retains its position in the front rank of our agricultural industries, in spite of competition. While the prices of "exporters," grain and hogs, fluctuate greatly, not only during the year, but from year to year, the prices of dairy products vary but little and always maintain a paying basis. True, every farmer cannot be a dairyman, for obvious reasons, and there are many farmers who are only "dabbling" in it; but on the other hand, many farmers are not dairying who are well adapted for it. The foundation stone of all dairying is the dairy cow, not the "dual purpose," "general purpose," or "purposeless" cow, but the cow that, by judicious training, has a special purpose in life, viz.: the production of a large quantity of rich milk for at least ten years of her life. There are several well-recognized dairy breeds of cattle, and a dairy farmer should select the breed best adapted for his special environment, circumstances and liking.

R. Reid, Waterloo Co.

Raising Calves Without Milk

Experiments with milk substitutes for calves are being conducted in the vicinity of large cities with some success.

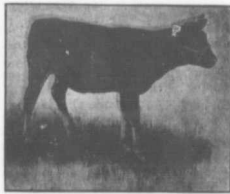
The illustrations on this page represent four calves raised at the Pennsylvania Agricultural College.



Raised on Calf Meal.—Weight at 141 days, 191 lbs.



Raised on skimmilk with Grain.—Weight at 107 days, 249 lbs.



Raised on Calf Meal.—Weight at 167 days, 262 lbs.

The centre two had skimmilk with grain, but the other two had no milk after they were 10 days old.

Cows are being drawn from the best dairy sections of the country to supply the dairies of city milk shippers. Calves from these fine milkers are gotten rid of as soon as possible, and the cows themselves are turned over to the butcher instead of being again bred. A practical system of raising calves from such cows would be valuable.

In this experiment, 30 lbs. wheat flour, 25 lbs. cocoanut meal, 20 lbs. nutrium, 10 lbs. linseed meal, and

2 lbs. dried blood were mixed together. A ration of 1 lb. of this mixture was added to 6 lbs. of hot water cooled to 100 degrees and fed, preferably with a calf feeder. Beginning when the calf was 7 days old, it was fed twice a day with 3 lbs. of whole milk and $\frac{1}{2}$ lb. of the calf meal mixed with water. More meal and less milk was used according to individual requirements, but the calves were usually put on a full calf meal ration when about two weeks old. The amount was



Raised on Skimmilk.—Weight at 210 days, 247 lbs.

gradually increased as the calf grew. The average daily feed of calf meal extending over a period of 83 days was a little less than 2 lbs.

Cocoanut meal is a by-product in the manufacture of cocoanut oil. As it becomes rancid and unpalatable a substitute might be desirable, although its effect as a part of the ration was very good.

Nutrium is a soluble skim milk powder manufactured by a new process. Success in this experiment is largely due no doubt to this product. It costs about 10c.

per lb. ground, or 7c. per lb. l.o.b. not ground and bolted.

The calf meal complete, cost, for this experiment, 3.2c. per lb. To feed a calf 100 days, an average of about $2\frac{1}{2}$ lbs. per day would be required, or a total cost of about \$7. Extra grain, hay and pasture would bring the cost up to about \$9, which is a low price for a well-bred calf $3\frac{1}{2}$ months old.

Father—Tell me why you want to get married?

Daughter—I expect it's one of the traits I inherited from my mother.

Look After the Milk

The following hints by J. A. Ruddick, Chief of the Dairy Division, Ottawa, although written specially for makers, will be found of value by patrons in caring for milk for cheese-making:

1. You cannot make strictly fine cheese from milk which is overripe or tainted.

2. If you are a progressive cheese maker, you will study the causes of tainted milk and assist the patrons to remove them.

3. Milk may become tainted from—

(a) Feed unsuitable for milking cows;

(b) Injudicious feeding;

(c) An impure water supply;

(d) Want of salt by the cow;

(e) Absorption of odors;

(f) The germs that get into the milk during and after milking.

4. Encourage the patrons to aerate the milk, but advise them that aeration must be carried out in a place where the air is pure and free from dust or bad odors.

5. Milk will be injured rather than improved if aerated in a stable, barnyard or even alongside a milking yard, from which dust arises.

6. Milk is not prevented from turning sour by aeration, except in so far as the process lowers the temperature.

7. Generally speaking, a patron who delivers tainted or gassy milk to a cheese factory causes a more serious loss to his fellow patrons than one who skims or waters his milk. This fact should be impressed on the minds of all patrons.

8. In warm weather the milk should be cooled to a temperature of 70 degrees Fahr. or lower.

9. Attend personally to the taking in of the milk as far as possible.

10. Keep your weighing stand and everything thereon, including your clothes and person, thoroughly clean. You have no right to require the patrons to furnish clean milk unless you set a good example.

11. Make fermentation tests of each patron's milk as frequently as possible. By this means you will often locate taints which are not discernible when the milk is being received.

Iceed Cars for Butter

The Grand Trunk Railway Co., have made arrangements with the Department of Agriculture at Ottawa to run refrigerator cars from different points to carry butter to Montreal for export to Great Britain. The service will be weekly. It began on May 18th. Cars will leave every Monday from Warton, Goderich, Petrolia, Kincardine, Orillia, Port Perry, and Meaford; on Tuesdays from Chaudiere Junction, Doucet's Landing, Coaticook, Rouse's Point, Hemmingford; on Thursdays from Quebec Central. Numerous stops at intermediate points will be made.

The Canadian Pacific Railway will run iced cars to Montreal from Quebec points as follows: West Shefford and South Roxton, on Monday; Bedford, Summerville, Cookshire, Mansonville, St. Jerome and Grand Piles, on Tuesday; St. Johns, Quebec, Labelle, St. Gabriel de Brandon, Pembroke and Three Rivers on Wednesday; St. Lin, and St. Eustache, on Thursday of each week.

Standards of Quality for Dairy Products

A joint meeting of cheese and butter salesmen, members of the Montreal Produce Merchants' Association and officials of the Dominion dairying service will be held at Montreal on June 2nd to consider the questions of standards of quality and descriptive terms of the different grades of cheese and butter. All the local dairy boards of trade, have been asked to send representatives.

Prevention of Mould on Butter

The following suggestions from a circular issued by the Agricultural and Dairy Commissioner will, if carried out, prevent the growth of mould on butter:

1. That factories should be thoroughly cleaned by liberal white-washing with lime, and the use of any other germicide that experience can suggest.
2. As damp wood is a hot-bed for breeding and disseminating spores of various kinds, care should be taken to have the woodwork of factories always thoroughly sound and dry, carefully removing all damp and decaying pieces particularly from the floors and gutters. Drainage should be carried away from the factory beyond smelling distance by watertight, vented, and trapped drains.
3. Factory refrigerators should be kept as dry as possible, and nothing but sound wood allowed to remain in their structures.
4. Particular care should be taken that butter boxes are made only of thoroughly seasoned wood carefully and properly paraffined.
5. Only the best and purest parchment paper should be used for lining the boxes. This paper while awaiting use, should be kept in a thoroughly dry, clean place; before use on the butter it should

be carefully soaked in a solution of brine and formalin. It should never be applied in a dry state, and particularly it should never be used after being wet with pure water.

6. Great care should be taken in conveying butter from the factory to the railway station. It should be exposed as little as possible, and for as short a time as possible.

Cool Curing Station Opened

The four cool cheese curing rooms maintained by the Dominion Department of Agriculture, at Woodstock and Brockville, Ont., and St. Hyacinthe and Cowansville, Que., to illustrate the advantages of curing cheese at a uniform temperature not exceeding sixty degrees, were opened on May 18th for the summer's work. The capacity of these curing rooms is of course limited, and in consequence usual about the same number of factories as last year are able to contribute cheese, although the owners of many other factories were desirous of doing so. Last year's experience with these rooms showed that it is desirable not only to control the temperature when curing in midsummer but also during the whole season or from the first of May to the end of October.

Curing Cheese in Airtight Packages

Pro. Pernot, of the Oregon Experiment Station, has been experimenting in curing cheese or the curd in air-tight packages instead of the usual drum or moulded shape. This is along the line of Drs. Babcock and Russells' recent discoveries that air and germ-life are not essential factors in cheese curing.

The first experiments at Oregon have just been completed. Cans, that had been sealed up five weeks previous, were recently opened, showing a cheese of good quality, having an excellent flavor and smooth pliable texture. No rinds form on the cheese and no moisture evaporates, so that two great sources of waste in the ordinary method of cheese-making are avoided.

The cans used held from one to five pounds and were first coated inside with paraffine to prevent tainting from the tin. The curd at the time it is ready for the press is tightly packed into the tins under pressure and allowed to remain over night. The cover is then soldered on and the can laid away for future use.

The advantages of such a plan of curing as applied to the average cheese factory are not quite apparent. There are some bad flavors in curds that pass off from the cheese in the curing-room. In an air-tight package, these would not have a chance to escape.

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Clover and Clover Culture

Why Farmers Should Grow It—How to Grow It—When to Grow It

Scientific probing has not altered the fundamental principle that clover improves the soil. This fact makes it an important subject in farm issues; important because of its direct influence in the improvement of soil fertility. Beside the energizing effect, which is a direct result, its great abundance of roots retains plant food that may be applied. The great depth to which the clover roots penetrate changes the physical character of the soil.

The air is full of nitrogen. Clover is a plant endowed by the Almighty with power to draft this nitrogen from the air, refine it and hold it available for the present and subsequent needs of plants. This, from the top.

The roots reach down into the sub-soil and unlock mineral plant food, storing a surplus in its growth. These roots have filled the soil with a rich organic substance that breaks down easily and in its decomposition makes the soil rich in all the elements of plant food. Sour soil is like a sponge holding large amounts of moisture and not easily affected by drought.

While this great improvement has been going on, what have we been doing with the hay? For growing young cattle, for making beef, for producing milk, pork, mutton, poultry and eggs there is no food so difficult to substitute as clover. Its absence affects very materially the economy of feeding.

VALUE OF CLOVER HAY

We have a great many things to say in favor of clover hay properly cured. Clover hay over ripe is about the poorest food you could possibly have. Clover should be cut just as the blossom is formed, cut after the dew is off, put in cock in the afternoon and left there until hauled to the barn, which, in good weather, will be from 24 to 36 hours. Clover hay will keep well cured in its own sap, but will spoil if housed carrying any foreign moisture in it.

WHY IS IT NOT MORE GROWN?

Now, with all the resultant advantages obtained from clover growing, why is it there is not more grown? I anticipate the answers: I can't grow it. I grew it one year and then it died. I had it start well but it winter killed. I had a good start and turned sheep on it in the fall and it died. I had a good start and when I cut the grain it died. I might go over a lot more excuses for not growing, but they are not sufficient reasons why every farmer should not grow more clover. We may meet with some difficulties, but with care and persistency we can overcome them. Farmers make a serious mistake when they trust clover to grow on poor, worn-out land. We have read and

heard so much about clover improving the soil, some of us have misconstrued the teaching to mean that clover will bring up poor soils. My experience is that you have got to have pretty good soil to grow clover. Then we make a mistake in not studying the life history of the plant.

CLOVER AS A FERTILIZER

We have no right to expect clover to grow five or ten years, when one year is the life of red clover, in fact, clover once blossomed has completed its life function. Clover is a great boon to every farmer in the solution of this problem. Any man, with barnyard manure at hand, can make a portion of his farm rich, but how to keep that portion rich until he carries manure to the rest of his farm, has been the problem with many of us.

Clover solves this problem. First



Scene at Grove Farm, home of John Eldridge, Bruce Co., Ont.

manure the poor soil, raise a crop of roots or corn, give the land good cultivation, follow the hoed crop with grain and clover, cut hay two years, plow, plant potatoes or corn, cultivate well, follow with grain and clover. You may keep this rotation up for years and your land will produce good crops. Manure about the third series of rotation.

FINE SEED BED

Clover seed is very small and must have a fine seed bed. The seed resembles turnip seed as regards moisture. It must have 40 times its own weight in water before it will germinate. You cannot grow turnips sown late in a dry season, neither can you get a catch of clover sown late in a dry season. Do not try it. It means a waste of seed. Clover seed must have a fine seed bed, fairly good soil and sown early in the spring. While it must have moisture, too much water will drown it.

Select good seed. Good seed is not sold cheap, but it proves the cheaper in the end. We had an instance in New Brunswick this year where there was found 40,000 weed seeds in one-half pound of clover seed. If from circumstances unavoidable you are not able to

seed early with your grain, let the clover seedling wait until the next spring; then seed just as the snow is leaving the ground. Sow at the rate of 10 pounds to the acre, the weather will do the covering. The ground will be porous from the action of the frost and you will get a good catch. If you have seeded and had the clover thrown out by frosts, sow again in the early spring. You will have a crop of hay, same year, about 3 weeks later than ordinary time for cutting.

THE CROP TO CLOVER WITH

Some farmers agree that wheat is the best grain to seed to clover with. I question whether it is better than any other grain, that stands up well. I tried it with wheat, oats, barley under similar circumstances with like results. The reason men got this idea was because they generally get a catch of clover with wheat. The real reasons were: Wheat was sown on well prepared ground, the wheat was sown early in the spring and less per acre than other grain. The clover seed fell on good soil, was sown early when there was sufficient moisture and it could do nothing else but grow.

After harvesting grain, on ground sown to clover, and there comes a hot, dry spell, it would pay to run a mowing machine over the field and cut the stubble, leaving it to mull the surface of the ground.

Clover should never be pastured close. While I believe in feeding it off in the fall, with cattle to keep it from blossoming, I never feed it close. Sheep should not be allowed to remain on a clover field, they destroy the crown and let the weather in, destroying its vitality.

SOW CLOVER WITH ALL GRAIN

It pays to sow clover with all grain if sown early, even though you plow the land the same fall, that growth of roots is worth about as much as ten loads of farmyard manure per acre. Clover may be sown in the corn field, at the last cultivation, providing the land has been well cultivated through the early season to conserve the moisture.

We have found some division of opinion as to cutting clover for hay or letting it remain to rot on the surface or be plowed down. I have no hesitancy in advocating the cutting for hay. This hay can be converted into a profitable farm product. It is the roots we want to improve our soil and we get a larger growth of roots on account of the tops having been cut.

We have heard clover called "the lazy man's friend." The appellation is a misnomer. The man who thinks clover will thrive and improve soil by simply sowing under any condition, and trusting to Providence for the result, will early find that it is like all other functions of Providence, helps those who help themselves.

W. L. Tomkins, York Co., N.B.

Nature About the Farm

Edited by C. W. Nash

Ravages of Field Mice—Bees in Clover—Poultry Lice.

The editor of this department will be glad to identify for subscribers any specimens of natural history sent to this office for that purpose and will answer any questions on the subject that may be asked through the Farming World.

BIRD LIFE

On looking over the Ontario crop report for May I noticed this statement:

"Orchards have come through the winter in excellent order so far as weather conditions are concerned. The only damage to fruit trees between November and April was caused by a plague of field mice which appear to be working steadily westward, the centre of operations now being in the Lake Ontario counties, while a year ago they were most hurtful in the counties along the Lawrence. This spring reference is made to their presence by correspondents in portions of Simcoe, Grey, Perth, Middlesex and Haldimand. Thousands of valuable fruit trees have been girdled by these pests, and some correspondents regard their operations as a serious menace to fruit culture."

