

The Farming World

A Paper for Farmers and Stockmen

Maxwell's "Favorite" Churn.



Patent Foot and Lever	No.	HOLDS	CHURNS
Drive.	0	6 gal.	4 to 3 gal.
Patented Steel Roller	1	10 "	1 to 6 "
Bearings.	2	15 "	2 to 7 "
	3	30 "	3 to 9 "
	4	36 "	4 to 12 "
Improved Steel Frame	5	30 "	6 to 14 "
	6	40 "	8 to 20 "

Superior in Workmanship and Finish

DAVID MAXWELL & SONS
St. Mary's, Ontario, Canada.

HORSEMENT! THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

*See genuine without the signature of
The Lawrence, Williams & Co.
Sole Importers & Proprietors for the U.S. & CANADA.*

CLEVELAND, O.

The Safest, Best BLISTERS ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle, SPEEDS ALL CAUTRY or FIRING. Impossible to produce scur or blench. Every bottle is warranted to give satisfaction. Price \$1.50 per bottle. Sold by Druggists, or sent by Express, charges paid, with full directions for its use. Send for free descriptive circulars.

THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

OUR TEACHING METHODS

Measured by the test of actual business they are all right.

Chas. W. Wynard, Accountant, Toronto, says: "I have received great benefit from the instruction received at your college, and can highly recommend it to anyone contemplating a business course."

- Book-keeping, Stenography,;
- Typewriting, Penmanship,
- Business Law and Advertising.

Drop post-card for booklet. Of value to every young man and woman contemplating entering business.

British American Business College

V.M.C.A. Bldg., Cor. Yonge and McGill Sts., TORONTO,

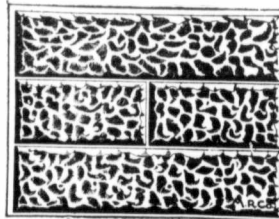
DAVID HOSKINS, Chartered Accountant, Principal.

ALL OVER THE COUNTRY

You can see for yourself in many buildings just what a handsome finish is given by our

ROCK-FACED STONE

A Steel Siding, Galvanized or Painted



Why not use it on the next building you are constructing or improving?
- It is invaluable for fire and weather proof protection
- is very easily put on—and costs but little.
Write us at any time for information—our experience in all building matters is "at your service."

METALLIC ROOFING CO.
(Limited)

Cor. King and Dufferin Sts., TORONTO

The RANKIN FENCE

Is a Coiled Spring Wire Fence containing all the latest improvements. Is easily and rapidly erected without any expensive tools or previous experience.

All particulars in our catalogue. Write for it.

AGENTS WANTED
THE RANKIN FENCE CO.
275 St. Martin St., Montreal.

Cheese and Butter

Makers of these articles, in many instances, do not pay the necessary attention to the quality of the salt they use. Some people think that "salt is salt," and it does not matter where it comes from or who makes it. This is a great mistake, for it is essential that to produce the best Butter or Cheese nothing but the purest salt should be used.

The number of prizes obtained by users of "RICE'S or COLEMAN'S" DAIRY SALT

at the various exhibitions is conclusive proof that these brands of salt stand unrivalled. For prices, etc., address

R. & J. RANSFORD,
Clinton, Ont.

Remainder of this Year Free to all New Subscribers to THE FARMING WORLD for 1901

THE FARMING WORLD BOOK PREMIUMS

We are offering many attractive premiums to FARMING WORLD subscribers as all who have read our eight-page premium announcement know. Not the least valuable of this splendid list are the several books that we offer. A good book is always a welcome friend. Ours are of a class that appeal to the reader on the ground of real interest as well as utility.

Home Nursing

We cannot too strongly recommend this book. It should have a place in every family. It is written by Eveleen Harrison, a nurse of large experience, and in such style as to make the information useful to everyone in the home. It will answer almost any question you are likely to ask regarding the treatment of the sick. Tastily bound in cloth.

—Home Nursing will be sent free to any subscriber of THE FARMING WORLD who will send us one new subscription giving THE FARMING WORLD from present date to January, 1902; or to any present subscriber, not in arrears, postpaid, on receipt of 50c.

Pilgrim's Progress

One of the books that never grows old, a staple with the publishing and book-selling trades from year to year. This is a particularly attractive edition that we are offering as a premium and contains an excellent memoir of John Bunyan, whilst the wonderful allegory itself occupies nearly 300 pages. Bound in cloth, handsomely embossed, size 9 x 6, and 1 1/2 inches in thickness, and the regular selling price is \$1.00.

—Bunyan's Pilgrim's Progress will be sent free to any subscriber of THE FARMING WORLD who will send us one new subscription, giving FARMING WORLD from present date to January, 1902; or to any present subscriber, not in arrears, postpaid, on receipt of 50c.

Life of Christ for the Young

The author of this book, Rev. Geo. L. Weed, is peculiarly fitted for his work and writes from a personal knowledge of the Holy Land, and with a grace of style that makes the book interesting to young and old. It is pronounced by leading clergymen of different denominations one of the best books of the kind published. 400 pages, with 75 full page half-tone illustrations, and handsomely bound in oilcloth.

—Life of Christ for the Young will be sent free to any subscriber of THE FARMING WORLD who will send us one new subscription, giving THE FARMING WORLD from present date to January, 1902; or to any present subscriber, not in arrears, on receipt of 50c.

Ideal Cook Book

This is the most practical cook book of the present day. The receipts appeal to the common-sense of the housekeeper. Grouped together in black-face type at the commencement of each receipt is a statement giving the amount and quantity of ingredients required—a very useful arrangement. The chapter on the "Sick" and again on the "Doctor" are simply invaluable and well worth the price of the book. This book contains over 300 pages, size of page is 5 x 8 inches, bound in substantial oilcloth cover for the kitchen.

—Copy of the Ideal Cook Book will be sent free to any present subscriber sending us one new subscription to THE FARMING WORLD, giving FARMING WORLD from present date to January, 1902; or to any subscriber, not in arrears, for 50c. The published price of the book is \$1.

The Nuttall Encyclopædia

This Encyclopædia is edited by the Rev. James Wood, editor of Nuttall's Standard Dictionary and compiler of the Dictionary of Quotations. It consists of over 16,000 terse and original articles on nearly all subjects discussed in the largest encyclopædia. It is the greatest one-volume encyclopædia in the world, and is a wonder in the immense amount of information contained between its pages.

—This Encyclopædia will be sent free for six new subscriptions to THE FARMING WORLD, giving FARMING WORLD from present date to January, 1902; or to any subscriber not in arrears for 75c.

The Oxford Workers' Bible

The Oxford Workers' Bible is an entirely New Book, printed from new plates, on the famous Oxford thin paper, containing the Old and New Testaments, with References, Bible Helps, Maps, etc. This book is made by the Oxford University Press, London, Eng., to meet the growing demand for a thoroughly up-to-date comprehensive book for teachers and students, and containing such helps to the study of the Bible as are of value in actual use from day to day. This splendid volume is convenient in size, is bound in Levant Morocco, linen lined with round corners and red undergold edges. It is printed from large, clear, new Minion type. Size, 5 x 7 1/4 inches.