If we are now to be attacked by an army of field mice we shall suffer severely, because these animals not only destroy the fruit trees in winter by girdling them, but they also destroy all grain crops in the summer. The attention of farmers and fruit growers has for several years been called to the fact that these mice were increasing in the province and that there was a great probability that they would develop into a plague as they had done in some sections in the United States and in Great Britain, but our people are slow to take warning from the experience of others, they seem to think that they can with impunity upset nature's laws, although they know that other people cannot without suffering for it. The field mice are very prolific and where food is plentiful increase with great rapidity. Nature, however, keeps them in proper check through the hawks, owls, weasels, etc., all of which use them as their principal food. The owls particularly destroy vast numbers of them. In 1892-1893, when a plague of these same field mice was ruining farmers in the Scotch border counties a committee was appointed by the board of agriculture to investigate the cause of the plague and find a remedy. Most of the witnesses examined by the committee not only bore witness to the efficiency of the owls in arresting the increase of the plague but ascribed its origin to the killing off of owls, hawks and weasels. Wherever any part of the country becomes infested by field mice, then the hawks and owls with that peculiar instinct which directs them to where food is abun-

dant will flock to the place and if undisturbed will remain until the supply of food is exhausted. The farmers who gave evidence before the committee stated that as a consequence of the vast multiplication of the field mice which had almost devastated their farms, the owls flocked to the infested spot in large numbers and not only remained to breed, but owing to the abundance of their favorite food, laid an unusual number of eggs and reared more than one brood in a season. Whereas six is the usual clutch they laid from eight to ten eggs. One shepherd counted fourteen nests on his ground and a small wood on another farm was described as being densely covered with castings composed of the bones and fur of field mice. The people there protected the owls



The Rough-legged (mouse-eating) Hawk.

and so they remained in the district until they had cleared off all the mice. It is probable that we shall in this province be visited by a large number of owls and the mouse-eating hawks which will be attracted to the infested districts by the field mice. If we are and the birds are protected the plague will soon be over, but if the farmers persist in their short-sighted policy of destroying owls and hawks the result will be disastrous. There is but one species of owl that ever does any injury to farmers, that is the great horned owl, this bird will attack poultry if they are allowed to roost in unprotected places. It is, however, not at all a common owl now and in any case will only attack poultry when other food is scarce or difficult to obtain. All the other owls are guiltless of doing any injury to farm produce and are in fact among the best guardians of the farmer's property. Owls are protected under chapter

289 revised statutes of Ontario and the law should be strictly enforced against every person found guilty of killing an owl. If this is not done we shall well deserve to suffer all that a plague of field mice can inflict upon us.

Mr. A. A. Wood has very kindly sent me a record of a second nest of the long eared owl found in the county of Middlesex. Last year Dr. Clarke found them breeding near Kingston and I have often observed the birds in the summer months in various parts of southern Ontario, so that I think there is no doubt but that they breed regularly throughout their range in Canada. It is to be hoped that as our people (farmers particularly) realize how essential owls are for the maintenance of the balance of nature they will be protected and that the senseless persecution to which they have been subjected by the ignorant will cease.

INSECT LIFE

The warm weather of the last few days has again brought out the female wasps and humble bees in large numbers, and they are very busy seeking nesting sites; both these insects are very useful though they have their bad points and sharp ones too, as we sometimes find out. The wasps, as I stated before, destroy vast numbers of flies and caterpillars when they are feeding their young. I have often seen wasps picking horn and stable flies off cattle and last summer I watched some catching flies on the wire screen which forms the outer door of the kitchen of my house. Upon this screen the flies had collected in great numbers and the wasps found them out and were coming and going all the afternoon, carrying off flies at each visit as fast as they could pick them up.

The humble bees or bumble bees are particularly beneficial to clover seed growers, because they are possessed of very long tongues, which enable them to probe the blossoms of the red clover and in so doing some of the pollen adheres to them, and they carry this from one blossom to another, thereby fertilizing them, so that seed will be formed. This work of fertilizing the red clover is almost exclusively performed by these long tongued bees; without them it is very doubtful if we could obtain any clover seed at all. And here is lies another danger from a plague of field mice. These mice destroy the bumble bees' nests and devour the comb and young at every possible opportunity, this creates a scarcity of honey gathering bees, consequently the clover will not be fertilized.

At this season poultry-keepers are likely to have more or less trouble with vermin in their poultry houses and about their premises. I say more or less, because those who know something about the nature of their birds and who use their judgment in ap-

plying their knowledge, will have kept their fowls always well supplied with fine dry material in which to dust themselves, and will have kept their poultry houses clean; these people will have very little trouble, but where fowls have been kept all through the winter without a chance to dust themselves properly, vermin will probably swarm. The best dusting material I ever found is fine sifted coal ashes, put in few shallow boxes full of this where it will be always dry and where the poultry can get at it and also scatter it freely and frequently about the poultry house, and there will be no trouble with vermin. But if these precautions have been neglected, or vermin have been introduced with some recent purchase, then they must be got rid of. To do this take one pound of phenyle powder and mix with it four ounces of pyrethrum. Keep the mixture in a glass jar securely closed until wanted. To use it fill an insect powder bellows three parts full of the mixture and then go into the poultry house at night when the birds are at roost and puff the powder everywhere about, over the fowls, about the walls and into the nests; do this for a few nights in succession and then about once a week until all the vermin are destroyed, after that just do it once in a while as a matter of precaution and you will see no more vermin. Before setting a hen always puff some powder about the nest and again just before the chicks are hatched puff some into the nest and over the hen and among her feathers. Nothing can be easier to apply than this is and I have found nothing so safe and effectual. Greasy remedies are nasty messes, troublesome to apply and so far as my experience goes, of very little use.

ERRATA

In our last issue the illustration was entitled the "song sparrow"; this is a mistake; it should be the white-throated sparrow. In the text also the words Irenco and Irenco occur; these should be Junco.

The Cost of Tuberculosis

At the third annual meeting of the Canadian Association for the prevention of consumption, held recently at Ottawa, the Governor-General delivered an address, in which he stated that probably there were annually not less than 30,000 cases of tuberculosis in Canada, and the number of deaths was about 9,000. It was pointed out by other speakers that the estimated annual loss to Canada from tuberculosis was \$72,000,000, based on deaths and invalidation from the disease.

Laughing is the sensation of feeling good all over and showing it in one spot.

Building Concrete Barns

Mr. G. T. Powell, of New York State, who attended the Ontario Fruit Growers' Convention at Whitby, a couple of years ago, gives the following description of his concrete barn:

"My barn is seventy-five feet long, sixty-five feet wide, and the walls are twenty-five feet high, with a partition wall which runs the entire length on one side, where I had silos with a capacity of five hundred tons arranged in the building. I set my studding wherever walls were to be built, and inside placed boxes made of two ten-inch hemlock boards, which were filled with concrete, and moved up the studding daily and filled again, this process being continued until the walls were completed.

"The proportions were as follows: One barrel of lime, one barrel of Rosendale cement and twelve barrels of creek-gravel. This material was mixed in mortar-beds. The cement was not put in until the lime was slaked and the gravel added, then all were thoroughly mixed, and wheeled to the walls, where all sizes of stones were thrown into the boxes and bedded in this mortar.

"The walls were made sixteen inches thick, with the exception of the silo walls, which were twenty inches. I think fourteen inches would be heavy enough, and I should not make them thicker than that in building again. A space three-fourths of an inch was left between the stones and the side of the box, which allowed the concrete mortar to cover the outside of the stones, making the surface nearly smooth."

Building Cement Walls

Use cement, gravel and stone in the proportions of 1 to 6, up to 1 to 12 depending upon the grade of gravel used and also upon the strength of wall required and the quantity of stone used.

The specifications for Portland and Queenston cements are the same viz: one part cement to six parts of clean gravel of mixed sizes, not exceeding two inches in diameter. The barrels are of the same size and contain about 3½ cubic feet of cement. Add 6 times the quantity of gravel it makes 21 cubic feet of concrete. To this amount is usually added sufficient clean stone to bring the aggregates up to 27 or 30 cubic feet per barrel. Add about 10 per cent. for openings and a barrel of cement usually makes 33 cubic feet of wall, but will vary widely according to the skill of the builder and the size of the stone used. Mr. Johnson, of Moscow, built a silo 12 x 29 high with 48 barrels or about 1 cement to 8 aggregates and Mr. A. Scouten, of Thorpe, built 12 x 30 high with 39 barrels or about 1 cement to 11 aggregates. Both used the same building forms and the same brand of cement.

Alf. Brown,
Prince Edward Co., Ont.



Shirt waists and dainty linen are made delightfully clean and fresh with Sun-light Soap.

58

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THE HOME WORLD

"Economy is the first mortgage on wealth."

If you listen with serene approval to praise of virtue, and go hence and do not try and strive to build what you have heard into the structure of your daily lives, into your buying and selling and voting and domestic care, you are worse men and women than if you stayed at home or went off somewhere into the free.—J. W. Chadwick.

A Mile With Me

By Henry Van Dyke.

O who will walk a mile with me
Along life's merry way?
A comrade blithe and full of glee,
Who dares to laugh out loud and free,
And let us frolic fancy play,
Like a happy child, through the
flowers gay,
That fill the field and fringe the
way
Where he walks a mile with me.

And who will walk a mile with me
Along life's weary way?
A friend whose heart has eyes to see
The stars shine out o'er the dark-
ening lea,
And the quiet rest at the end o'
the day,—
A friend who knows, and dares to
say,
The brave, sweet words that cheer
the way
Where he walks a mile with me.

With such a comrade, such a friend,
I fain would walk till journeys end,
Through summer sunshine, winter
rain,
And then?—Farewell, we shall
meet again!

For the House Pets

One morning pussy came in sick,
and we found out, after she had
been sick a week, that she had eat-
en a mouse which our next-door
neighbor had poisoned. I poured
a small bottle of cream three times
a day down her throat, and by the
end of the second week she was
well, but was at first
stiff in the joints and had not
much appetite. In the spring she
was missing for an afternoon and
night, and in the morning we found
her and four little kittens in the
lower part of our sideboard. She

had pulled the door open and went
in, and the door had closed after
her.—Effie Brooks.

When you want to give your cat
medicine, mix the dose with thick
cream or grease and put it on her
paw. In lapping the paw clean she
will have swallowed the remedy
without knowing it.—E. B.

Last summer I had quite a little
experience in treating cats for dis-
temper. The first thing I tried
was tar. I took a couple of coals
on a fire shovel, and on this put
a little tar and compelled the kits-
tens to inhale the smoke, being
careful not to make so strong as
to smother them. (This method is
also very good for horses.) As
they could not drink on account of
their throats, I steeped a little cat-
nip and put in warm milk, and
poured it down their throats with
a spoon several times a day. After-
ward I tried greasing their throats
and noses with lard or salve. We
also gave them a good warm bed
night and day. After a day or two
we could see that they were im-
proving. We continued this treat-
ment until they were well.—Lizzie
M. Diarmid.

Useful Hints

One of my friends recently wish-
ed to preserve the remnants of an
old blue and white coverlid that
her grandmother wore. She cut it
in strips one inch wide, slightly
fringed each edge, and it was wov-
en the same as rag carpet. The
result was a beautiful rug.—Hattie
May Benjamin.

It is a mistake to allow table
linen, bed linen, tidies, etc., to
reach their dirtiest state before be-
ing washed. More time and labor
is expended in getting them clean
than if they were washed oftener.—
Mrs. F. W. Carnes.

Fun at Home

Do not be afraid of a little fun at
home, good people. Do not shut
your houses, lest the sun should
fade your carpets; and your hearts,
lest a laugh should shake down a
few of the musty cobwebs that are
hanging there. Young people must
have fun and relaxation somewhere
if they do not find it at their own
heartstones they will seek it at
other and less profitable places.
Therefore, let the fire burn bright-
at night in winter, and let the
doors and windows be cheerfully
thrown open in summer, and make

the homestead delightful with all
those little arts parents so well
understand. Half an hour of mer-
riment blots out the remembrance
of many a care and annoyance dur-
ing the day, and the best safeguard
they can take with them into the
world is the unseen influences of
the bright little home sanctum.—
Home Doctor.

Tribute to the Farmer's Wife

She may not be queen of the
dazzling crowd,
With lily white hands of snow;
She may not shine out 'mid the
rich and the great
Nor their arts of deception know.
But she's queen of queens in her
chosen sphere.
Is the farmer's wife I say,
And she rules by right of her royal
worth,
So, gladly, we yield to her sway.
She's quietly in every word and
act,
Because she's good and true,
In her care and devotion to those
she loves,
Doing well what her hands find to
do.

How sweet the pure yellow butter
she makes,
Her bread, how wholesome and
light.
The old home without her, just
think of it once,
Would hardly be home to-night.
The chickens run at the sound of
her step,
The calves and the lambs know
her call;
The dog bounds beside her, in rap-
turous joy,
And the pony neighs loud from the
stall.

There isn't a thing on the whole
farm to-night,
But knows of her magical skill;
There isn't a soul in the old house
but owns
The sway of her dear loving will.

Her hands scatter blessings wher-
ever she goes,
She smiles and sings on the way;
There's health in her touch, and
love in her voice;
She fairly turns darkness to day.
God bless her this hour, this brave
hearted one,
Whose work seems never to end;
She is wise as in mother, neighbor
and nurse,
She's a constant, true-hearted
friend.
—C. W. Stevenson, in Exchange.



What A Boy Is

Upon being asked to write a short description of a boy, this is what a certain young scholar handed to his teacher:

A boy is a wild animal like me. A boy is always a girl when he is a baby, for his mother makes him wear dresses, but as soon as he gets pants on he begins to feel like a man, and he is one when he is twenty-one. A boy is a queer article anyway you take him. He don't like the girls much till he's grown. He loves his ma and pa pretty well, but he's more devoted to an air-rifle than to anything else. The only trouble with a boy is that he can't be a man fast enough.

What A Girl Is

Upon being asked to write a short description of a girl, this is what another youth at school handed her teacher.

A girl is a beautiful young creature. A girl is much better than a boy, 'cause she can't climb trees and shoot guns. A girl never knows which to squeeze in the most, her feet or her waist. A girl always has a pretty shape, while boys are like regular barrels. Girls are always better looking than boys, 'cause they're always thinking of themselves. Girls scream when they get frightened, 'cause they don't like to swear. Altogether, girls are much sweeter than boys, 'cause they eat lots more candy.

A Garden Race (Bessie's Prize Poem.)

The horseradishes began the race;
The cabbage-heads had their say;
The carrots triumphantly wave
their leaves,
While the turnips turned up the
way.

The bean climbed up the highest
stake,
The pea rolled out of the pod;
The asparagus cheered with in-
creased growth,
And the squash peeped from the
sod.

The potatoes laughed till they wip-
ed their eyes,
The cucumber crawled in the
heat;

The lettuce let up second,
And the beet—of course it beat!

Some Conundrums

Why is the letter "D" like a sailor? It follows the c (sea).

Why is a pair of skates like an apple? Because they have occasioned the fall of man.

Why is a book like a king? It has many pages.

What burns to keep a secret? Sealing wax.

When is a newspaper like a delicate person? When it appears weakly.

At what age should a man marry? At the parsonage.

Why is a committee of enquiry like a cannon? It makes a report.



A Farmer of the Future

What is the most popular paper at a summer resort? Fly paper.

What tree is most suggestive of kissing? Yew.

What coat is finished without buttons and put on wet? A coat of paint.

What is that which will give a cold, cure a cold, and pay the doctor's bill? A draught (draft).

What is that which is neither flesh nor bone, and yet has four fingers? A glove.

What notes compose the most favorite tunes, and how many tunes do they compose? Bank notes, and they make (four) fortunes.

A mother sent her boy to the butcher shop one day to see if the butcher had any pigs' feet. The boy came back and said: "No, mamma, I don't know; the butcher had his shoes on."



Our Work

We may not be able to do as well as we would like to do. As we may not even be able to do as well as our neighbor does. But we are able to do as well as we can do. God, who sees us as we are and understands our lack of power and our desire for more power than we have, will judge us according to our doing within our limits of power and in our circumstances. Have we done in all things to-day as well as we could do in view of our ability and circumstances and of our understanding of duty?—Sunday School Times.

The Silent River

When for me the silent oar
Parts the silent river,
And I stand upon the shore,
Of that strange Forever,
Shall I miss the loved and known?
Shall I vainly seek mine own?

Will the bonds that make us here
Know ourselves immortal,
Drop away, like foliage sear,
At Life's inner portal?
What is holiest here below,
Must forever live and grow.

He who on our earthly path
Bids us help each other,
Who, His Well-Beloved hath
Made our Elder Brother,
Will but clasp the chain of love
Closer, when we meet above.

Therefore dread I not to go
O'er the silent river.
Death, thy hastening oar I know,
Bear me, thou life giver,
Through the waters to the shore,
Where mine own have gone before!

A Creed of Love

Could anything be finer in sentiment or more true to the spirit of hearth and home than one of Bismarck's letters to his wife. There is something strangely pathetic and beautiful in the strong fidelity of the man. He writes: "I married you in order to love you in God and according to the need of my heart, and in order to have in the midst of the strange world a place for my heart, which all the world's bleak winds cannot chill and where I may find the warmth of the home fire to which I eagerly betake myself when it is stormy and cold without, but not to have a society woman for others; and I shall cherish and nurse your little fireplace, put wood on it, and blow and protect it against all that is evil and strange for, next to God's mercy, there is nothing which is dearer and more necessary to me than your love and the homelike hearth that stands between us everywhere, even in a strange land, when we are together."

IN-THE-SEWING-ROOM



WASHABLE STOCKS, 4378

Stocks are among the accessories of dress whose variations know literally no end. None, however, are more desirable or more stylish than the simple washable ones which come forth fresh and new after each visit to the laundry. The models shown are among the newest and are suited to a variety of materials.

No 1 Includes a plain stock and four-in-hand tie with soft pointed ends and is finished with fancy



4378 Washable Stock, one size, medium.



4380 Misses' Circular Tucked Skirt, 12 to 16 yrs.



4381' Shirt Waist, 24 to 44 bust.

stitching. As shown the material is blue chambray, but all the linen and cotton materials used for the purpose are appropriate.

No. 2 Varies from No. 1 in having ends cut diagonally and in being made with tiny tucks as a finish to both the stock and tie. If desired cords can be inserted in these, but they are exceedingly attractive plain.

No. 3 combines a stock of white butcher's linen with a tie of embroidered batiste and is quite plain. In each instance the ties are attached to the back edges of the stock, brought around to the front and knotted under the chin.

The quantity of material required, 27 inches wide, is for No. 1 $\frac{3}{4}$ yard; for No. 2 $\frac{3}{4}$ yard, and for No. 3 $\frac{3}{4}$ yard for stock and $\frac{1}{2}$ yard for tie.

The pattern 4376 is cut in the medium size only.

MISSSES' CIRCULAR TUCKED SKIRT WITH CIRCULAR FLOUNCE, 4380

Girls from twelve to sixteen wear skirts and gowns modelled closely after those of their mammas. This very graceful skirt is one of the latest shown and is suited to all the season's materials. It is exceedingly effective in wool suitings, it is admirable in the heavier linens and cottons and can be utilized for madras and all similar stuffs as well as for light weight wools. The original, however, is made of asparagus green canvas veiling stitched with corticelli silk.

The skirt consists of the skirt proper and the flounce, which is cut in two sections, all of which are circular. The flounce is tucked at the edge of each portion and the

skirt at its lower edge and joinings are made beneath these tucks. The fulness in the back is laid in inverted plaits which can be stitched flat or left plain as preferred.

The quantity of material required for the medium size (14 years) is $\frac{7}{8}$ yards 27 inches wide, 6 $\frac{1}{2}$ yards 32 inches wide or $\frac{3}{4}$ yards 44 inches wide.

The pattern 4380 is cut in sizes for girls of 12, 14, and 16 years of age.

WOMAN'S SHIRT WAIST, 4381:

The waist consists of fronts and back only and is fitted by means of shoulder and underarm seams. The fronts are gathered at the neck edges and again at the waist line but the back is plain and drawn

down snugly at the belt. The sleeves widen as they approach the cuffs, which are straight and can be held by means of buttons or links as preferred.

The quantity of material required for the medium size is 4 $\frac{1}{2}$ yards 21 inches wide, 4 yards 27 inches wide, 3 yards 32 inches wide or 2 $\frac{1}{4}$ yards 44 inches wide.

The waist pattern 4381 is cut in sizes for a 34, 36, 38, 40, 42 and 44 inch bust measure.

The price of each of the above patterns post-paid is only 10 cts. Send orders to The Farming World, Morang Building, Toronto, giving size wanted.

A Good Idea.

Does anyone know the comfort as well as the quickness with which some kinds of sewing may be done with the use of two needles? Now that shirring is coming into vogue two rows can be run in almost the same time as one, and in sewing a braid flat on the bottom of a skirt, a saving, both of the skirt (which is handled less) and of time, will be accomplished by the use of two needles.—E. R.

To Remove Stains.

Chloroform will often remove spots from delicate material, and leaves no mark on the goods as gasoline is apt to do if used on delicate silks and satins. If the entire article can be immersed in gasoline, well and good; but if a spot must be removed, make a ring of chloroform around and well outside of the spot. Sponge with the chloroform until all stain is removed.



Care of the Teeth.

Sir T. Lauder Brunton, M.D., remarks on the necessity of cleansing the teeth at night, in order to rid them of the food debris which has accumulated in their interstices during the day. Even poor people might use the pointed end of a lucifer match to remove the particles between the teeth. As a nation, our teeth are disgraceful, and if national prosperity depends on national health, it is easy, says Dr. Andrew Wilson, in the Daily Chronicle, to show that defective teeth represent a condition sapping the foundation of our welfare.

Lettuce a Preventive of Smallpox

Lettuce is an absolute preventive of smallpox. No one is in the least danger of catching smallpox who eats a little lettuce every day. We say without hesitation or reserve that lettuce will prevent smallpox. It is a thousand times better than vaccination. It has no liabilities like vaccination, to produce other diseases. We are willing to stake our professional reputation on the broad statement that anyone who eats lettuce daily, will not catch smallpox, whether he be vaccinated or not.—Medical News.

Health Hints

In spite of the fact that water is usually irritating to eczema, an occasional case is benefited by the use of applications of hot water daily.

A great deal of harm has been done by the injudicious use of ordinary spirits of niter. When given at all a teaspoonful, well diluted, is the adult dose. There are milder diuretics which are safer in the hands of the laity.

Some of the "anti-fat" medicines on the market contain a preparation of thyroid glands. This is a powerful medicine and has been known to produce very disagreeable symptoms and even death, by its action on the heart.

Sometimes after shaving, small, red pimples appear on the face. These are usually due to irritation from the ends of the growing beard. Witch hazel jelly rubbed into the skin immediately after the shave will help to prevent this troublesome condition.

To a Warmer Climate

A London clockmaker had placed the following notice in his window: "The misguided creature who removed the thermometer from this door had better return it, as it will be of no use where he is going, as it only registers 125 degrees."



Points In Dish-washing

Before clearing the table prepare a place in the kitchen for the soiled dishes, thus avoiding confusion and extra labor.

Gather up and remove the dishes methodically, glasses by themselves, silver and plates uniform in size in separate piles.

Save steps by using a tray or pan, thus carrying a larger number from the dining table at once. Take a little more time, if necessary, and free all dishes from bits of food, grease, etc., which would render the dishwasher dirty.

Use plenty of hot water, changing often. We eat from dishes which have passed through the dishwasher.

Use soap or other preparations which will make the water soft, and which will easily remove grease.

Place the dishes, when washed, in a wire drainer, or if one does not have this convenience, a substitute can easily be made by making a few holes in a large milk pan which may be placed in a larger pan. Pour very hot water over the dishes. This will drain into the lower pan, leaving the dishes so bright and dry that only a little polishing with a towel is needed.

Clean dish-towels are necessary to secure clean surfaces. Cleansing the towels each time they are used is the only way to secure this result.

Piling many dishes into the pan at once is not as well as taking the tumblers, silver, and other dishes by themselves.

Tea and coffee pots should be very thoroughly washed in clean water and each time after using.

A good dishwasher may count herself one of the chief treasures of the household.

M. V. R.

Worth Knowing

Powdered borax is a harmless and exceedingly useful article to keep in the house. A tablespoonful added to hard water successfully softens it. It is an agreeable addition to the dish-water and helps to keep the hands soft instead of irritating them as soda does.

Keep a flour barrel elevated at least two inches from the floor on a rack to allow a current of fresh air to pass under it and prevent dampness collecting at the bottom. Do not allow any groceries or provisions with a strong odor near the flour barrel. Nothing absorbs odors more certainly than flour.

The best way to clean a wash silk waist is to wash it in a soda made of benzine or gasoline and a white soap. After the garment is

clean it should be thoroughly rinsed in fresh benzine. No pressing will be needed as a result of the washing, but if the silk is wrinkled it should be ironed with a warm flat iron after it is dry. A hot flat iron must not, of course, be put on goods wet with such fluid. The rinsing liquid may be saved for another occasion, providing it is allowed to settle, and is then drained from the sediment. Delicate fabrics may be cleaned in this way.

Southern Bread

Into two and one-half cupsful of sour milk put two teaspoonfuls of soda—first putting this on the stove, and allowing it to get hot—one-half cupful of New Orleans molasses, one small teaspoonful of salt, one cupful of Graham flour, one cupful of corn-meal, one teaspoonful of baking-powder. Stir well, then turn into a well-greased stem cake-pan. Tie a thin cloth over it, put it into your steamer, and steam for three hours; then set it into a slow oven for fifteen minutes to dry out. Cut as you would a solid cake.

W. D. M.

Onions Baked in Paper Cases

Wash and peel six large onions. Cover them with boiling water, add a teaspoon of salt (level), boil for ten minutes and drain. Add more boiling water and cook for 20 minutes longer. Have ready squares of thick brown paper. Dip each onion in melted butter and wrap it in the paper, bringing the covers together with a twist to close the wrappers snugly; then tie them with a piece of twine. Bake in a brisk oven until tender. The usual time allowed is half an hour.

Left-over Meats

In using bits of left-over meat I chop them fine, add seasoning, a beaten egg, form into balls and bake in a biscuit pan until brown. Before putting in the oven I pour a little melted butter over them. Almost any cold meat can be used this way. An original recipe for using cold lamb is to cut lamb into slices, put into a spider with a slice of salt pork, cook until brown, then take some lamb gravy if you have any left—if you haven't, add a little soup stock—and when it comes to a boil thicken and add a cupful of strained tomatoes. If one has a few peas left from the day before they may be added also.—A. B.

Bliss is happiness boiling over and running down both sides of the pot.

No Rubbing

The New Century Washer makes it unnecessary to use a washboard.

Five or six minutes—easy movement of the machine while seated will thoroughly wash a tubful of clothes.

Ball Bearings and strong spiral steel springs do most of the work. No process so easy on the clothes or the operator.

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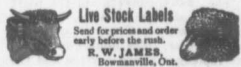
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MEN WANTED

Salary or commission, \$100 a year and expenses, payable weekly, to good reliable man, representing us in their district, introducing our goods, distributing large and small advertising matter, no experience, only honesty required. Write at once for instructions. Sales Medical Appliances Co., London, Ontario.

Farmers' Sons Wanted with knowledge of farm work to an office, \$60 a month with advancement; steady employment; good for honest and reliable. Branch office of the association are being established in each Province. Apply at once to THE FARMERS' SONS' VETERINARY SURGEON ASSOCIATION, London, Ont.



FOR STRAY MOMENTS

The Wood-Path

(From Country Life in America.)

It leads around unbragable aisles,
Through banks of bending ferns,
Where wood-blossoms spill their fragrant smiles
From out their cloistered urns.

Shy hermit-creatures haunt its shades,
Where calm and coolness are,
Whether the day its depths invades
Or night's clear zenith star.

And he who tenderly intrudes
Thereafter will divine
Faun-lore and wilding dryad-moods
And secrets wilylline!

A Novelty in Timepieces

A Birmingham inventor has just placed on the market a remarkable clock which he claims can "make tea." It is a very ingenious arrangement by which at any specified hour the sleeper can be awakened, and five minutes later there is a cup of tea and hot water for shaving ready for him. The machine does all automatically, and without any human aid whatever. Lights spirit lamp, boils water, and tips the same up gently into the required vessel. It also puts out the lamp and rings a second gong to notify that tea is ready.—London Leader.

Speak to the Old Horse

Who can look into the soulful eyes of an animal and say they do not know, they have no feeling? Go up to some disreputable-looking horse standing patiently waiting his master's will (what is so patient as a horse?) and speak to him in a kind voice; if you raise your hand to strike him, a startled, frightened expression comes into his face and he invariably jerks his head away as if he expected a blow—and then watch the aspect as it gradually changes to a look of questioning and finally confidence.

Do not hurry on, thinking you have no time to waste on an old horse; we must always have time to do a kind deed, and kind deeds and thoughts are never lost. Stay a moment longer; it will pay you. Continue speaking to the horse as if his feelings and thoughts are just as your own, and sympathize with him.

What response do you get? Watch his eyes grow soft as he feels the warmth and magnetism of your love which is the strongest force in the world; then see the almost foolish look of contentment and happiness, your reflected love, and his eyes tell you as plainly as if he could speak, "Thank you, you have

made me happy." You leave that horse with a feeling of fellowship and understanding that you may be sure he feels as much as you do.

Do not try the experiment with petted animals who are used to kindness, but choose the worst-looking old beast you can find, for then you can see in a more marked manner the effect of love. Whatever has the capacity for love must also have the same capacity for suffering, no matter what form of life, be it in the highest or lowest state of evolution.—Daily Transcript.

One Finds Oneself

A laboring man was following a humble load of goods to a new neighborhood, where he had hired a farm. It was summer, and his horse stopped to rest under some cool elms by the road.

A farmer came out of his cottage near, and leaned on the stone wall. The man with the load of goods approached him, and said:

"I am moving; I am going to live in the Sanders neighborhood. Do you know anything about it?"

"I ought to, stranger; I was born there, and lived there twenty years."

"What kind of a neighborhood shall I find it?"