—Will cost you only 75c. if you are a subscriber to THE FARMING WORLD and not in arrears, or will be sent free for five new subscriptions to FARMING WORLD. The regular price is \$2.50.

Make all cheques, drafts and money orders payable to

THE FARMING WORLD

Confederation Life Building, TORONTO

The Farming World

For Farmers and Stockmen

VOL. XVIII.

SEPTEMBER 25th, 1900.

No. 4

The Side Show and the Fall Fair



AFTER the World's Fair at Chicago in 1893 the motley crew of performers who graced the Moorish Palace, the Persian Theatre, the Streets of Cairo, and such like places of amusement on the Midway Plaisance, scattered abroad throughout the United States in an attempt to introduce their unseemly wares in other cities. The State Fair was the first ground to be systematically worked by these individuals, and for a few years the side shows at these annual Fairs were reeking with the filth and indecencies of the most demoralizing features of the Midway Plaisance. But public indignation became aroused and the managers of the State Fairs, in order to retain the confidence of the constituency to which they were catering, were compelled to exclude such questionable exhibitions from the grounds. Driven from the State Fair, we understand that this class of entertainers are now reaching out to the small local or county fair across the border, where they are distributing their filthy goods to the innocent and inexperienced youth of the more rural districts.

But what has all this to do with our Canadian Fairs? Merely this. There is seemingly a tendency to allow some of these questionable side show performances to gain a foothold at our annual fall fairs, and a warning just here may have a wholesome effect in checking any further growth along this line. We have no room on any fair ground in Canada for any of the unseemly side shows referred to above, and which, we are sorry to say, were to be seen at a couple of our larger exhibitions outside of this city, this year. Why cannot our exhibitions be made a financial success without such accessories? There is no reason other than a financial one that we can see for the management of a fair allowing the side show space on the grounds. If the big fall fair cannot be successfully financed without the percentage of receipts from these sources it would be better to increase the general admission fee. In this connection it might be well to note that the admission fee to the big State Fairs across the line is usually double of that to the larger Canadian Fairs.

No one objects to the sideshows so long as the entertainment provided is clean and wholesome even if it is not educational. Many, no doubt, look upon it as an essential feature of the big fall fair and if there were not something of this kind to enable them to get rid of a few extra ten-cent pieces, they would go away feeling disappointed. It may be necessary to provide some extra feature of this kind, but if it has to be done let the directors and managers of our exhibitions see to it that only clean and wholesome entertainments are allowed on the grounds. A policy

of careful selection and rejection in this matter would do more than anything we know of to secure to our larger exhibitions the confidence of the general public.

At the present time there are not wanting signs of a gradual withdrawal of public confidence from the fall fair because of the too great tendency to cater more to the special attraction and amusement feature rather than to the educational and industrial side of the exhibition. This is done we think because of a false impression as to the real object people have in visiting the annual fair. True, there are a goodly number who attend only to be amused, but we are well within the mark when we state that the vast majority of those who visit the fall fair do so because of an earnest desire to obtain information as to the resources of the country and the progress that is being made in manufactures, live-stock, agricultural products and manufactured goods of all kinds. It is then the educational and industrial feature that should be given first attention if our fair managers wish to cater to the large majority of our citizens. We are not given much to prophesying, but we venture this: That the successful fair of the future and the one that will live will be the one that will give the greatest prominence in the way of equipment and methods of demonstration, to the educational and industrial features of its exhibits. Mere amusement alone will not retain for very long the confidence of the better class of our citizens and of those whose patronage is necessary to the success of any large exhibition. There must be something more substantial than this to induce people to travel a number of miles and undergo the inconvenience of a crowded city in order to attend a fall fair. The tendency to-day is for people to desire to get their money's worth, and this cannot be had for the average citizen from the amusement feature alone of the big fall fair. The educational and industrial feature must predominate in order that visitors may be well repaid for their investment of time and money.

Tampering with Milk for Cheese-Making

Reports from the inspectors employed by the Eastern and Western Dairymen's Associations seem to indicate that the practice of tampering with milk for cheese-making purposes is not decreasing very rapidly. In fact, we have it on the authority of an inspector who has been engaged in this work for twelve or fifteen years that the practice of watering and removing the cream from milk supplied to cheese factories does not appear to be decreasing to any great extent. Wherever the dishonest patron is to be

found a thorough inspection of the milk supplied to cheese factories and creameries becomes a necessity. Unless this is done regularly the dishonest individual is pretty sure to add water to or take the cream off the milk he supplies, thus cheating his neighbor, who supplies good milk, and often injuring the quality of the product made therefrom.

One may well ask if there is any remedy for this kind of thing? Will it be necessary for our dairy associations and those interested in maintaining a high standard in the quality of our dairy products to continue this inspection and prosecution business *ad infinitum* in order to obtain an honest delivery of milk at the factories? In other words, has the work of education along dairy lines during the past fifteen or twenty years been non-effective in inducing methods of honesty and fair dealing between patrons? As compared with the early days of cheesemaking in this country, it is, perhaps, true that tampering with milk supplied to our factories is not so largely practised to-day. But the present season's experience would lead one to conclude that wherever the dishonest patron is to be found all kinds of legislation or prosecution fail to prevent him from adding a little water to the milk, or removing cream from the portion which he supplies to the factory, if a favorable opportunity presents itself. So long as the dishonest individual is associated with co-operative dairying in this country, just so long will it be necessary to have some means of finding out who the delinquent patrons are, and meeting out adequate punishment for the offense committed.

But will it pay our dairy associations to employ inspectors to do work of this nature? Should not the whole time and energies of the instructors and inspectors be devoted to giving assistance to the maker in improving the quality of the output? Quality unquestionably should be the first object of dairy association work in this province. Whether the two (inspection and instruction) can be satisfactorily combined it is for those directing this work to say. The experience of the past would go to show that they believe it can, as up to the present time the instructors employed by both associations have undertaken both lines of work. But notwithstanding this fact, it is a question whether it would not be better to separate the two, and have the instructors employed devote their whole time to improving the quality of the product. Where an instructor has to devote the early morning to inspecting milk, and a large share of the day to looking up the delinquent patrons, it is not possible for him to give very much assistance to the maker.