"What kind of a neighborhood did you come from, stranger?"

"An excellent neighborhood, full of good people, honest and accommodating. I am sorry to leave it."

"Don't you know," added the wayside philosopher, "that a man's neighborhood, as a general rule, is just what he is himself?"

"It speaks well for a man to speak well of his own town. You are my friend! An excellent one! full of good people, and accommodating."

"Thank you," said the traveller, as he passed on, "I never thought of it in just that way before."

A Curt ain Stick to Press Seams

A curtain roll that has been discarded because of a broken spring will be found just the thing to use for pressing the seams in sleeves. With a sharp knife cut a little of the wood from one side, so it can rest on this flat place and not roll. Wrap with several thicknesses of old muslin, and paste or tack it on this slightly flattened side. It will be found a great convenience. A broom handle may serve the same purpose, but it is hard wood, not quite so large around, and it is not so easy to make.—B. Practical.

Diggs.—There's Smith; they say his wife is deaf and dumb.

Briggs.—Does she talk with her fingers?

Diggs.—I guess so. Smith hasn't a dozen hairs on his head.



The Old Reliable Remedy

for Spavins, Ringbones, Splints, Curbs and all forms of Lameness. The use of a single bottle may double the selling price of your horse.

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Dear Sirs:— Gallons, N.M., June 18, 1903.
I have been using your Kendall's Spavin Cure for some time. I use from twelve to fifteen bottles a week and find it as efficacious as any cure. I have two hundred head of horses in my care.
I enclose a stamp for your "Treatise on the Horse and his Diseases."
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Thousands of Men report equally good or superior results from its use. Price \$1 per bottle for 60. As a liniment for fastening the Spavins, Ringbones, Splints and all other ailments of the horse. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free, or address

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If you have a horse that is lame or blemished by any kind of a growth, or enlargement, Poll Evil or Knoxy, or if there is a case of Limp Jaw among your cattle, write us at once. We will send you two big booklets. One tells you just how to cure these diseases and blemishes. The other proves that you can cure them, and we guarantee you success besides. Same methods employed by over 100,000 far-own and stock owners. Write for the books and tell us what kind of a case you have to treat.

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For 50 cents a gallon can be made as follows:
Absorbine, 4 ounces
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Water, 5 quarts
Saltpetre (powder), 1 ounce

This combination will prove satisfactory and successful in curing Bruises, Strains, Collar Galls, to soothe the shoulders for work horses; it will reduce Swollen Ankles, Bad Tendons and all kinds of troubles where a liniment would be generally used. Buy the

ABSORBINE

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Lynnman Bros. & Co., Montreal, Agents,
who will send it prepaid upon receipt of \$1.00 for a bottle. One bottle ABSORBINE will make three gallons of liniment or wash as above formula. Write for a bottle and the free booklet giving formulae of Veterinary Remedies.

In the Flower Garden

Shading the Greenhouse

Keep the greenhouse well ventilated during dull weather, and if a long spell of it is quickly followed by bright sunshine, sprinkle the plants with water, and keep the walks wet down. It is usually wise to shade the house during the hot season, especially for some varieties of plants and for all plants that are not perfectly healthy.

Ordinary lime whitewash is good applied on the outside of the glass. The heavy rains will wear it all off by autumn. For more temporary use, simple flour and water will do while a permanent shade is obtained by using a paint made of naphtha and white lead.

W. S. F.

The Cannas

The canna is a large-flowered, ever-blooming plant. They are America's most popular bedding plants. The improvements made in the canna during the past few years, in size of flower and diversity of color, place it away in advance of all other plants for bedding purposes, even surpassing the geranium in its gorgeous display of beautiful and brilliant colors; and with the large-growing varieties planted in beds around the border of lawns or tennis courts they present the most slightly and attractive appearance of all the plants that we can grow in this country. Their grand, heavy foliage, which is equally as attractive as their fine flowers, makes them of great value for this purpose, and also the long season that they continue in their grand beauty as they can be started in pots in the house and planted out as soon as danger of frost is over and they will commence to bloom by the latter end of June, and will continue in flower till frost kills them. Then to save the bulbs for another year's planting, all the roots that will be needed should be taken up about a week after they have been killed down with first frost, the tops cut off about a foot from the ground, then the roots dug up, leaving all the earth on and around the bulbs that sticks to them. Let them stand outside or in a shed a few days till the earth around them gets partly dry, then stand in a shallow box in the cellar where there will be no danger of frost, and cover all the roots with dry sand or coal ashes, and they will keep and be ready for potting the middle of February for early planting.

J. C. Warnock,
Huron Co., Ont.

Plant Flowering Shrubs

Every year sees more attention given to the cultivation of flowers on the farm. This is as it should be. No one is in a better posi-

tion to grow flowers and to enjoy them than the farmer or those living on the farm. A good way to get flowers is to grow the flowering shrub. In many parts of Canada the summers are too short to secure the best results with flowers grown from buds and bulbs, shrubs and bushes will do better. For example the rose bush can be grown quite easily, and what is more delightful than a bush of delightfully scented and beautifully colored roses. They require winter covering and an abundance of fertility, moisture and sunshine. The old fashioned lilac is a beautiful thing, very hardy and propagates itself like a weed. The snow-ball, mock orange, spirea and bridal wreath are also good. The hardy hydranger is an exceptionally pretty shrub, blooms out of season in autumn, when shrubs are usually without flowers.

Benefits of Forestry

At a recent meeting in the interests of forestry, President Roosevelt, said:

"And now, first and foremost, you can never afford to forget for one moment what is the object of our forest policy. That object is not to preserve the forests because they are beautiful, though that is good in itself; nor because they are relics for the wild creatures of the wilderness, though that, too, is good in itself; but the primary object of our forest policy, as of the land policy of the United States, is the making of prosperous homes. It is part of the traditional policy of home making of our country. Every other consideration comes as secondary. The whole effort of the Government in dealing with the forests must be directed to this end, keeping in view the fact that it is not only necessary to start the homes as prosperous, but to keep them so. That is why the forests have got to be kept. You can start a prosperous home by destroying the forests, but you can not keep it prosperous that way."

Why the Missile Hit Him

"How did this happen?" asked the surgeon, as he dressed the wound in the cheek and applied a soothing poultice to the damaged eye.

"Got hit with a stone," replied the patient.

"Who threw it?"

"My—my wife," was the reluctant answer.

"Hum! It's the first time I've heard of a woman hitting anything she aimed at," muttered the surgeon.

"She was throwing it at the neighbor's hens," explained the sufferer. "I was behind her."

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TORONTO

The Orchard and Garden

Successful Orcharding means Hard Work but Good Profits

Some people who, needless to say, are not practical horticulturists, have an idea that the man who grows apples has a comparatively easy time of it. They appear to have the impression that an apple tree, somehow or another, grows spontaneously, and that all there is to orcharding is for the farmer to plant the trees and then wait patiently for nature to do the rest. Then after a lapse of a number of years, all that the fruit grower has to do is to gather and market the abundant harvests of the "russet and red-cheeked apples" about which poets have sung so entertainingly. Visions appear to them of "apple and peach tree fruited deep," and the whole subject is tinged with a coloring truly pastoral and idyllic. But to the practical orchardist much of the poetry of the business is strongly adulterated with prose. After a hard day's work in the orchard with pruning saw and shears, he is more conscious of a stiff neck and an aching back than anything else. Or later when plentifully bespattered with Bordeaux and Paris green from the spray pump, it is difficult for him to see the aesthetic side of the question. The coloring is there all right, but there is too much of it in the wrong place. And so on, all through the seasons of spring summer and autumn, until the apples are gathered, there is hard practical work to be done. Winter too brings him no rest, for when the last shipment of apples has been packed and sent forward, it is time for him to take his saw and shears and begin pruning once more.

But while successful commercial orcharding undoubtedly entails plenty of hard work, there is a pleasure and fascination in it, which presents strong attractions to the lover of nature; while at the same time, when the necessary element of profit is considered, orcharding affords for the labor and capital invested, probably one of the most remunerative sources of revenue, of any of the various departments of farm husbandry.—Paul C. Black, N. S.

The Cow Tree

In the valley of the Amazon in Brazil is to be found a remarkable tree. It is called the cow tree because its sap has many of the qualities of milk. A recent traveler in South America described this tree as follows:

"Its sap is a milk, singularly like the finest cow's milk. It is highly nutritious, and will mix with water, hot or cold, and never curdles in coffee, cocoa or tea. It keeps good for a week, ever, in this climate, and has much the taste of cow's milk in which cinnamon has

been steeped. It is rather thicker than ordinary milk, having the feeling in the mouth of liquid gum. If left standing for a time a thick,unctuous cream arises, which, when dry, has the consistency of wax. I have drunk large quantities of it, both as it came from the tree and also mixed with tea or cocoa, with which it combines better than cow's milk; and I can say that it is not only exceedingly sustaining, but has not the slightest deleterious quality. When I could get this sap I always chose it in preference to cow's milk.

"The sap is obtained either by wounding the bark of the trunk or by breaking the smaller branches. It runs freely, and several quarts can be obtained from a single tree in the course of a few hours. Unless the tree is much broken or cut, it does not seem to suffer from the loss of sap."

Dwarf Beans

To get a variety of wax-podded bush or dwarf beans that will stand the low temperature and disease that the green-podded varieties will, is the aim of every seedsman and gardener. The hardest sorts are the green-podded varieties of which the Mohawk and Sixweeks I have found to be the earliest. For shell beans and for baking, the Improved Yellow Eye is the most satisfactory variety as to yield, and they command a high price in the market compared with the ordinary white marrow. The best wax bean I have found to be Ward-well's Kidney Wax. The Golden and White Wax are apt to make too much vine. Yosemite is of splendid size and flavor, but very susceptible to mildew and disease, so much that it is not profitable. The Davis Wax, which has long slender pods, is also an excellent variety for an early crop.

E. McKinley.

Marketing Strawberries

It is one thing to grow strawberries and another to market them. Successful marketing depends upon careful picking and handling. A big grower in Maryland estimates that it costs from \$75 to \$100 to grow an acre of strawberries besides the cost of picking. His average crop of Brandywine and Gaudy is about 4,000 quarts per acre for which he receives from 4c. to 7c. per quart net picking and packages out. He estimates that if he does not get a return of five cents a quart less picking and packages, he is losing money unless there is an excessive crop. He states that the Brandywine is a poor shipper unless an iced car is used. The Gaudy on the other hand is an almost ideal strawberry.

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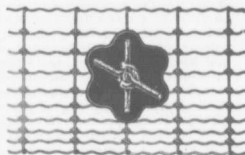


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TORONTO, ONT.

The Sugar Beet World

Devoted to Sugar Beet Culture in Canada

Sugar Beets in Manitoba

The committee selected to look into the sugar beet industry in the west has presented its report. The results show that Manitoba grown sugar beets contain a very high percentage of sugar. The series of experiments now in progress will be continued this season. The estimates submitted for building a factory at Winnipeg are considered too high and the matter of cost will be further looked into. A plant of 400 tons is desired, to build which \$600,000 will be required according to estimates.

Utilizing the Pulp

An important discovery has been made, which, if it turns out practical, will almost revolutionize the beet sugar industry by utilizing the waste of manufacture. A company has been organized in New York, to operate the new invention upon which patents have been taken out. The reports so far regarding it are not very explicit, but it is claimed that the pulp will be almost entirely utilized, and from it will be produced four by-products, namely, alcohol, a certain acid of great commercial value, a fine quality of glue and a high grade of charcoal. It is figured out that these by-products will give a net profit of not less than \$8 per ton.

Distance Between Rows

In localities where the growing of sugar beets has not been long practiced the matter of distance between rows is one giving rise to constant discussion, and not infrequently gives rise to much ill feeling between field men of the company and the growers. It should go without saying that the factory people are just as anxious for the farmers to secure good returns from the crop as are the farmers themselves, for in the success of the farmer lies the success of the factory. There are many factors involved in this matter of spacing which vitally affect the life of the beet and which have a direct bearing upon its quality. The matter of size of beet is not the only question which enters into the problem, but in addition to this must be considered the effect of such spacing upon both the sugar content and the purity of the roots, in both of which factors, the factory is vitally interested.—Beet Sugar Gazette.

The Weeder May Be Used

The weeder is a very good tool for the first cultivation, although if the beets come up quickly and there is no heavy rain to pack the ground before the beets come up

enough to see the rows, a cultivator can be the first tool used, but in case of the ground being packed by rain, or the seed too slow in germinating on account of the cold it would be a good idea to go over the field with a weeder crosswise of the rows and scratch the ground deep enough to break the crust without tearing it up as much as it would with a harrow. It might also be policy to go lengthwise of the rows with the weeder, in which case the tooth that would come on the row should be taken out. If the ground is hard and a crust forms so that the weeder doesn't take hold, a spiketooth harrow can be used by setting the teeth to slant back so as not to dig up the ground too much. This may disturb a few of the plants but there are always enough left to make a good stand, and the cultivation will help the germination and growth to the extent that it will make it a much better stand.

A New Beet Puller

A German has invented a new beet puller by which beets, with dry weather and a hard soil, can be pulled without earth sticking to them. It consists of two forks, a fixing and pulling fork, of unequal length, both provided with two clutches. These two forks join at the point of their respective cross pieces, through a peculiar hinge, so that the moveable or pulling fork, which has longer teeth, can swing in the interior of the clutches of the fixing fork. The moveable fork is held by a wood handle terminating in a point, while the fixing fork is provided with a hollow steel handle, thus permitting the round handle to half enter the hollow steel one, when the apparatus is folded on itself and the two forks coincide. A little above its fork the steel handle (fixing handle) is secured, moving to the right or left, with a sort of pedal on which the foot exerts the pressure to drive both forks simultaneously in the soil, one resting in the other, this pedal at the same time limiting the depth of entrance.

The instrument is handled like a common spade and inserted near the beet. One hand lowers the long handle, while the other one sizes the beet. The semi-circular or hollow handle remains stationary, because the exterior forks, on account of their worth, find a support in the earth before the interior fork does, which permit them to support the pivot.

Sugar in Brazil

Sugar production in Brazil amounted to 240,000 tons in 1901 and 309,000 tons in 1902. Importation for 1901 amounted to only

25 tons of sugar. Exportation was for that year 151,720 tons, of which 134,040 tons went to the United States and 17,400 tons to Great Britain. The home consumption is about 140,000 tons per annum, and is increasing rapidly. It is the general opinion that Brazil sugar will ultimately disappear from the foreign markets.

Sugar in England

For three years two large sugar refineries have been for sale in England without finding a buyer. The continued discouraging condition of the British refinery business is the cause. With the abolition of the sugar bounties things are expected to take on a rosier hue, and ultimately the old prosperous condition is confidently expected to return.

A Good Sugar Beet Story

Frank Hayes, one of the solicitors for sugar beet acreage for the Kaukauna Sugar Company, tells a good story about chickens and sugar beets.

Last week he drove into the country in the vicinity of Brillion. Leaving his sample sugar beet in the buggy under the seat, he tied his horse and went into a farm house to talk on his favorite topic, the sugar beet.

After a half-hour conversation with the man of the house, he was told to call again in a few days. When he got into the buggy and was about to drive away, two chickens flew out of the vehicle, having discovered the sugar beet under the seat, they were enjoying a feast when disturbed. Both the farmer and the solicitor enjoyed a hearty laugh over the foxy chickens.