There are two ways that seem to present themselves of overcoming this difficulty. One is to let the factories do their own inspection and prosecution. Every up-to-date cheese factory is or should be equipped with a Babcock milk tester and other instruments for testing milk, and it should not be difficult to make a thorough test of each patron's milk regularly, and to follow up the delinquent by prosecution on the part of the directors. If this were not satisfactory, let a dozen or so factories combine and engage some competent individual who might be called in if necessary to inspect the milk. The other remedy is for the factories to pay for milk according to its quality. This plan was advocated several years ago as an effective remedy for all tampering with milk, and was adopted by many factories. But for some reason or other, best known to the dairymen themselves, it was discarded after two or three years' experience, and with a few exceptions all our factories have reverted back to the old plan of "pooling" the milk. The principle of paying for milk for cheese-making according to its quality is, however, the correct one, and if carried on in the proper way affords a just and fair means of apportioning dividends to patrons. Later on, we may have something to say as to the causes which have induced factories to discontinue paying for milk according to its quality. In the meantime, we would be glad to hear from dairymen as to the best methods of coping with the question of tampering with milk supplied to our cheese factories.

Progressive Agriculture

The term "Progressive agriculture" is used to designate that branch of the "Macdonald Manual Training Fund" the object of which is to "draw out" the rising generation of farmers in a way that will induce them to acquire a liking for the study of nature and nature's methods, and a knowledge of the extent to which nature's methods can be controlled and made to assist in living a happier and more useful life.

Successful farming has grown to mean more than the mere cultivation of land. Agriculture may be said to include not only the cultivation of the land but the culture of the people who live on the land. The outcome of true culture is the exercise of intelligent purpose in the activities of life, and that in his occupation stamps the good farmer as a man of real culture.

In a new country like Canada, where the struggle for existence is not necessarily a keen one, few have an inclination to become familiar with the plant life as seen in the field. The boy who is entering the profession of agriculture because of his love for the farm, should early be brought to realize that he is choosing one of the most difficult but none the less interesting of all pursuits. The rapidly changing conditions necessitate accurate foresight and careful thinking and planning. The farmer is wise who adjusts himself quickly to present conditions so unlike those of his father. The conditions under which the farmers of to-day are operating are vastly different from those of twenty years ago. As the fertility of the virgin soil decreases, competition in agricultural products increases, and the need of a general knowledge of the underlying principles of scientific agriculture becomes more and more apparent.

If, by applying a few well-established scientific principles to the methods of growing farm crops, an increase of ten per cent. in yield can be obtained, then if from the old method expenses could be met the increased productiveness due to better cultivation, seed selection, or other improved methods, will give a profit.

It is the desire of Prof. Robertson and Sir William C. Macdonald, who are unsparingly using their energy and money for the purpose of giving young Canadians an opportunity to receive a training that will better fit them for their life's work, to help the young boys and girls who live on farms to obtain a better understanding of their surroundings in a way that will assist them to take a deeper interest in the activities of farm life.

With a thorough understanding of the difficulties that must be overcome in order to bring to a successful issue such movements as would prove to be educational to the young mind and beneficial to the farmer from a practical standpoint, plans were arranged for awarding cash prizes to boys and girls who live on farms according to results to be obtained from operating a seed grain plot.

Many farmers and farmers' sons are fond of experimenting. This is the best, but a very expensive, way of obtaining knowledge. Heretofore as each standard variety of grain "runs out"—when the once very popular variety of oats has deteriorated in productiveness until it ceases to be a profitable cropper—many new varieties are tested, entailing much expense, before a new and more productive variety, that proves to be well adapted to soil and climate, is selected and used as a general cropper.

Now to a limited extent this system is commendable and is almost necessary, risky and expensive though it may be. Space will not admit of a discussion of the advantages, or perhaps it would be better to say the disadvantages of changing seed which has been grown under one set of conditions in soil and climate to another and different environment. However, the average grower of grain seems to forget that to bring any variety of grain up to its maximum of productiveness, special attention must be given to forcing the crop so that the plants will reach the best possible development; and then selecting the best heads from the

best developed plants, and finally the largest and most perfect seed from these heads. And if he understands that unless this practice is continued his grain will grow less productive—"run out"—he does very little towards exercising his intelligence.

The farmers of Canada will have taken a very important step in advance if they can be brought to understand, and to diligently operate according to their understanding, that by practising the system of seed selection which the competitors in the "Seed Grain Competition" are following, they are dispensing with the expensive and necessary evil of having to continually look for a new and more productive sort of grain.

That it is most difficult to sharpen the intellect of a student without coming in personal contact with him is generally conceded, but some good and helpful tuition is being given to young men who are anxious to help themselves to a better education through correspondence schools. Self-made men are always the most successful no matter in what business they are engaged and if through the medium of "Progressive Agriculture" such encouragement can be given that will stimulate aggressiveness among the rising generation of farmers and induce them to study more carefully the conditions which influence their farm operations, then the efforts of its promoters will not have been in vain.

The Relation of Fat to Milk

A correspondent sends us the following, and as it touches upon an important topic we have pleasure in giving it space in our columns:

Apròpos of the conclusion reached by dairy experimenters that the percentage of the fat cannot be readily, if at all, increased by any known plan of feeding the animals, a corroboration is found in the vegetable kingdom. When we increase the dry weight of hay in a meadow, the flesh-forming constituents may be largely increased, while the fat will only increase in proportion to the increase in weight of the hay. Here is an authentic experiment which illustrates this: A meadow was divided into two plots, and one of them treated with a view to improving the feeding quality of the hay. The result was an increase in weight, the grasses being finer, more robust and more solid, rather an increase in solidity than in bulk. The figures given show that the weight of hay was doubled, there being about 12,000 pounds on the treated portion and only 6,000 pounds on the untreated half. The 6,000 pounds of hay showed on examination 450 pounds of flesh-forming constituents and 150 pounds of fatty matter, while the 12,000 pounds had 1,610 pounds of flesh-forming constituent and 300 pounds of fat. Thus the fat increased in proportion to the weight increase of the hay, while the increase in flesh-forming constituents was 80 per cent. greater. This meadow then increased in dry weight production of hay 100 per cent., and in the flesh-formers 180 per cent. This same peculiarity of fat production I have noticed in the turnip experiments, and it is safe to presume that other plants would show a similar condition. As the percentage of fat, then, seems to remain constant to the weight of material, it is quite reasonable that the animal can only use it in like proportion. In fact, the feeding experiments conducted by Dr. Sommerville, the Professor of Agriculture of Cambridge University, showed a gain in weight on the animals in almost this exact proportion.

In noting the doctrines of the agricultural doctors it is observable that plans of procedure are frequently advocated without due reference to surrounding circumstances. Lately the question of cultivation of orchards has had some ventilation, the initiative being a correspondent over the initials "W. J. T." in *FARMING WORLD*. He certainly raises a most important question as to whether orchard ploughing is after all the best method of cultivation for mature trees. He admits it as possibly the best for a young orchard not in bearing.

While the conservation of soil moistures is important, it

is not the whole secret of production, as some of the soil doctors seem to suggest, and when we have found a plan by which it may be conserved, we must consider it in the light of other points in cultivation, as, for instance, that of manuring. I find the great difficulty in orchard cultivation is manuring, and while we can get the substances which will remain easily soluble in the soil pretty well down to the roots, which are kept low by plow cultivation, it is absolutely impossible to get the important phosphate there. But there is yet a more difficult phase of the matter. In what form do plants naturally feed? All experience and research in the numus question point almost unerringly to the conclusion that they take it in an organized form, which means the mineral and atmospheric elements made organic matter by combinations in some living form, plant or animal, which, dying, leave their bodies in the soil to form humus, and consequent plant food. To this is added the dissolved materials of the soil, and we have humus and humates as the plant food of the soil. Plow cultivation of the soil prevents the feeding rootlets coming near the surface to get the organized plant food, and only the matter dissolved and sinking into the soil is available to the tree, with the result that the growth of wood is more prolific than development of fruit, the reproductive organs not being satisfied.

The Central Canada Fair

The Central Canada Fair of 1900 closed on Saturday of last week. This year's show in point of attendance and the merit of many of the exhibits must be classed as one of the best exhibitions ever held at the Capital. For the principal days of the show good weather prevailed, and the attendance was larger than ever before. Over 35,000 people are said to have been on the grounds on Wednesday, one of the big days of the show. There was a good show of live stock, especially of Ayrshire cattle, this breed alone numbering 105 animals. The new main building was well filled with attractive and well-arranged exhibits. This building, unlike that at Toronto and London, has no gallery, and consequently it is bright and airy throughout, giving exhibitors a better chance to display their wares to good advantage. A feature of this year's show that is to be regretted and which detracted considerably from the success of the fair, was the large number and somewhat unsavory character of the side shows to be found on the grounds. True, they were not given the conspicuous place on the grounds that the side shows at the Industrial were given, but in numbers and quality, to judge from the free shows given on the outside of the tents, they were not nearly of such a high standard as those seen at Toronto a couple of weeks ago. However this may be, the directors of our big fall fairs would do well to cater to this feature as little as possible. If the fair cannot be made a financial success without the "rake off" the Exhibition Associations are supposed to get from the inferior side shows and fakes that are all too numerous at our fairs to-day, we would strongly recommend increasing the admission fee and enlarging the revenue from other sources.

Aside from this side show feature the directors of the Canada Central fair are to be congratulated on the success of this year's exhibition. This exhibition has suffered in the past from bad weather during the progress of the show, which very much lessened the number of visitors and diminished the receipts. The success of this year's show from a financial point of view will enable the directors to continue the good work of the past few years in the way of erecting new buildings and thoroughly equipping the show. In many respects the equipment of the Ottawa Fair is excellent, the live stock stables being superior to anything of the kind we have seen at any annual fair.

AGRICULTURAL HALL.

This building, which contained the exhibits of flowers, fruits, roots, grains, etc., was well filled, and the quality of the products was the best. The arrangement of the ex-

hibits was very good. An interesting feature was the display made by the Ontario Crown Lands Department of the products of New Ontario. A number of grasses, grains, roots, etc., were shown, grown chiefly in the Port Arthur district.

A building of interest in this connection was that containing the Central Experimental Farm and Canadian Pacific Railway exhibits. These were tastily arranged, and with the descriptions given were of great educational value.

THE DAIRY.

The dairy products exhibits were located in a special building, which also contained the honey, maple sugar and domestic exhibits. The cheese display, though not large, was very neatly arranged. The cheese were well finished, and the weather being cool they presented a neat and clean appearance. The quality was pronounced by the judge, Mr. A. F. MacLaren, M. P., to be good. The butter display, though hardly enough to fill the refrigerators, was very good in point of quality. Professor Dean, who acted as judge pronounced the quality very good, there being only two or three inferior lots in the whole exhibit.

Some interesting exhibits were shown of maple sugar products and fruit evaporators, the G. H. Grimm & Co., Montreal, making a fine display in this connection.

AGRICULTURAL MACHINERY.

Like at Toronto and London, agricultural machinery of all kinds was very conspicuous by its absence, leaving much vacant space in the building set apart for this purpose. As at Toronto, the dairy supply manufacturers were located in this building. In this connection the Canadian Dairy Supply Co. and the R. A. Lister & Co., of Montreal, made fine displays, the former showing the Alpha DeLaval and the latter the Melotte cream separators. J. Bibby & Sons, Toronto, also had on exhibition their cattle foods and cream equivalent now being introduced into this country with much success.

POULTRY.

Ottawa always has a good poultry display, and this year's exhibit was quite equal to that of other years. The utility breeds were out in large numbers, many farmers being among the exhibitors in these classes. Some very fine bronze turkeys and Toulouse geese were shown. There was the usual number of fancy birds and pet stock.

JUDGING LIVE STOCK.

Thanks to the generous offer of the Massey Harris Co. the directors were able to offer valuable prizes to farmers and farmers' sons for the judging of live stock. The regulations governing the judging were the same as those laid down for Toronto. The official judges acted as referees in each case. Mr. G. H. Clark, of the Department of Agriculture, Ottawa, acted as director of the competition. There were eight competitors in the dairy class, six in the beef class and six in the sheep class. The following is the result of the contest and the score made by the winners in each class:

DAIRY CATTLE.		Max. 300 points.
1st, G. I. Christie (O.A.C.),	Winchester, Ont.	230
2nd, Horace Craig (O.A.C.),	North Gower, Ont.	225
3rd, N. F. Wilson, B.S.A. (O.A.C.),	Cumberland, Ont.	223
4th, O. O. Bull, Brampton,	Ont.	219
BEEF CATTLE.		
1st, James Ferguson (O.A.C.),	Spring Hill, Ont.	268
2nd, G. A. MacIntyre, B.S.A.,	Renfrew, Ont.	248
3rd, H. R. McDermid (O.A.C.),	Martintown, Ont.	225
4th, G. H. Hutton, B.S.A. (O.A.C.),	Easton's Cor.	218
SHEEP.		
1st, N. F. Wilson, B.S.A. (O.A.C.),	Cumberland, Ont.	190
2nd, Jas. Ferguson (O.A.C.),	Spring Hill, Ont.	180
3rd, G. H. Hutton, B.S.A. (O.A.C.),	Easton's Cor.	160
4th, G. I. Christie (O.A.C.),	Winchester, Ont.	155

Up to the time of going to press copy for our

special report of live stock at the Ottawa Fair had not arrived. We are therefore compelled to hold this part of the report over for next week's issue.

Live Stock Directory

The Live Stock Department of the Department of Agriculture at Ottawa has decided to issue annually a directory of the breeders of pure-bred stock in Canada with a view to compiling in one volume reliable information concerning each stud, herd and flock in the Dominion. Such a volume should prove of value to the live stock interests of the country. Its primary object seems to be to enable the operators of large ranches in the West and other buyers who require frequently to purchase pure-bred stock to more readily obtain what they want and to bring buyer and seller together. This volume will be largely distributed in the ranching districts and to prospective buyers both in Canada and the United States. It is the intention to revise and issue this volume in the month of June of each year.