Mr. Hayes went on to Cato and later in the week while passing the farm house where the chickens had helped themselves to the sample sugar beet, he was hailed by the farmer.

"Put me down for two acres of sugar beets," was the ejaculation that reached the ears of Mr. Hayes. "Them sugar beets are great things," continued the farmer; "you know them two chickens that ate your sample sugar beet the other day; well, they have been laying two eggs every day since. Yes, sir; sugar beets are all right. Put me down for two acres."—Kaukauna, Wis., Sun.

Fad Had Struck Him

"What on earth has become of the Jinks family, I wonder?"

"Why—what's the trouble with 'em?"

"All hit heavy by the new food craze. Went over the other mornin' an' found 'em at breakfast—grandmother eatin' Blank's Food, Jink's wife tacklin' Dobb's Cereal, an' the children divided between ten different brands."

"An' where was the old man?"

"In the stable eatin' a bale o' hay."—Atlanta Constitution.

Bees and Poultry

The Swarming Season

We are close upon the height of the swarming season and many a bee-keeper is sorely perplexed as to how to manage. This is particularly true of the farmer who, with the difficulty of securing help and the price of farm labor, finds it desirable to get through the season with as little help as possible.

It is a matter of regret that so many who begin bee-keeping decide to go into the production of comb-honey because they imagine it is less trouble. I say imagine, for that is what it is. When producing comb-honey the bees have to be kept close to the swarming impulse and the hive has to be crowded and a limited space given, or the sections will not be filled and in marketable shape.

In the production of extracted honey plenty of room can be given and if the bees do not fill the combs the quality of the honey is just as good. Again, only experts in bee-keeping can produce a nice comb-honey and unless the sections are well filled and neat they cannot be sold at a remunerative price.

These runnings for extracted honey can best prevent and control swarming. The method I use all through is briefly as follows: Running over three hundred colonies economy must be practiced in every move. Supers are put on the hive before they get the swarming impulse. A wedge seven-eighths of an inch square at the front, going to a point by seven-eighths at the back, is put at each side of the hive. These wedges are placed between the bottom board of the hive and the brood chamber with the seven-eighths at the rear; this enlarges in hot weather the entrance seven-eighths of an inch in front, yet keeps the sides and back of the hive closed.

When one super is full or nearly so a second one is used should the season promise to continue.

Every brood chamber is examined once a week and if queens cells are started for swarming they are destroyed if the honey flow is nearly over, if not a fresh hive is put on the old stand, the supers are removed from the old hive, the queen and nearly all, say three-quarters, of the bees shaken into the new hive, the colony is given full sheets of foundation in the brood chamber a queen excluder placed upon this and the old super with adhering and contained bees placed upon it.

The old hive is put upon a new stand and the parent colony given a new queen, a queen cell or allowed to complete the partially ripe cells and a queen thus secured.

Such a practice practically does away with the necessity of waiting for swarms and is of very great value to all bee-keepers. The en-

trance of the old hive should be contracted to one-half inch or more to prevent robbing. This operation should only be done when honey is coming in from the field or forest.

R. F. Holtermann,
Brant County, Ont.

Novel Way to Study Bees.

(From Country Life in America.)

The city-dweller, longing for the time when he can exchange heated pavements for the yielding turf of the meadow carves a dainty "section" of comb-honey at his table, and thinks: "If we ever get out on a farm, one of the first things that I buy will be a hive of bees." Little does he realize that, in all probability, he could keep a hive of bees right where he now lives.

The observation hive, with its glass sides, makes it possible for him to lay the foundations of commercial bee-keeping by studying the life history and habits of the bee. Such a hive can be placed in an ordinary bedroom window with absolutely no danger to the occupants of the house. Impossible as it may seem, commercial bee culture is actually practised in some of the largest cities of the country. Several extensive apiaries have been maintained upon the tops of buildings in New York and elsewhere.

Handling Eggs at Creameries

At the government creameries at Churchbridge and Grenfell, N.W.T., eggs were received and handled during 1902. At Churchbridge 15,501 dozen eggs were received from 194 patrons and realized net, \$2,481, being 17.02 cents per dozen. At Grenfell 3,042 dozen were received and \$487 paid to the patrons, after deducting all expenses, being a net price of 16.53 cents per dozen.

Why could not some such scheme be worked in connection with the cheese factories and creameries in the other provinces. If such a plan were in operation in Ontario it would save many thousands of dollars to farmers in the value of their egg crop. In the hap-hazard way in which the bulk of the eggs are marketed many are lost, many more injured, and all of them more or less stale because of exposure and bad handling. At any creamery or cheese factory a cool place can be secured or fitted up at little cost, and by bringing in the fresh eggs every day and packing them carefully away, they can be sold to the best advantage to the dealer or packer.

Pleasure is like a hornet—generally ends with a sting.

Hope is a hen that lays more eggs than she can hatch out.

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WE MANUFACTURE thirteen styles of Incubators and Brooders, and keep all kinds of Poultry supplies. Catalogue free. MORGAN'S INCUBATOR WORKS, London, Ont.

EGGS from choicest "utility" and "fancy" strains, Brown Leghorns, Black Minorcas, Buff Rocks, White Wyandottes. Circular giving particulars free. JOHN FETTIG, Fraitland, Ont.

WHITE AND SILVER WYANDOTTES; bred for quality and vigor. W. D. MONKMAN, Bond Head, Ont.

SHORTHORNS AND LERCISTERS. Young Stock of both sexes for sale, also my stock Bull. Christopher 29089. Satisfactory reasons for selling. JAMES DOUGLAS, Caledonia, Ont.

IMPORTED BUFF ORPINGTONS—Another importation just arrived, Cooke direct costing \$90.00 a pair. Orange and Lemon Buff eggs, imported stock, \$5.00 per 15; Canadian bred solid Buff \$2.00 per 15. Eggs reduced after May 20th to \$3.00 and \$1.00. Also bred of registered Shropshire, Game and Yorkshire birds, best quality. W. W. CLARK, Importer and Breeder, Onondago, Ont. Write for catalogue giving standard.

BEES AND QUEEN—Wanted purchasers for either full colonies (prices on application), or queens. Imported queens direct from Canada or Italy. For these orders must be looked at least four weeks before delivery. Either kind \$4.00. Unpaired Italians before July 1st, each \$1.25, per six \$6.50. Tested before June 1st, \$1.50, after June 1st \$2.75. Tested before July 1st, \$1.50, after June 1st \$2.75. Unpaired before July 1st, each \$1.25, per six \$7.50; after July 1st, \$1.25, per six \$6.50. Tested before June 1st \$1.75, after June 1st \$1.50. Imported queens \$5.00. Am sending 200 to 500 colonies. Blood tests in bees, try 10. Full directions sent on changing the queens. Send money by P.O. order, Express order, or Registered letter, address H. F. HOLTERMANN, Brantford, Ont., Canada.

WANTED—Energetic, responsible men to sell fruit trees, ornamental trees, etc. Travelling outfit free Liberal pay weekly. Arrangements made for winter or part time. We also have a special line of seed potatoes never before offered for sale in Canada. For terms apply NOW. PELHAM HURRY COMPANY, Toronto, Ont.

FINE HILL POULTRY YARDS has been getting a lot of imported stock and is better prepared than ever to fill orders from the following varieties: Lang and W. Wyandottes, S. L. and W. Wyandottes, S. G. Dorkings, W. and B. Leghorns, eggs \$1.00 per 15. Pekin Ducks eggs \$1.00 per 15. M. Bronze Turkey eggs \$1.00 per 15. Terms on application. We are prepared to fill small or large orders on short notice. D. A. GRAHAM, Thorndale, Ont.

SALESMEN wanted for "Auto-Spray." Best automatic compressed air hand sprayer made. Liberal term. Season now on. Rapid sales assured. CAVERS BROS., Box 695, Galt, Ont.

HORSE OWNERS—Send \$5.00 silver for valuable receipt; cures sprains, bruises, strains, windgalls, etc. Nothing better. Q. McGILL, Jr., P. O. Box 114, McMoran, P. Q.

HOLSTEINS—For sale, one young bull and two heifer calves. S. E. SMITH, Dundas, Ont.

HOLSTEINS—Young stock of both sexes for sale; three choice young bulls from good milk strains. FREDERICK REINKEN, Southton, Ont.

You will profit by mentioning THE FARMING WORLD when writing advertisers.

The Hen

Alas! my child, where is the pen That can do justice to the hen? Like royalty she goes her way, Laying foundations every day, Though not for public building, yet For custard, cake and omelet, Or, if too good for such a use, They have their fling at some abuse, As when to censure plays unfit, Upon the stage they make a hit; Or at elections seal the fate Of an obnoxious candidate. No wonder, child, we prize the hen, Whose egg is mightier than the pen.

Oliver Herford.

Preserving Eggs

The following interesting experiments were tried last year at an English farm school:

First Series—Eggs preserved in limewater made as follows: Add to every gallon of water three-quarters of a pound of fresh lime, shake well, and let it stand for twenty-four hours, then pour off and use the clear liquid. Three weeks after the eggs have been put in, add sufficient fresh lime to make the water cloudy. The great object is to get the eggs as soon as laid, not two or three days old. The eggs were taken on May 21 and opened on Nov. 12. Result: All perfectly fresh.

Second Series—Make lime-water as above and add one ounce of cream of tartar and five ounces of common salt. Eggs taken June 9 opened Nov. 12. Result: All perfectly fresh.

Third Series—To one gallon of hot water add one pound of "water-glass," when cool it is ready for use. Eggs taken May 27 opened Nov. 12. Result: All perfectly fresh. A few were kept in the mixture for one to three weeks only. Result: Fresh but air space in eggs larger than in the others.

Fourth Series—Eggs smeared lightly with vaseline. Taken May 15, opened Nov. 12. Result: Musty flavor, though not bad.

One important factor in all egg preserving is to keep them in a cool place until required.

Field Bean Culture

In some parts of Ontario, notably in Kent County, beans are a staple crop. An Iowa authority gives his method of growing beans as follows:

"Plow the ground some time during the first part of June and harrow immediately to prevent its

becoming cloddy. After harrowing, leave for at least two weeks so as to give weeds a chance to start. Before planting, work thoroughly with disk and harrow. If planting large quantities, use a common horse corn planter with a hand drop or drill attachment. The hills should not exceed six inches apart in the rows, or if drilled, the beans should be about 1½ inches apart. Plant as shallow as possible and do not draw or disturb the ground in any way after planting, and before the beans are up.

"With favorable weather they will come up in three days and thus get ahead of the weeds. When they are about 4 inches high, cultivate with a cultivator having small shovels and open shields. Cultivate shallow, go close so as to allow the loose soil to roll in around the beans, and cover up the small weeds which have by this time started in the rows. If this first cultivation is done carefully, there will be no trouble from row on, for the beans will soon completely shade the ground in the rows and keep all weeds out. It is generally not necessary to cultivate more than once, but if the season is rainy, two or even three times may be necessary; but if the first cultivating is done right, it will never be necessary to use a hoe or any other hand tool."

Appointed Publication Clerk

Mr. W. A. Clemons has been appointed publication clerk of the Department of Agriculture at Ottawa, to succeed W. H. Coard, resigned. Mr. Clemons, who is a son of Mr. G. W. Clemons, St. George, Ont., has for several years been secretary to the Live Stock Commissioner, and is well fitted to perform the duties of his new position.

In Buying a PIANO PLAYER
See That It is a

CHASE &
BAKER

Inspection and Correspondence invited.

The Nordheimer Piano & Music Co., Limited
Toronto

Prince Edward Island.

Cool, backward weather up to May 16th. Rain is needed. Jack Frost paid us another visit on the night of May 15. As the weather has been fine our farmers have nearly all their seed sown. Some are planting potatoes. Farmers have seeded a big acreage this spring. A great deal of fertilizer has been used this year. Farmers find that it pays to give the land liberal doses of fertilizer. The catch of clover looks excellent. First-class seed grain has been on sale. The attendance at the market on May 15th was large. Not much produce offered. Hay 60c. per cwt., oats 35 to 36c. per bushel, potatoes 45 to 50c., butter 23 to 25c. per pound, poultry 10c. per pound, eggs 11 to 12c. per dozen, turkeys 12c. per pound, lobsters from 50c. to 20c. each. There was a good demand for young hogs, shippers were picking them up at from \$4 to \$7 per pair. The favorite breed is Yorkshire and Berkshire crossed. The first Island rhubarb of the season sold at 9c to 10c. per lb. Pork, live weight, sells for 7c. to 8c. per pound, and is in good demand. Cattle, dressed, 7c. to 8c. per lb. Mutton per carcass, 8c. Apples per peck, 15c. to 25c., and reported scarce. Flour per barrel, imported, \$3.50 to \$5. Pressed hay \$11 per ton, wild goose 70c. to 75c. Codfish are plentiful, herring scarce.

Mr. Chipman, general manager of the Plant line of steamers, arrived in the city on May 13th. A good tourist season is expected. The SS. Olivette will be put upon the route on the 16th of June.

On May 14th Mr. John Macdonald shipped a draft horse to J. D. Frier, Sussex, N.B., and Mr. James Brown took four horses to Moncton. Mr. E. Wheatley shipped 10 head of cattle by the Princess for Sydney, on May 18th. Mr. Lodge of Truro also crossed, taking with him three fine cattle. On May 16 J. E. Keeffe shipped 42 head of fat cattle to St. John. Hon. K. C. McLeod shipped 18 head of fine cattle to the D. P. Co. on May 15th.

A number of men have been clearing the streets lately, and about 300 trees have been planted. Mr. Richard Burke, fruit inspector, and Mr. Vroom will travel through different sections of the island holding orchard meetings, and giving demonstrations in spraying, pruning, grafting and general orchard management.

A. R.

What J. H. & E. Patrick Say About Zenoleum Dip

"After having used your dip for the last three years on our flock of Lincolns, among which are the best that money could buy in England, including the winner of the International Stock Food Co. prize of \$400.00 for the largest sheep in the world, we take pleasure in offering you our testimonial as to the merits of Zenoleum."

J. H. & E. PATRICK, Hilderton, Ont.

Send for copies of "Zenoleum Veterinary Advisor" and "Piggle's Troubles" and see what others say about it. Books mailed free. Sample gallon of Zenoleum \$1.50, express prepaid. Five gallons \$6.25, freight prepaid.

"The Great Coal Tar Carbolic Dip."

ZENNER DISINFECTANT CO., 112 BATES STREET, DETROIT, MICH.

WHEN WRITING ADVERTISERS, PLEASE MENTION THE FARMING WORLD.

Finance on the Farm

The Farmer and Life Insurance

Should the farmer get his life insured? This question is frequently asked by many interested in the welfare of the agriculturist. While life insurance is prominently a city institution, conferring large benefits upon the professional and the business man, whose capital and income may not be as secure as that of the farmer, there is no reason why the latter should not share in its advantages. Of course the need of insuring his life is not so incumbent upon the farmer as upon the man on salary, who has no estate to leave his family. And yet why should not the farmer, even if he has a good farm to leave behind, have a thousand or two extra to leave from life insurance? A policy taken out when young on the twenty or twenty-five pay life plan, does not cost much and will add greatly to the farmer's estate in later years.