Mr. F. W. Hodson, Live Stock Commissioner, has prepared a circular containing a list of questions which he is sending to every breeder. From the answers received the directory will be compiled and the information obtained arranged in proper form. In order to make the directory as complete as possible it will be necessary that every breeder, large and small, should reply to these questions. If any breeder should not receive the circular containing questions he will confer a favor by immediately notifying Mr. Hodson at Ottawa.

CORRESPONDENCE

Prominent Breeders Endorse It

To the Editor of THE FARMING WORLD:

It is of the greatest importance to me, as well as to the many of my friends who take a great deal of pride in live stock, to have annual auction sales. I have interviewed several prominent breeders who endorse the scheme. I think it will encourage the farmers more than any other way to improve their live stock, and not only that, but it will encourage those who are trying to breed for profit. I am certain that if we could have annual sales scattered throughout Canada, it would be a great boom to live stock. Each breeder would try to be at the top. I will only be too happy to do all in my power to help on the annual sales.

ELGIN ROW.

Brockville, Ont.

Would Help the Small Breeder

To the Editor of THE FARMING WORLD:

I am raising a few thoroughbred Shorthorns yearly, and feeding a number of export steers, and I think the great point is to induce the farmers to use nothing but first-class bulls. It seems hard to get the right kind of steers for feeding; too many turn out to be scrubs and do not pay for feeding. Often, when we think we have fairly good steers, they turn out unsatisfactory. And in regard to our selling our young Shorthorn bulls, where we have only two or three to dispose of and have not made a name as a breeder, we stand no chance against those men that have a reputation for first-class stock; and the only thing we can do is to sell to some farmer at very low figures. I think if annual auction sales could be inaugurated, so that stock would be sold on its merits, it would be a great help to the small breeders, provided that these sales were patronized also by well-known breeders. Unless they would sell their surplus stock by these sales they would be sure to be a failure, as the small breeders could not keep them up without help.

HENRY PLUMSTEEL.

Clinton, Ont.

Studies in Nature

A Monthly Review of Insect and Bird Life on the Farm

Edited by C. W. Nash

BIRD NOTES.

The full tide of the southward migration is now sweeping across the province. Every day sees the departure of one or more species of our summer visitors. All the swallow tribe, with the exception of a few flocks of whitebreasts, have gone, and of the wood-frequenting thrushes only the olive-backed, grey-cheeked and hermit are left. Our friend the robin is still here and will remain, so long as food holds out, they are now associated in flocks, and are feeding on wild berries in the woods. The trees are full of warblers and the underbrush is alive with sparrows. On fine mornings many of these will sing, but their song is scarcely recognizable. The clear note of the white-throated sparrow is generally distinguishable, but it lacks the spirit and tone of spring. The flocks of bluebirds, that used to frequent our orchards a few years ago all through this month, are not seen now; there are, however, a few broods raised through the country. These are now getting together and may sometimes be seen fitting along the roadside fences, from stake to stake. Every little while one will drop gracefully from its perch to the ground and pick up a grasshopper or some other insect discovered by the bird's keen eyes. The bluebird's note at this season seems tinged with melancholy, yet it is in harmony with its accompaniments. Everything in nature is still beautiful, but it is the beauty of maturity and repose—an exquisite beauty while it lasts, but merely the prelude to the deathlike sleep of winter. Next month we shall see flocks of bluebirds coming from the north-east and passing hurriedly over us on their way to their winter quarters in the South. Just where they come from I should like to know. In all probability they have followed the settlers, and now spend their summers about the new clearings to the north of us. I believe they have abandoned us because of the destruction of their old nesting places, and in losing them we have lost one of our most valuable insect destroyers; it would well repay a farmer to put up a few nest boxes in his orchard if he could by that means induce the blue birds to remain and nest on his premises. The experiment is well worth trying, and will, I think, be successful.

About the middle of September the hawk migration generally takes place. These birds, so solitary in their habits as a rule, seem at this time to be all at once actuated by a common impulse to move, and when a strong westerly

or north-westerly wind blows they start their flight to the south, and they seem to follow certain lines across the country. They do not congregate and fly in flocks, though sometimes a party of four or five will travel in close proximity to one another, but usually they stream along singly. These flights begin usually in the morning and generally cease about noon, though I have seen them continued all day long. When a flight occurs, almost all species of our hawks will be found represented in it, though it is principally composed of sharp-shins and pigeon hawks in some places, and in others red-tailed, red-shouldered and broad-winged hawks. The sharp-shinned hawk is the most destructive of the whole tribe and should be given no quarter when an opportunity occurs for thinning them down, but the red-tailed, red-shouldered and broad-winged, though usually called "Hen Hawks," are valuable friends and ought not to be molested. Their food consists almost entirely of mice, rats, and grasshoppers, with an occasional frog by way of variety.

THE COW-BIRD.

Molothrus ater.

In July last a correspondent, (Mr. C. H. S.) asked me to give an illustrated description of this bird and I promised them to do so. Pressure of other matters however prevented my carry-



Cow-bird (*Molothrus ater*) Adult Male.

ing out my intention at the time, so I will now, (at any rate in part,) redeem my promise and in this issue produce a drawing of the adult male cow bird.

The description of the species in detail is as follows. Adult male in summer, all over except the head a lustrous glossy black, with green purple and bronze reflections, head glossy chestnut. Female, and young when full grown, dull sooty black. Young

in first plumage dull brownish above, beneath ashy grey broadly striped with dull brown. Length of adult male seven to eight inches, female rather smaller.

About the twenty-fifth of March if the weather is fine the male cow-birds arrive here from the Southern States where they have spent the winter; about a week afterwards the females follow them. Both sexes then unite and form small flocks and remain associated together in this way for the remainder of the season.

Their food in the spring and early summer consists of insects and weed seeds principally; later on, as the grain ripens they visit the oat and wheat fields and help themselves liberally, but so far as their diet is concerned, they are possibly slightly beneficial, as they fully pay for all the grain they eat in the autumn, by the destruction of insects earlier in their year.

The name cow bird was undoubtedly given to this species on account of its habit of resorting to pasture fields in which cattle are grazing, where the birds may usually be seen running about almost under the feet of the animals, the attraction being the insects disturbed by the movements of the beasts.

The love song of the male consists of a few discordant notes, which more nearly resemble the squealing of the rusty axle of a wheelbarrow than anything else I can think of, but their utterance seems to give the bird an immense amount of satisfaction. When engaged in producing this absurd noise the bird spreads his tail and wings and twists about so as to show his plumage off to the greatest advantage before the female which may for the moment have taken his fancy.

These birds do not mate, nor do they build a nest for themselves. The female seeks out the completed nest of one of the sparrows, finches, warblers or other small birds and in it she deposits an egg of her own and leaves it there to be hatched by the bird on whose home she has trespassed. In due time all the eggs are hatched and then the intruder makes trouble. In a few days the young cow bird has far outgrown its fellow-nestlings in size, strength and voracity so that it requires and manages to get all the food the parent birds bring to the nest, the result being that the proper occupants are either starved to death, or crowded out by the interloper, who from that time until it is full grown taxes to the utmost all the energies of its foster parents to satisfy its voracious appetite. After the young cow-bird leaves

the nest it follows its foster parents through the trees, clamoring like a spoiled baby for food, until its faculties are fully developed, which in this case takes a longer time than that required by the young of other small birds.

The eggs of the cow-bird are whitish, thickly covered with small greyish-brown dots and are generally easily distinguishable from those of the species in whose nest they are deposited. Just how many eggs each bird lays in a season is not positively known. Probably four or five will be the number. If that is so, every female cow-bird that arrives here in the spring and is allowed to follow her own method of re-production causes the loss of from fifteen to twenty five of our most valuable birds.

The cow-birds are altogether too abundant. In the autumn large flocks of them may be seen associated with the other blackbirds feeding about the grain fields. Each of these cow-birds has been raised at the cost of at least one brood of one of our useful, insect-eating, small birds and so it is easy to see that they do a great deal of injury to the country.

About the middle of October the cow birds leave us for the south, where they spend the winter in foraging about the grain fields with their more noticeable associates.

INSECTS.

Insect life is extremely abundant this year. Young grasshoppers and locusts were innumerable, so were cutworms and the caterpillars of the butterfly, known as the mourning cloak or Camberwell beauty, but I have not seen many tent caterpillars nor have I so far heard of any great damage having been done by them.

The caterpillars of the tussock moth were as usual allowed to increase and spread in Toronto until the insects reached maturity and now I believe some effort is to be made to destroy them. It seems strange that people will always wait until too late before attempting to cope with destructive insects. The proper time to attack these pests is when they are young. Look for them early in the season and if there is the least sign of a caterpillar use the remedy at once and use it until your trees are clear of them. There is no other road to success and if you don't intend to follow it, you had better cut down your trees and so avoid breeding insects to injure other people's property.

ANSWERS TO CORRESPONDENTS.

D. Robertson, What is the length of life of the larvæ of the carpet beetle?

The eggs of the carpet beetle are laid in the spring, the larvæ quickly hatch out and feed until the end of summer when they transform into the pupa state emerging therefrom as per-

fect beetles the following spring. It is not probable that more than one brood is produced during a season in this country.

(2) What are the enclosed beetles?

The beetles sent are two specimens of the Black blister beetle (*Epicauta pennsylvanica*.)

These beetles belong to a very curious family of insects. In the first place they undergo a more complicated series of metamorphosis than any other of their class. Their eggs are laid upon plants or upon the ground. From each hatch a small, long-legged larvæ called a "triungulin." After a time it casts its skin and assumes what is called the "carabidoid" larvæ stage and when it next molts it resembles a white grub, "scarabæidoid" larvæ stage. When the larvæ has finished feeding it undergoes a third molt and forms within its own skin what is known as the "coarctate" larvæ stage and in this condition it usually passes the winter. In the spring the fourth and last larvæ molt takes place, and with the fifth molt the insect enters upon the true pupal stage and in due course transforms to the perfect beetle.

Besides the many and remarkable transformations these insects undergo they are peculiar in that they are very beneficial in their earlier stages. As soon as the eggs are hatched the young larvæ (at this period) furnished with long legs run actively about hunting for the egg pod of a grasshopper into which they enter and there remain until they have reached their full development, in the meantime feeding upon the grasshoppers' eggs contained therein.

These beetles are gregarious and they sometimes appear in swarms in late summer and do much damage in a few days. As a rule they do not last very long but disappear as suddenly as they come.

Many remedies have been tried for the destruction of these insects, but none are quite satisfactory. The arsenites kill them slowly and a swarm that feeds for a day or two before application is made, and a day or two before the beetles die, has done about as much injury as would have been caused without treatment of any kind.

Driving them off into rows of straw and then burning it, has been practiced with success, as also has knocking them off into a pan containing coal oil.

The black blister beetle does not seem to be usually destructive to cultivated plants, its favorite plant being the goldenrod on which it is sometimes common.

The power of correct observation is one of the most valuable faculties a man can be possessed of, no matter

what his position in life may be, and in no way can this be acquired more readily than by training the eye to see truly, and the mind to comprehend quickly, the various forms of life we have about us and their relation to each other.

Mamma—"Bessie, how many sisters has your new playmate?"

Bessie—"He has one, mamma. He tried to fool me by saying that he had two half-sisters, but he didn't know that I've studied arithmetic."—*Tacoma Ledger*.

"How are you getting on with your automobile?" asked Miss Cayenne

"Well," answered Willie Washington, "I can run the machine all right, but it will be a long time before I can get over saying 'geddup' and 'whoa' to it."—*Washington Star*.

Ada—Yes; she accepted him Monday night, but broke off the engagement almost immediately.

May—Indeed! Why?

Ada—Well, I believe he omitted to say that he was the happiest man in the world.—*Brooklyn Life*.

Muriel—Your brother proposed to me during the service in church last Sunday.

Zoe—You mustn't mind him. He often talks in his sleep.—*Smart Set*.

"Stickney Jones never seems to want any but cold commercial relations with me."

"Is that so? Well, I owe him money, and he keeps our commercial relations hot."

"Are you a vegetarian?" "Yes; by proxy. I have always insisted that cows and other food animals should be strictly limited to a vegetable diet."—*Washington Star*.

Exhibition Number.

THE FARMING WORLD, the leading agricultural journal of Canada, published a special exhibition number, last week, of 84 pages.—*Merrickville Star*.

In addition to a comprehensive and practical article on horse-breeding, in the Exhibition number of THE FARMING WORLD, the same issue contains several articles of great merit by prominent agriculturists and others on important topics, among them being the following:—"Influence of Short-horns in Ontario," by Hon. John Dryden; "Manual Training in the Public School," by Prof. Robertson; "Our Common Game Fishes," by C. W. Nash; "Canada at Paris," by W. H. Hay; "Organized Effort in Ontario," by F. W. Hodson. There is also a sketch of the Hon. John Dryden, and his ten years' work as Minister of Agriculture in Ontario; a review of the work of the Dominion Department of Agriculture, under Mr. Fisher's Ministry, and of the cattle quarantine system of Canada, with a sketch of Dr. McEachran, the superintendent. The number is profusely illustrated, containing over fifty half-tone engravings, those of special merit being some of our game fishes and views of the Canadian exhibits at Paris.—*Toronto Globe*.

The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep, and Swine Breeders' Associations, and of the Farmers' Institute System of the Province of Ontario.

THE DOMINION CATTLE, SHEEP, AND SWINE BREEDERS' ASSOCIATIONS.

Annual Membership Fees:—Cattle Breeders', \$1; Sheep Breeders', \$1; Swine Breeders', \$3

BENEFITS OF MEMBERSHIP.