Farmers as a class have held aloof from life insurance in the past chiefly because they felt no necessity for it. Besides, the insurance companies have not cultivated this field, chiefly because they could not write policies easier in the cities where the need of insurance was more urgent. But of late the younger farmer is giving more attention to this matter, and it is a frequent occurrence to find young farmers who have a \$1,000 or \$2,000 policy in some mutual benefit organization. As yet, comparatively few have patronized the regular life insurance companies, though we think more would do so, if this field were cultivated a little more by them.

Should the Farmer Advertise?

Many farmers will without second thought answer this question in the negative. But consider a moment what advertising means, or in other words, what does it do? It brings together the man who wants to sell and the man who wants to buy. Looked at from this standpoint, will the above question be answered in the same way? We think not.

The farmer's connection with advertising is both as buyer and seller. But it is chiefly with the latter phase of it that we wish to deal more particularly at the present time. As with any other kind of business, a farmer's success depends, not only on what he has to sell, but upon what he can sell it for. We may have a splendid herd of Shortorns, but if he does not let the buyers of this class of stock know he has them for sale, he is not likely to profit much by breeding them.

But everyone is agreed, no doubt, that no breeder of pure-bred stock of any kind can make a success of it unless he advertises. But what about the other products of the farm? Should they be advertised? Not to so large extent, perhaps, as live stock, and yet many a farmer has made good money by judicious advertising of his butter, fruit, etc. Some years ago the manager of a large farm dairy in one of the Eastern States decided to turn out a better quality of butter than the average "farmers' butter" in the neighborhood. This he was able to accomplish by attention to a few of the simple but important details in butter-making. His next move was to secure a better market than the average "farmers' butter" had, for his improved quality. This he was able to secure by a little judicious advertising. He had a lot of

half-pound samples of his choice butter neatly put up and sent among the people in the adjacent city whom he wished to secure as customers. Each package was accompanied by a printed letter stating that he was prepared to supply this quality of butter at thirty-five cents a pound to anyone ordering ten pounds or more at one time. Smaller orders than this he did not care for on account of expressage.

In less than a month he had orders, at this price, for all the butter he could make, and from that time on the demand was greater than he could supply. As the average "farmers' butter" in the district sold for twenty cents a pound, this meant an advance of 75 per cent, which was obtained by attending to a few details and a little judicious advertising.

In discussing this whole question of farmers advertising, an American authority says:

"In speaking of the value of advertising to farmers, I would not, of course, be understood as advocating its indiscriminate or excessive use; it is simply one of the factors in the proper marketing of goods and, as such, is to be used with discriminating judgment. No hard and fast rules can be laid down, and it is for the farmer to decide when it is to his advantage to advertise and, what is of equal importance, what form of advertising will best serve his purpose. In the marketing of staple products, such as wheat, corn, hay, potatoes and the like, in which the price current for each grade is very definitely fixed, advertising would serve no purpose, and such crops, if produced in any considerable quantities, are best disposed of through the regular channels of trade.

"The whole matter of marketing farm products resolves itself into what is necessary in any well-conducted enterprise: a careful study of the situation and the exercise of common-sense. I would say, in conclusion, what I have often said before when speaking of the possibilities of agriculture, that, as the demand for the best farm products is always in excess of the supply, he who has them has a great advantage in the market if only he knows how to profit by the situation. And if he has practised a proper economy in their production and follows up with sagacity and perseverance the advantages that the market conditions afford, he need have no fear of the result; his reward will be ample."

Banks and Prosperity

Profits of its great banks show a country's prosperity better than anything else. Judged by this criterion, Canada must be very prosperous. The annual statements of banks which are now being given to the public show large dividends, large increases to the rest funds, and every indication of the country's prosperity. For example, the net profits of the Bank of Montreal for 1902 amount to \$1,813,483.66, the largest in its history, and exceeding those of the previous year by \$212,330.76, and showing a net earning power of over 15 per cent. per annum on a paid up capital of \$12,000,000, \$1,000,000 of the net profits having been added to the "rest" fund, bringing that up to \$9,000,000.

The statements of other banks, though not showing such large profits, are equally encouraging, showing a state of general prosperity in the country that is most gratifying.



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We teach all Commercial Course
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THE TORONTO GENERAL TRUSTS CORPORATION

Capital - \$1,000,000
Reserve Fund - \$290,000

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and have nothing but a rich Landlord to show for it. We lend money, repayable in small monthly instalments without any interest whatever, for you to buy and take possession of your home at once.— Our plan is as good as it is unique.

Write for our Free Booklet.

The Loan & Savings Co., Limited

Capital, \$250,000.00
Authorized Bond Issue, \$1,000,000.00
20 ST. ALEXIS ST., MONTREAL, P.Q.
Local Managers wanted.

WHEN WRITING ADVERTISERS, PLEASE MENTION THE FARMING WORLD.

The Farming World

—AND—
CANADIAN FARM AND HOME.

J. W. WHEATON, B. A. Editor

The Farming World is a paper for farmers and stockmen, published twice a week and 100 pages each month, with illustrations. The subscription price is one dollar a year, payable in advance.

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Discontinuance.—Following the general desire of our readers, no subscriber's copy of *The Farming World* discontinued until the notice to that effect is given. All arrears must be paid.

How to Remit.—Remittances should be sent by cheque, draft, express order, postal note or money order, payable to order of DOMINION PHELS, LIMITED. Cash should be sent in registered letters. Foreign stamps accepted for amounts not less than \$1.00.

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Letters should be addressed to:
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MORANO BUILDING,
TORONTO

QUESTIONS AND ANSWERS

Lame Cow

I have a four-year-old cow that went lame in the hip a year ago. She is far worse now. What do you think about blistering her?—W.S.G., Wallacetown, Ont.

Blistering might help. At any rate it could do no harm. A perfect cure of the parts affected is, however, the best cure for lameness. Are you sure that the lameness is in the hip? Is it in the joint or in the ligament? If the lameness is in the hip joint, the joint itself is so deeply seated that external application may not be effective. It could not, however, do any harm. If the cow is a valuable animal we would advise calling in a competent veterinary surgeon to locate the trouble.

The Angora Goat

1. What is the native country of the Angora goat? 2. How near here can they be purchased, and what would be the cost per head? 3. Would there be any duty on bringing them into Canada?—C.A., New Norway, Alta.

1. The Angora breed of goats originated in the Valley of Angora in Asia Minor, some say long before the Christian era. There is some evidence to show that they were a distinctive breed when Moses was leading the Israelites out of Egypt. The Angora goat was introduced into the United States about 1850, and has become a source of large profit in many of the Southwestern States, where large ranches are to be found. 2. The Angora goat can be purchased in any of the States bordering on Manitoba and the Territories. The cost, like other kinds of pure-bred stock, will depend upon the quality and kind of breeding. We have known Angora goats to sell in Ontario at \$50 for pairs not akin. Whether prices in the Western States would be higher or lower we cannot say. Some breeders of Angora goats are: Northern Angora Goat and Live Stock Co., Hel-

ena, Montana; Francis Johnston, Glenwood, Wis., and Thomas W. Brunk, Salem, Oregon. You might write these for prices. 3. There is no duty on live stock brought into Canada for breeding purposes.

Distemper

I have a mare that has distemper, that will foal shortly; another mare also has it. What can I do for them?—J.K., Annapolis, N.S.

Good nursing is about all that can be done for a pregnant mare, as medicines are likely to cause abortion. If there is fever present give a drachm of saltpeter two or three times daily, allow all the cold water the animal wants to drink, and supply soft, easily digested food. Have the stable clean and well ventilated.

ABOUT RURAL LAW

In this column will be answered for subscribers, free of charge, questions of law. Make your questions brief and to the point. This column is in charge of a competent lawyer, who will, from time to time, publish herein notes on current legal matters of interest to farmers. Address your communications to "Legal Column," The Farming World, Toronto.

PURCHASE OF FARM SUBJECT TO LEASE

Q.—I purchased a farm from B. B. had, prior to the sale to me, leased the farm to C. for five years. The lease could be terminated by notice at the end of the third year. Two years had expired when I bought the farm. There was a provision in the lease that if default were made in the payment of rent for twenty days, the landlord could re-enter and terminate the lease. The tenant has left this province and apparently has no intention of returning. He is over six months in arrears with the rent. I am now in possession of the farm. 1.—Would I be safe in paying over the purchase money and run no risk of being put out of possession if the tenant returned and paid his rent?—J. C.

1.—Yes. The tenant would have no right to the possession on his return. Under the circumstances the landlord had the right to re-enter and terminate the lease, and he has done so. The safest course for you to adopt, however, would be to get the agreement in writing from the man who sold you the farm agreeing to indemnify you from all costs or damages you may suffer by reason of any demand of possession made on you by the tenant.

CONTRACT BY DRUNK MAN

Q.—A, while drunk, agreed at an auction to make purchase of houses and lands. After coming to his senses he did nothing, either by way of affirmation or repudiation of the contract, for six months. He now seeks to repudiate his contract on the ground that he was drunk at the time it was entered into. 1.—Can he do so?—A. W. F.

A. 1.—Not after the expiration of that length of time. A contract made by a person in a state of intoxication may be subsequently avoided by him, but if confirmed it is binding on him. If he wants to take advantage of this defence he should repudiate the contract as soon as he is sober. The lapse of time, in the absence of special circumstances explaining it, would be evidence of confirmation.



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Welland, Ont.

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The Covers are **MADE IN GLASGOW** from the very best Oak Tanned (specially prepared) leather.
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Cover..... 1.00...1.15...1.20...1.50...2.00
Rubber..... .60... .75... .80... .90...1.00
Post paid, and rules with each ball.

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Keep your cattle free from these pests by the use of

The Uncle Sam's Compressed Air Sprayer

A merciful man is his beast.

IT PAYS!
and the Sprayer will pay for itself twelve times over on the farm.

This Sprayer is non-gallican capacity and made entirely of steel and brass, and is not affected by any other article used on the farm.


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If you hope to exhibit your stock at the Fall Fairs, start now and get them in perfect health by using

Dick's Blood Purifier


It will help you to carry off the Blue Ribbon.

Fifty Cents per package.

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Of a Fence Lock which needs a kink or crimp to make it hold. It weakens the wire and will eventually cause it to break. The



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is the only Fence Lock on the market today which will bind two hard wires without injury to either.

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between the fruit sprayed with a common spray pump and one that is not. There is a still greater profit from fruit sprayed with the SPRAMOTOR. Why is it the entomologists get such bounteous returns while the average grower fails? Why do these experts who have used the Spramotor recommend it? Why does the Spramotor kill the San Jose Scale and let the tree live, while the ordinary spray pump kills the tree?

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will apply soap and oil, or bordeaux and oil and water, or any combination of them in the right proportion. The Spramotor will paint your barns and buildings with oil or Spramotor Water Paint. The Spramotor was winner of the Canadian Government Spraying Contest, and the Gold Medal at the Pan-American Exhibition. Send for 50-page Copyrighted Treatise, "A Gold Mine on Your Farm." It tells about the use of fruit trees and their remedies. It's free.

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GOOD WIRE FENCES



Must necessarily be well and evenly stretched, close and high. In short a really good wire fence is one which no animal can reach over, under or through, and equally strong and durable.

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CAN'T GET HIS REWARD

Q.—Certain persons published an advertisement stating that a reward of \$500 would be paid to anyone giving information which would lead to the recovery of certain articles which were missing. A, not being aware of this offer, gave the required information, and afterward learning that a reward had been offered, claimed it. The persons who had offered it refused to pay him on the ground that he did not know that it had been offered when he gave the information, and, therefore, gave the information voluntarily. 1—Can he make them pay him the reward?

A. 1.—No. His conduct was not affected by the promise offered; there was, therefore, no contract, and he cannot compel them to pay him the reward.

SALE OF A HORSE

Q.—F, offered by letter to buy his nephew's horse for \$50, and stated in the letter that if he heard no more about him, he would consider the horse his at \$50. No answer was returned to his letter, but the nephew told the auctioneer to keep the horse out of a sale of his farm stock as he had sold him to F. The auctioneer sold him by mistake. 1—Has F any remedy against the nephew or the auctioneer?—J. D. H.

A. 1.—No. There never was any contract of sale between F, and his nephew as the nephew had never communicated to F, his acceptance of his offer. Had there been a completed contract, F, could have sued the auctioneer for wrongful dealing with his property.

CONTRACT FOR WAGES

Q.—A, agreed to work for B, on his farm for his board and such remuneration as he (B) "should deem right." A, worked for B, a full B, year, but B, refuses to pay him anything. 1—Can A, compel him to do so?—A. D.

A. 1.—No. There was no promise that A, should receive anything in addition to his board. Had the contract been that A, should receive such remuneration in addition to his board as was reasonable, that might be interpreted to mean that he should receive the current rate of wages, and then he would be able to recover the usual wages in that district for that class of work.

June Institute Meetings

Delegates are being sent to the following by the Ontario Department of Agriculture:—

Section 1.—Delegate, Mr. Alex. MacNeill, Fruit Inspector, Ottawa. Subjects: "The Fruit Marks Act," "Export Trade in Apples and Pears," "Spraying for Insects and Fungous Diseases," "Cold Storage Buildings and Fruit Houses," "Modern Methods of Fruit Growing," "Packing and Shipping Fruit."

Meetings:—Cayuga, June 1; Burford, June 2; Hamilton, June 3; Teeswater, June 4; Glamis, June 5; Port Elgin, June 6; Owen Sound, June 8; Durham, June 9; Kimberley, June 10; Cookestown, June 11; West, June 12.

Section 2.—Delegate, Duncan C. Anderson, Rugby, Ont. Subjects: "Soil Cultivation," "The Bacon Hog," "Horse Breeding," "Care of Grass Lands," "Cattle Raising," "Care of Manure," "Green Crops as Fertilizers."

Meetings:—Brampton, June 2; Milton, June 3; Guelph, June 4; Cliford, June 5; Winterbourne, June 6; Galt, June 8; Ridgeway, June 9.

Section 3.—Delegate, Prof. J. W. Hart, Kingston, Ont. Subject: "Dairying."

Meetings:—Bracebridge, June 2; Lindsay, June 3; Bobcaygeon, June 4; Agincourt, June 5; Belleville, June 6. Threshers' Grove.

Section 4.—Delegate, Prof. J. H. Crisdale, Ottawa.

Meetings:—Vankleek Hill, June 13; Beachburg, June 13; Renfrew, June 13.

WOMEN'S INSTITUTES.

Section 1.—Delegate, Miss Laura Rose, Guelph. Subjects:—"Butter Making as an Art," "What Milk is and How it Should be Cared For," "Make Dairying Pay," "The Making of Bread and Buns," "A Chat With Housekeepers on Housekeeping," "Why I Have a Garden," "As Others See Us," "One Eye in the Field and the Other in the Town," "From Ocean to Ocean."

Meetings:—Drayton, June 6; Owen Sound, June 8; Durham, June 9; Kimberley, June 10; Cookstown, June 11.

Section 2.—Delegate, Miss Blanche Maddock, Guelph. Subjects:—"Science of Butter Making," "Bread Making," "Our Women's Institutes," "A Talk on Digestion, with Simple Demonstrations in Cooking," "Bacteria, and Some of Their Effects on the Home and Dairy," "Domestic Science," "Adaptation of Flowers to Their Surroundings and Their Cultivation."

Meetings:—Bracebridge, June 2; Lindsay, June 3; Bobcaygeon, June 4.

Section 3.—Delegate, Miss Agnes Smith, Hamilton. Subjects:—"Principles of Cooking, with Simple Demonstrations," "Food and Its Relation to the Body," "Domestic Science," "The Sanitary Home," "Needs of the Home of the Present day."

Meetings:—Teeswater, June 4; Milverton, June 5; Winterbourne, June 6; Galt, June 8.

O.A.C. Excursions

Farmers' Institutes will run excursions to the Ontario Agricultural College during June as follows:

8th, East Elgin; 9th, West Middlesex and Lincoln; 10th, North West-worth and Welland; 11th, East Simcoe, East Durham, and East and West Peterboro; 12th, North Middlesex; 13th, North and South Brant; 15th, Haldimand, West Wellington, Centre Wellington; 16th, Centre Simcoe, and East and West Lambton; 17th, Peel and South Oxford; 18th, Dufferin, Lennox and South Simcoe; 19th, North and West Bruce, North Grey, and Norfolk; 20th, East Huron and Halton; 22nd, North Ontario; 23rd, North and South Waterloo; 24th, Centre Grey and Centre and South Bruce; 25th, East Parry Sound and South Ontario; 26th, South Kent and West Elgin; 27th, South Grey and East York; 29th, West Simcoe.

Supt. Creighton has arranged with Miss Agnes Smith, Hamilton, to give demonstrations in cooking, etc., at the college when the excursions are in progress.

The Society of Christian Endeavor, Denver, 1903

The Passenger Department of the Chicago & North-Western Railway has issued a very interesting folder on the subject of the Christian Endeavor meeting to be held at Denver, July 9 to 13, together with information as to reduced rates and sleeping car service, as well as a short description of the various points of interest in Colorado usually visited by tourists. Send 2-cent stamp to W. B. Kniskern, Passenger Traffic Manager, Chicago, for copy.

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SAFE FOR ANYONE TO USE.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or specific mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent men here say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

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Always Reliable. Sure in Results.



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Finds Caustic Balsam to be Reliable.

I can say that I have for the past three years been a user of GOMBAULT'S CAUSTIC BALSAM, and have found it to be all that is claimed for it, and have in a great many instances, recommended its use to others.—B. D. KIDEN, Antigonish, N.S.

Canadians Appreciate Caustic Balsam

I have been selling GOMBAULT'S CAUSTIC BALSAM for years, and it is giving my customers the best of satisfaction. I have also used it myself on different ailments with the best results. For much cannot be said in its favor.—W. T. PRICE, Berkeley, Ont.

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Gets more Cream out of the Milk
Is less expensive to operate
Increases the quantity
Improves the quality
Will wear longer
Soon pays for itself
Has its gears enclosed
Bowl has few parts to wash
Has simple self-emptying Bowl
Has many other points of superiority
more fully described in our catalogues
which are free for the asking, all making

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For Manitoba and the West we transfer our separators from Chicago and Minneapolis, and for the Eastern Provinces from Quebec, Sherbrooke, Montreal, and Hamilton. Address all letters to Bellows Falls, Vt.

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PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations, make, sale and purchase of stock and the condition of birds and flocks, and to the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. An editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Among the butter tests recently accepted for publication by the American Jersey Cattle Club are the following:—

Exile's Kalmia—111647: Sire, Exile of St. Lambert, 13657; dam, Volie of Sennett, 49059.

Butter, 18 lbs. 15 oz.; milk, 237 lbs. 8 oz. Tests made from Mar. 6 to 12, 1903; age, 7 years 9 mos.; estimated weight, 900 lbs.; fed 12 lbs. ground corn and oats, 6 lbs. cottonseed meal, 6 lbs. wheat bran, and 10 lbs. corn ensilage, daily—hay ad lib. Property of Frank W. Hart, Cleveland, Ohio.

Exile's Pomona, 111106: Sire, Exile of St. Lambert, 13657; dam, Volie of Sennett 2nd, 78638.

Butter, 17 lbs.; milk, 182 lbs. 7 oz. Test made from Jan. 6 to 12, 1903; age, 8 years 2 months; estimated weight, 950 lbs.; fed 12 lbs. ground corn and oats, 6 lbs. cottonseed meal, and 6 lbs. wheat bran, daily—hay ad lib. Property of Frank W. Hart, Cleveland, Ohio.

Fortia of Prospect, 138783: Sire, Ida's Rioser of St. L. 10th, 47704; dam, Bess of Ingleside 2nd, 59648.

Butter, 22 lbs. 8 oz.; milk, 345 lbs. 13 oz. Test made from Feb. 24 to Mar. 2, 1903; age, 4 years 1 month; actual weight, 1035 lbs.; fed 6 qts. wheat bran, 4 qts. corn meal, 4 qts. Buffalo gluten, 2 qts. oil meal, and 30 lbs. corn ensilage, daily—hay ad lib. Property of W. H. Silverthorn, Painesville, Ohio.

Mr. L. W. Paisley, Secretary of the Live Stock Association for British Columbia, who had been in Ontario for several weeks looking up stock, left for the West about May 15th with a shipment valued at \$10,000. Among the noted purchases were that of Newham Duke, champion Shire stallion at the Industrial last fall. He was purchased from J. M. Gardhouse, Hightfield, Ont., for \$2,500. Another noted purchase was the two-year-old colt Royal McGregor, bought of O. Sorby, Guelph, for \$1,000. A standard-bred stallion was purchased from John Knight, Leeds, in the same shipment, designed for the Aberdeen Ranch, was a Shire stallion from Stone & Wellington's stud. In addition to these shipments of horses, were three car loads of pure-bred Shorthorn bulls and heifers, three car loads of grade Shorthorn heifers for dairy purposes, besides a number of Lincoln and Oxford sheep, Yorkshire and Berkshire pigs, and Plymouth Rock chickens.

The Earl of Rosebery is not like the Berkshire farmers who are coming to "Chapelhill," think it beneath their dignity to bother with pigs. Last year an enterprising Canadian breeder, namely, Mr. D. C. Platt, of Hamilton, Ontario, bought from the Dalmeny herd 200 head of pedigree Yorkshires for exportation to Canada. Encouraged by his great success with these Dalmeny pigs last year, Mr. Platt has purchased another draft of eighty pigs from the Dalmeny herd, and these were shipped on Saturday last per the Donaldson liner Kastalin. From the same herd also there was last week shipped a picked lot of

six gilts and two boars to the order of Messrs. Shand & Haldin, Ceylon. Two further large lots will be shipped next week to Russia and Germany respectively, and at the present time the home demand for pigs from the Dalmeny herd is greater than it has ever been before. Evidently Lord Rosebery finds that the pig, if he be of the right sort and well attended to, is a "gentleman who pays the rent."—North British Agriculturist.

The big sale of Scotch-bred Short-horns at Hamilton on June 9th furnishes a good opportunity to secure choice breeding stock at market value. The names of contributors are a sufficient guarantee that the animals to be offered are of a high quality. W. C. Edwards & Co., who are offering 27 head, are among Canada's foremost Shorthorn breeders. They are offering several imported ones of the best Scotch breeding, and a number of Canadian bred of the noted Missie family. A large number are sired by Marquis of Zenda, one of the best bulls in Canada. He was got by the great Shittyton Brawthwith sire Wanderer (60138), out of Missie 123rd. He is a noted sire of show animals. Marquis of Zenda is a full brother to Missie 153rd which Messrs. Edwards & Co. purchased at Chicago in 1901 for \$6,000, the highest price paid for a Shorthorn cow at auction in many years.

Next follow the contributions of Hon. John Dryden, seven in all, mostly of his own breeding, sired by the bulls, Collynie Archer, Revenue and Prince Gloster, all of good breeding. Collynie Archer is a Dutch-bred bull, imported by Mr. Dryden in 1898. He was sired by the Cruickshank bull Scottish Archer. Collynie Archer's pedigree is precisely the same as that of Marengo, the great champion bull of Great Britain. Prince Gloster is an all red bull of Mr. Cruickshank's celebrated Duchess of Gloster family. He has great substance and thick flesh and his calves are excellent.

Other contributors are Captain T. E. Robson, W. B. Campbell, R. Mitchell & Sons, A. J. Watson, and Jas. Gibb, who are offering animals of good type and breeding. Over fifty are offering in all.

The Winners at Calgary

Horses—Thoroughbred, any age: 1, Colonel Dennison, J. D. Lauder, Innisfail; 2, Potomac, W. D. Kerfoot, Cochrane; 3, Lord Glen, R. F. Bevan. Coach breeds: 1, Black Dodd, Rawlinson Brothers, Calgary; 2, Napoleon, D. P. Macdonald; highly commended, Pladeno, G. E. Goddard, Cochrane; Yelva, R. G. Robinson, Calgary.

Standard bred: 1, Alvoilo, R. G. Forrest, Calgary; 2, Eustace. Hackneys: 1, Commodore III, C. M. Rawlinson; 2, Gilmoyon, W. L. Christie, High River. Clydes: four years and over: 1, Prince Lindock, John Clark, Crowfoot; 2, Gretna C., John A. Turner, Calgary; 3, McClinker's Heir, H. Banister, Davisburg; 4, Borden River, A. H. Eckford, High River.

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All Else Had Failed

It will do the same for you, and that you may be convinced I will send ten days' treatment free to any lady who is suffering from troubles peculiar to our sex. Address, with stamp, MRS. F. D. CURRAH, Windsor, Ont.

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That you may be assured of the merits of this wonderful medicine, I will send ten days' treatment free, with stamp, MRS. F. D. CURRAH, Windsor, Ont.

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IS WOMAN'S BEST FRIEND.



It cured me of painful periods, leucorrhoea, diarrhoea, and other irregularities, after I had been sick for 11 months. I will send a free trial package of this Wonderful Home Treatment to suffering ladies who will send, with stamp, MRS. F. D. CURRAH, Windsor, Ont.

FREE!

Will Make Your Wife Well



Many a husband is held down and robbed of much happiness by his wife's illness. If his wife is an invalid, I will send a free sample of this Wonderful Home Treatment to any man who will send, with stamp, MRS. F. D. CURRAH, Windsor, Ont.

FREE!

Is Your Wife an Invalid?



If you will send for a free trial of this Wonderful Home Treatment you can be convinced that in a few months she may be strong and well again. Hundreds of women have been cured and made happy. Send today, enclosing stamp. Address MRS. F. D. CURRAH, Windsor, Ont.

FREE!

Is Suffering Women to Suffering Women.



It is Grand Home-ody, having brought all female weakness and happiness to thousands of ladies all over the world. I will cure you, too. A free sample will be sent by addressing, with stamp, MRS. F. D. CURRAH, Windsor, Ont.

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Cures Permanently



all the following complaints, viz.: Female weakness, leucorrhoea, painful periods, backache, pain in side and abdomen, tumors, cancers in their earlier stages, and all female troubles. Write to-day for 10 days' treatment and cure yourself before it is too late. Enclose stamp and address MRS. F. D. CURRAH, Windsor, Ont.

Clydes, three years old: 1, Charming of Eastfield, J. Clark, Calgary; 2, Pride of Eastfield, J. Clark, Crowfoot; 3, Matches, Hon. W. Beresford, Calgary; highly commended, Orvals Prince, J. A. Turner, Calgary; commended, Brooklyn II., J. K. Dickson, Medicine Hat.

Clydes, two years old: 1, Royal MacQueen, J. A. Turner, Calgary; 2, Winsome Prince, J. A. Turner, Calgary.

Clydes, yearlings: 1, Improver, John R. Thompson, Calgary.

Shires, three years and over: 1, Fairfield Hero, C. Kinniburgh, Calgary; highly commended, Lyndon II., W. L. Christie, High River.

Shires, yearlings: 1, Pelham Chief, A. H. Eckford, High River.

Suffolk Punch, any age: 1, Nelson, J. A. W. Fraser.

Championship, for the best heavy draught stallion, any breed or age, prize \$50.00 plate, presented by Imperial bank: J. A. Turner, Calgary.

Cattle—Aberdeen Angus bulls: 1, Long Branch Commodore, John Morton, Lacombe; 2, Red Deer Robinson, John Morton, Lacombe; highly commended, Red Deer Boy, John Morton, Lacombe; commended, Red Deer Carlyle, John Morton, Lacombe.

Hereford bulls, three years and over: 1, Oakwood Hesiod, Oswald Palmer, Lacombe; 2, Loretto III, of Ingleside, Mossom Boyd Co., Bobcageon, Ont.; highly commended, Lucius, Jas. Shouder, Namaka; commended, Canada Land and Ranch Co., Crane Lake.

Hereford bulls, two years and under: 1, Bonnie Brae Hesiod II., Oswald Palmer, Lacombe; 2, Bonnie Brae Hesiod IV., Oswald Palmer, Lacombe; highly commended, Bonnie Hesiod III., Oswald Palmer, Lacombe; commended, Headlong, Mossom Boyd Co., Bobcageon, Ont.

Shorthorns, three years and under: 1, Trout Creek Hero, Robt. Page, Pine Lake; 2, Farmers' Fancy, A. H. Bolton, Gladys; 3, Lord Raglan, Henry Hans, Gladys; highly commended, by H. C. Watson, Oxbow; commended, Roan Prince, A. B. Snider, Okotoks.

Shorthorn bull, two years: 1, Eugene V. Debs, Henry Hans, Gladys; 2, by Jas. Cheyne, Oxbow; highly commended, by Mead Brothers, Pincher Creek; commended, Bencher, J. and W. Sharp, Lacombe.

Shorthorns, yearlings: 1, Bachelor, J. and W. Sharp, Lacombe; 2, Lacombe Prince, Hy. Talbot, Lacombe; 3, Prairie Chief, Robert Page, Pine Lake; highly commended, Strathcona Chief, S. R. English, Strathcona; commended, King Edward, J. and E. Bolton, Okotoks.

Championships—Best Shorthorn bull, bred in Alberta: Bachelor, J. and W. Sharp, Lacombe. Best Shorthorn bull, bred in Assiniboia, Jas. Cheyne, Oxbow. Best Shorthorn bull, bred in Saskatchewan, no entries. Best Shorthorn bull, any age, Trout Creek Hero, Robt. Page, Pine Lake.

Shorthorn cows, three years and over: 1, Oenone, Hugh Fraser, De Winton; 2, Bennell, Geo. Geary, Innisfail; 3, Rose Bloom, Hy. Hans, Gladys; highly commended, Winds, Geo. Geary, Innisfail; commended, Jess, Shaw, High River.

Shorthorn cows, two years old: 1, Luxury, Canada Land and Ranch Co., Ltd., Crane Lake; 2, Conlee Queen, P. Talbot & Son, Lacombe; highly commended, Queen Ester, P. Talbot & Son, Lacombe.

Shorthorn, yearlings: 1, Isabella, Robt. Page, Pine Lake; 2, Miss Deldee, Robt. Page, Pine Lake.

Championships—1, Oenone, Hugh Fraser, De Winton.