Each member receives a free copy of each publication issued by the Association to which he belongs, during the year in which he is a member. In the case of the Swine Breeders' Association this includes a copy of the Swine Record.

A member of the Swine Breeders' Association is allowed to register pigs at 50c. per head; non-members are charged \$1.00 per head.

A member of the Sheep Breeders' Association is allowed to register sheep at 50c. per head, while non-members are charged \$1.00.

The name and address of each member, and the stock he has for sale, are published once a month. Over 15,000 copies of this directory are mailed monthly. Copies are sent to each Agricultural College and each Experiment Station in Canada and the United States, also to prominent breeders and probable buyers resident in Canada, the United States and elsewhere.

A member of an Association will only be allowed to advertise stock corresponding to the Association to which he belongs; that is, to advertise cattle he must be a member of the Dominion Cattle Breeders' Association, to advertise sheep he must be a member of the Dominion Sheep Breeders' Association, and to advertise swine he must be a member of the Dominion Swine Breeders' Association.

The list of cattle, sheep, and swine for sale will be published in the third issue of each month. Members having stock for sale, in order that they may be included in the Gazette, are required to notify the undersigned by letter on or before the 9th of each month, of the number, breed, age, and sex of the animals. Should a member fail to do this his name will not appear in that issue. The data will be published in the most condensed form.

A. P. WESTERVELT, Secretary,
Parliament Buildings, Toronto, Ont.

Stock for Sale.

THE DOMINION CATTLE BREEDERS' ASSOCIATION.

Shorthorns.

Harvie, J. H., Orillia—Bull, 18 months; 2 bull calves, 7 to 9 months; 3 heifers.

Jeffer, E., Bond Head—Aged bull; 9 bull calves; young cows; 5 yearling heifers; 3 heifer calves.

Tufts, W., Weiland—10 cows, 5 to 7 years; 6 heifers, 1 and 2 years.

Ayrshires.

Smith, W. M., Fairfield Plains—2 bull calves; females all ages.

Holsteins.

Smith, S. E., Dundas—2 heifers, 6 to 10 months; 2 heifers, 2 years.

THE DOMINION SHEEP BREEDERS' ASSOCIATION.

Leicesters.

Jeffer, E., Bond Head—Aged ram; 3 ram lambs; aged ewes; shearing ewes; ewe lambs.

Southdowns.

Jeffer, E., Bond Head—2 aged rams; 2 shearing rams; 10 ram lambs; aged ewes; shearing ewes; ewe lambs.

Lemon, S., Kettleby—Ram, 2 shears; 2 shearing rams; 2 ram lambs.

McEwen, R., Byron—Aged and shearing ewes; ram and ewe lambs.

Martin, E. E. & Sons, Canning—Shearing ram; 2 ram lambs; 6 ewes.

Smith, W. M., Fairfield Plains—2 rams.

Dorsets.

McGillivray, J. A., Uxbridge—40 aged ewes; 20 two-year-olds; 25 yearlings; 30 ewe lambs; 10 ram lambs; 6 yearling rams.

THE DOMINION SWINE BREEDERS' ASSOCIATION.

Berkshires.

Jeffer, E., Bond Head—Aged boar; 3 boars 5, 7, and 12 months; pigs, 3 mos.

Lemon, S., Kettleby—Boar, 2 years; 2 sows, 7 months; 4 boars, 2 months.

Martin, E. E. & Sons, Canning—Boar, 2 years; boar, 16 months; 5 boars, 3 to 5 months; young pigs.

Sanderson, G., Colborne—Boar, 3 years.

Yorkshires.

Little, J., Henfryn—7 sows, 6 months; 6 sows, 3 months; 4 sows; 3 old sows; 6 boars; 10 young pigs.

Poland Chinas.
Smith, W. M., Fairfield Plains—Boars and sows, all ages.

Tamworths.

Smith, W. M., Fairfield Plains—Pigs, 6 months.

Duroc Jerseys.

Smith, W. M., Fairfield Plains—Boar and sow pigs.

FARM HELP EXCHANGE.

The Farm Help Exchange has been started with the object of bringing together employers of farm and domestic labor and the employees. Any person wishing to obtain a position on a farm or dairy, or any person wishing to employ help for farm or dairy, is requested to forward his or her name and full particulars to A. P. Westervelt, Secretary, Live Stock Associations. In the case of persons wishing to employ help, the following should be given; particulars as to the kind of work to be done, probable length of engagement, wages, etc. In the case of persons wishing employment, the following should be given: experience and references, age, particular department of farm work in which a position is desired, wages expected, and where last employed.

These names when received together with particulars will be published FREE in the two following issues of the "Agricultural Gazette" and will afterwards be kept on file. Upon a request being received the particulars only will be published, the names being kept on file.

Every effort will be made to give all possible assistance, to the end that suitable workers, male or female, may be obtained. Every unemployed person wishing to engage in farm or dairy work is invited to take advantage of this opportunity.

Help Wanted.

Wanted by November 15 a single man on a farm near Owen Sound. Must understand farm work and be thoroughly reliable. One who has had experience with bush work preferred.

Wages \$175 a year, with board and washing. No. 588. a

Wanted, a married man, who is accustomed to general farm work. Wages \$240 a year and house, garden and wood in bush. Would also pay \$144 a year and give board to a man accustomed to tending cattle, and who could milk. No. 586. b

Young man wanted, for eight or nine months in the year. \$16 a month to commence, with increase to satisfactory man. No. 587. b

Situation Wanted.

Unmarried man, 30 years old, strictly temperate, an associate graduate of the O.A.C. who has worked on a dairy farm all his life, wants a position as manager of a large farm. Has been in charge of pure-bred prize-winning cattle for 8 years. Can do all kinds of farm work. No. 444. a

Young man wishes situation on a stock farm; was reared on a farm, and is farming now; five years a schoolmaster; is not afraid of work, and is a first-class milker. No. 445. a

Domestic Situation Wanted.

Wanted situation as housekeeper on farm by person accustomed to milk and care for calves in addition to housework. Is middle-aged. No. 443. b

N.B.—Where no name is mentioned in the advertisement, apply to A. P. Westervelt, Parliament Buildings, Toronto, giving number of advertisement.

A Well-Satisfied Member of the Cattle-Breeders' Association.

Mr. John Clow, Harrowsmith, Ont., writes: "I am very thankful for the trouble you went to in advertising my stock in FARMING. Through it I made a sale of seven cows, and I have still for sale three very fine young cows due to come in the latter part of September."

NOTE—Mr. Clow's herd are Ayrshires. His testimonial is a sample of many received. The list of "Stock or Sale," published once each month, is doing good to the breeders and the country.

Farmers' Institutes.

Under this head the Superintendent of Farmers' Institutes will each week publish matter relating to Institute work. This will include instruction to Secretaries and other officers, general information about Institutes and Institute work, suggestions to delegates, etc. He will also from time to time review some of the published results of experiments conducted at the various Agricultural Colleges and Experiment Stations of Canada and the United States. In this way he hopes to give Institute members some valuable agricultural information which they might not otherwise receive, on account of not having access to the original publications. If any member at any time desires further information along any of the lines discussed, by applying to us he will be put in direct communication with the Institution that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes.