Scotch Shorthorns

Imported and Canadian Bred Shorthorns. Imported bulls, cows and heifers of the best families, bred and headed by Napton Ch. Specialist Imp. and Vicepres, bred by Lord Lovat.

Large White Yorkshires

A choice lot of bores ready for service, direct from stock of the best herds in England. Also young pigs and sows bred or old enough to breed.

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—ON—

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This is a splendid opportunity to secure animals of the choicest breeding, many of them being imported from Scotland at great expense. The cattle will be found in good condition, and will be sold without reserve.

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I have for sale 4 Ayrshire Bulls, 2 Pure Bred Shorthorn Heifers, coming one year old; 1 Shorthorn Bull, two years old; Choice Yorkshire Boar, one year old; Yorkshire Sows and Boars, from four weeks to six months old; these animals are of choicest breeding. Will be sold cheap to quick buyers.

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Large English Yorkshires. Boars fit for service; sows ready to breed; boars and sows 8 weeks to 3 months old, from imported and Canadian bred sows. Write

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Scotch Shorthorns, Choice Milk- ing Strains, Prize Winning Let- cesters, Young Stock for sale—im- ported and home bred.

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(and other noted Prize Boars)

I was awarded the above honors, besides 10 other prizes, at the late Toronto Exhibition. The great growth and size of my hogs, at the different ages, was freely complimented on by the best judges, many of whom awarded me such high and never been seen before, and I think I had the HEAVIEST HOGS on the grounds of ANY BREED in almost every class, and at every age. I have a grand lot of young boars, ready for service, young sows bred to prize boars, and young pigs from my best prize sows and boars, all for sale very reasonable. Come and see them, or send for pictures of my winners, showing part of the group that won at Toronto. W. H. DURHAM, York Lodge, East Toronto P.O., Canada.

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Importer and Breeder of Galloway Cattle, Citydale Horses and Coo-walung. Choice animals for sale

NO HUMBUG. Three

times I beat Walker and Cliff Buchanan. Single sows bred to different one quarter, Supreme Essex, Price \$1.25, head \$1.00. 11 trials, and last one, Part 1, 1898. Run and Cliff made only THE FARMER BUCHANAN, FAIRFIELD, IOWA.

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Our Fortnightly Market Review

The Trend of Markets—Supply and Demand—The Outlook

Toronto, May 30, 1903.

In spite of the frequent and persistent strikes, general trade continues fair. Increased immigration is making things active in the West, which stimulates business in the East. There has been considerable "bearing" of stocks and heavy losses on amateur speculators, but this is outside of the realm of general trade. The large expansion in trade has increased the demand for money. Call loans range from 5 1-2 to 6 per cent. with the latter figure ruling. Discounts continue at from 6 to 7 per cent.

Wheat

The wheat situation hinges around the condition of the growing crop. So far, reports this season have been favorable both in the United States and Canada. The recent rains will help the fall wheat crop in this province very much, while Manitoba and the West is having fine growing weather. The acreage under winter wheat in the United States is 15.5 per cent, in excess of the acreage harvested last year. There were reports a week or two ago that the crop had been injured by the cold snap, but these have been shown to be foundationless. As to markets there has been nothing exciting since our last report. Under a good export demand, prices have remained steady. Locally the market is firm at 73 to 73c. for red and white, 65 to 66c. for good, and 70 to 72c. for spring at outside points.

Cereals Grains

There is nothing striking in coarse grains. There have been heavy receipts of Russian oats in England. Corn planting in the States has been delayed by rains.

Hay

There is a little more interest in the hay market. The prolonged drought in May perhaps injured the hay crop more than any other. Though it is hard to say to what extent. The recent rains may help matters considerably. However, farmers in some sections, especially in Quebec, have made it an excuse to advance prices, and they have succeeded to some extent. American buyers have been paying higher values and there has been considerable excitement in the Quebec market. Ordinary good No. 2 has sold at \$7.50 l.o.b. at country points. The market here is unchanged at quotations.

Eggs and Poultry

The egg market must be rather a puzzle to those parties who have been predicting 8c. for eggs at central points still continue at about the shilling. Export orders for pickling stock are not coming very fast, though considerable stock is being put down in the Western part of the province. Dealers are evidently holding off for the expected rockbottom values. At Montreal case lots are quoted at 12 3-4 to 13c., and here at 12 1-4 to 13c.

Dairy Products

Dairy products seem to hold their own, especially cheese. Though prices, as expected, have lowered a little, they still rule at a profitable figure. At the local markets 10 1-2 to 10 3-4c. are the ruling figures for last half of May goods. The export demand for cheese keeps up.

In butter, the situation is not so good in the export line though things may improve when full grass butter comes forward. So far exports of

butter this season have been away below what they were a year ago at this time. At Montreal choice fresh creamery is quoted at 18 to 18 1-2c., and Western dairy at 13 to 16c. Here creamery prints are quoted at 20 to 21c., solids at 18 1-2 to 19c., and large dairy rolls and tubs at 14 to 15c.

Wool

The wool season is now at hand. Markets outside of Canada are reported firm, with advances in both fine and cross-bred wools. But the market here shows no great activity. Toronto dealers quote 14 1-2 to 15c. for washed and 8 to 9c. for unwashed fleece. These are a shade over the values offered last year at this time, but are not in keeping with values elsewhere. On the whole, things look better than a year ago, and farmers would do well to give special attention to put their wool up in proper condition for marketing.

Live Stock

Live stock conditions, generally speaking, show little change since our last report, with the exception, perhaps, that the export demand just now is not so brisk as two weeks ago. It is said that one reason for the poor export demand here is that our dealers rely on Chicago market for their supplies as they can get better quality for less money. At Toronto the bulk of the export cattle sell at from \$4.75 to \$4.90, with some picked lots at \$5.00 per cwt. Good butchers' cattle are scarce, with prices firm at \$4.75 to \$4.85 for choice, \$4.60 to \$4.70 for good, and \$3.65 to \$4.50 per cwt. for common to medium. Quite a few unfinished exporters shipped in here have been bought by farmers as short-keep feeders. The demand for both feeders and stockers is good, especially short-keep feeders, which sell as high as \$4.75 to \$4.90 per cwt. Other feeders bring \$4 to \$4.40, and stockers \$3 to \$3.75 per cwt. as to quality. Milch cows sell at \$36 to \$46 each; better quality

higher. All choice veals find ready sale.

Sheep continue in fair demand at firm prices. Spring lambs sell at from \$3.50 to \$4.50 each, still a good

price. Early last week goods advanced from \$5.90 to \$6.10 per cwt. for selects only to drop at the end to \$6.00, with \$5.75 for lights and fats. The run of hog is increasing.

Horses

Though the general horse market is a little quieter, there is still a good demand. There have been a couple of buyers at Grands this week from the Northwest who have taken a number, chiefly the cheaper work horses at prices ranging from \$100 to \$132.50 each. One good driver sold to go to the West at \$135. About 100 horses were sold in all this week, chiefly workers and general purpose horses, the better kinds at \$100 to \$135 each and the cheaper workers at \$75 to \$100 each. One fine pair of heavy draft horses sold at \$500, and one fine driver at \$235. Horses that will bring these latter prices are hard to get.

Maritime Markets

Halifax, May 25, 1903.

The spring to date has been backward, and the pastures and the hay crop have suffered considerably from drought. It is not too late yet to save the situation, but farmers take it for granted that hay will be short of the average yield and consequently the price has advanced about seventy-cents per ton. There is a fair supply of old hay on hand in this province, but little or none in New Brunswick. Feeds generally are very firm, as farmers in this locality have not yet been able to turn their stock upon the pastures.

Business in butter and cheese is somewhat quiet at present. There is quite an output of butter at most of the local factories, and prices have declined. There is some export demand from the West Indies, but on the English market prices are too low to warrant shipments. Quite a number of lots of dairy tub butter from Ontario are now coming to this market, but there is very little Nova Scotia dairy tub available. To-day's

The Canadian Produce Markets at a Glance

The highest quotations of prevailing prices for standard grades of farm produce in the leading markets on the dates named. Poorer stuff lower.

Date	Toronto		Montreal		St. John's		Halifax		Winnipeg	
	30	25	28	25	25	25	25	25	25	25
Wheat, per bushel.....	\$ 0 73	\$ 0 72	\$..	\$..	\$..	\$..	\$..	\$..	\$ 0 75 1/2	\$..
Oats, per bushel	34	35	43	43	43	43	43	43	38	38
Barley, per bushel	48	48	48	48	48	48	48	48	48	48
Peas, per bushel	64	62	65	68	68	68	68	68	68	68
Corn, per bushel	40	50	50	50	51	51	51	51	51	51
Flour, per barrel	4 00	4 10	4 80	4 80	4 75	4 75	4 75	4 75	4 10	4 10
Bean, per ton	17 00	17 50	21 50	21 50	21 50	21 50	21 50	21 50	15 00	15 00
Shorts, per ton	18 00	18 50	24 00	24 00	24 00	24 00	24 00	24 00	17 50	17 50
Potatoes, per bag	1 10	1 20	1 80	1 80	1 85	1 85	1 85	1 85	1 80	1 80
Beans, per bushel	1 75	1 75	1 95	1 95	2 00	2 00	2 00	2 00	1 80	1 80
Hay, per ton	9 00	10 50	10 75	10 75	10 75	10 75	10 75	10 75	9 00	9 00
Straw, per ton	5 00	6 25	8 00	8 00	8 00	8 00	8 00	8 00	5 00	5 00
Eggs, per dozen	12 1/2	13	13	13	13	13	13	13	13	13
Chickens, per pair, d. w.	1 25	1 25	60	60	60	60	60	60	85	85
Ducks, per pair, d. w.	1 25	1 25	60	60	60	60	60	60	85	85
Turkeys, per pound, d. w.	15	15	15	15	15	15	15	15	15	15
Geese, per pound, d. w.	15	15	15	15	15	15	15	15	15	15
Apples, per barrel	2 50	3 50	3 75	3 75	3 75	3 75	3 75	3 75	5 50	5 50
Cherry, per pound	12	11 1/2	13	13	13	13	13	13	15	15
Butter, per pound	21	18 1/2	15	15	15	15	15	15	21	21
Butter, creamery, per pound	15	16	19	19	19	19	19	19	16	16
Cattle, per cwt	5 00	5 25	5 00	5 00	5 00	5 00	5 00	5 00	5 50	5 50
Sheep, per cwt	4 25	4 25	6 00	6 00	6 00	6 00	6 00	6 00	4 50	4 50
Hogs, per cwt	6 00	6 50	6 75	6 75	6 75	6 75	6 75	6 75	4 25	4 25
Veal Calves, per cwt	5 50	5 25	6 00	6 00	6 10	6 10	6 10	6 10	5 00	5 00

Lambs each.

jobbing prices at Halifax are:— Creamery prints, 23c.; boxes and tubs, 21 to 22c.; new dairy rolls and tubs, 19 to 20c. Cheese are on the decline. The factories are now asking 12c. l.o.b. for twins and solids, but they will likely accept less. The supply of eggs is still light, and the price keeps firm at 13 to 14c. for fresh stock. Some lots forwarded from P. E. Island to Montreal sold there at 13c. last week.

The meat market is steady. Butchers are paying a shade less for cattle. Other meats are unchanged. There is a fair supply of P. E. Island potatoes now on this market, but the Nova Scotia article is entirely out of the market.

The apple orchards of the Annapolis Valley are in full bloom and the trees seem to have fully recovered from the blight of last season. It is not expected that the crop will be up to the average. Small fruits generally are looking well.

The Successful Ones

The following are the successful students in the first and second years at the recent O.A.C. examinations, the names being given in the order of general proficiency:

First year.—1, Bracken, J., Seeley's Bay, Grenville, Ont.; 2, Hart, P. A., Wallace Bay, N. S.; 3, White, G. G., Perth, Lanark, Ont.; 4, Colwell, H. H., Toronto, Ont.; 5, Stayer, H. S., Toronto, Ont.; 6, Ballantyne, R., Sebringville, Perth, Ont.; 7, McMillan, H. R., Aurora, Ont.; 8, Dickson, J. R., Seaforth, Huron, Ont.; 9, Hamilton, C., Dundela, Dundas, Ont.; 10, Tucker, H. S., Chapman, Hastings, Ont.; 11, Meikley, G. H., Chesterville, Dundas, Ont.; 12, Nixon, C., St. George, Brant, Ont.; 13, Munroe, J. F., South End, Welland, Ont.; 14, Hawtin, A., Newmarket, York, Ont.; 15, Smith, H. B., Wanstead, Lambton, Ont.; 16, McKenney, A., Corinth, Elgin, Ont.; 17, Ramsay, A. L., Toronto, Ont.; 18, Fife, K. E., Shelburne, Dufferin, Ont.; 19, Logsdail, A. J., Nagpur, India (4); 20, Northcott, S. A., Solina, Durham, Ont.; 21, Farmer, P. P., Arnprior, Renfrew, Ont.; 22, Scott, H. W., Lancaster, Glengarry, Ont.; 23, Bailey, C. F., Coldbrook, N. S.; 24, Ketchen, A. F., St. George, Brant, Ont.; 25, Marshall, C. A., Westbrook, Frontenac, Ont.; 26, Land, T. H., Chorley, England (12); 27, Jones, D. H., Bedford Park, York, Ont.; 28, Middleton, M. S., Vernon, B.C.; 29, Murray Wilson, J. G., Monte Video, Uruguay; N. Robertson, A., Brantford, Brant, Ont.; 31, Somerset, H. R., Crickhowell, Wales, England (2 and 4); 32, Halliday, C., Pakenham, Lanark, Ont.; 33, Taylor, H. E., Colchester, Essex, Ont.; 34, Duncan, R. S., Hantsville, Muskoka, Ont. (13); 35, Bean, W., Haysville, Waterloo, Ont.; 36, Weylie, D. B., Glanford Station, Wentworth, Ont.; 37, Weir, D., Montreal, Que.; 38, Elderkin, J., Amherst, N. S.; 39, Atkin, J. P., Aldershot, Wentworth, Ont. (4); 40, Evans, W. G. E., Ottawa, Ont.; 41, Irving, A. J., Vernon Bridge, P.E.I.; 42, Johnston, D. N., Navan, Russell, Ont.; 43, Leavens, H., Chisholm, Prince Edward, Ont. (14); 44, Woolverton, N. D., Grimby, Lincoln, Ont.; 45, Birley, R. B., Paris, Brant, Ont.; 46, Nancekivell, J. H., A., Port Antonio, Jamaica (13); 48, Sumner, A. L., Montreal, Que.; and Williams, R. P., Corbetton, Dufferin, Ont.; 50, McVannel, R. P., St. Mary's, Perth, Ont. (7 and 13); 51, McKenzie, J., Queen's Hill, Brant, Ont. (1); 52, Metcalf, H. M., Grimby, Lincoln,



COLD WATER Celluloid Starch

mixed with cold water only soaks at once into the fabric, fills the small spaces, and is cooked by the heat of the iron, making the surface perfectly smooth and leaving the fabric thoroughly stiffened. It gives greater beauty and longer life to your linen.

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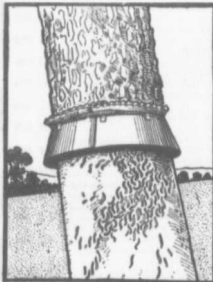
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