Ontario Agricultural College Notes.

IMPORTANT INVESTIGATIONS.

A partial list of the work being carried on:

PHYSICAL DEPARTMENT.

1. The effect of color and water content upon the temperature of the soil. A large number of determinations have been made, and the conclusions from the data obtained will be very instructive.

2. Influence of different methods of cultivation and surface treatment upon the moisture, content and temperature of the soil throughout the season.

3. Experiments with refrigerators in order to determine the amount of ice required per square foot of surface to keep the refrigerator at a given temperature.

BIOLOGICAL DEPARTMENT.

Never before has such interest been shown by farmers and fruit-growers in noxious weeds and plant diseases; and the correspondence received in the Biological Department regarding these has been greater than usual. Probably the chief outbreak in the way of insect pests has been the Variegated Cutworm and the Hessian Fly. The life history of both these have been carefully studied in breeding cages, and the best means of treatment will be given in the report of the department.

An undescribed disease, which has attacked the conifers, has been thoroughly investigated, and extensive experiments in the treatment of mustard on a large scale by spraying have been carried on. Both these lines of investigation promise to be productive of methods of combating these foes which will be of immense value to the farmer.

A large amount of material has been collected in this department for the purpose of instruction throughout the year.

CHEMICAL DEPARTMENT.

One of the most important lines of work in hand is the superintending of a thorough test of the growing of sugar beets to ascertain whether it is possible to raise beets of a sufficiently high quality to warrant the establishment of sugar beet factories in Ontario. For this purpose a number of farmers in the neighborhood of Welland, Aylmer, and Newmarket have sown one-quarter plots of the beets and are cultivating them as directed by the Department. Analysis of the juice will be made from time to time, as the plants mature, and a full report made at the end of the season.

The work on the determination of the ash constituents in wheat, barley, and peas, as outlined in the college report of 1899 is being continued. In addition, samples of these grains have been collected from the experimental plots for the same purpose. Dr. Shuttleworth is this year referee for the testing of methods for the burning of ash for the Association of Official Agricultural Chemists and is carrying on the work assigned by the

association. This is another proof of the prominent place which the college holds among similar institutions on the continent.

Some work has been done in determining the change in composition and digestibility of ensilage and corn kept in the barn as compared with like corn when green. Digestion experiments are also being carried on.

An effort is being made to get at the true milling properties of a few of our more common varieties of winter wheats. For this purpose a sufficiently large quantity of wheat has been ground to get a true sample of flour. The gluten in the flour will be determined and a baking test made to ascertain the quantity and quality of the bread from the various figures.

DAIRY DEPARTMENT.

Butter-making—

1. Comparison of pasteurized and unpasteurized milk for butter-making.

2. The effect of heating milk to different temperatures; its effect on separation by centrifugal and gravity methods.

3. The different factors influencing the percentage of moisture in butter: (a) temperature at which butter is washed; (b) size of the granules in which the butter is gathered; (c) temperature of churning.

4. Relation between total pounds of butter fat and amount of overrun. This subject has been the source of a good deal of argument and the results promise to be most instructive.

5. The effect of having salt (a) dry, (b) wet, and (c) at different temperatures, when applied to the butter.

Cheese-making—

1. Curing cheese at different temperatures. The results so far confirm the conclusions reached last year.

2. Making cheese from washed and unwashed curds.

3. Care of milk: cooling, aerating, use of starters, etc.

4. Cheese is being brought in from different parts of the province and cured at different temperatures.

FARM PROPER AND EXPERIMENTAL FEEDING.

The operations on the farm proper have been attended with success in every department. The hay crop, which in the early part of the season did not look very promising, turned out much better than was expected, giving on an average three tons to the acre. The grain this year has proved to be an excellent crop. The winter wheat is a superb sample and the yield is much above the average. Dawson's Golden Chaff and Early Genesee Giant were the varieties of winter wheat grown on the farm this year. It is calculated that the oats will thresh about 65 bushels to the acre. The peas are also a fair crop. The barley was somewhat broken in the straw by the rains which fell on it just before it

was harvested, but it is a good sample and will turn out above the average yield.

Among the hoed crops the most noticeable feature is the fine stand of silage corn. The amount of coarse fodder which is on the thirty odd acres of corn is something enormous. The corn is exceptionally well-cobbed this year and the silage promises to be of first-class quality. Since this crop is maturing comparatively early it is expected that it will be harvested before any frosts occur to damage it. The farm superintendent has also provided quite a large amount of fall feed for steers and lambs in the shape of rape.

Already some 32 head of feeding steers are pasturing on this valuable forage crop and are improving upon it very fast. It is expected to have before long a number of lambs placed on the rape to prepare them for winter feeding.

At the present time (August 25th) preparations for sowing the winter wheat are being pushed on rapidly in order that the seed may be placed in the ground during the first week in September. The fall plowing of sod is also being done and very shortly the system of thorough surface cultivation for the destruction of weeds, manuring and ribbing up, will be under full swing.

Valuable work in testing the effect of food on the quality of bacon produced is being carried on in the Experimental Feeding department along with other work.

HORTICULTURAL DEPARTMENT.

Complete and extensive experiments have been carried on in this department with strawberries, raspberries, blackberries, blackcaps, and tomatoes. A comparison of varieties of a number of different kinds of plants has been conducted.

BACTERIOLOGICAL DEPARTMENT.

The outbreak of a great many cases of chicken cholera and roup have been reported to this department, and very satisfactory results have been obtained in exterminating these diseases, especially the former. Work is still being carried on and valuable data are being secured.

A number of cheese and butter starters and a large amount of tuberculin have been sent out from the department to all parts of the province.

EXPERIMENTAL DEPARTMENT.

The season has been exceptionally favorable for the growth of the various classes of crops, and in consequence much valuable information will be gleaned from the numerous experiments which have been conducted during the year. Among the crops more recently introduced the Yellow Soy beans and Hairy vetches give promise of being of unusual value to the province.

Some very interesting work has been done along the line of growing various annual plants to furnish pasture during the summer or for cutting at intervals of a few weeks for green feed. Among the more promising of these are Hairy vetches, Grass peas, sugar cane, millet and common tares, all of which gave several good cuttings during the season.

Considerable work has been done during the summer in the fitting up of the new agricultural museum, and we now have a most instructive display of the different classes of cereal crops and of grasses and millets. These are arranged so as to graphically represent the results of the experiments conducted on the plots during the past five years. Much interest in this display has been evinced by farmers and others who have recently visited the college, and it is now undoubtedly one of the most valuable features in connection with the Department.

POULTRY DEPARTMENT.

Extensive experiments in feeding poultry for the British market will be conducted. Some 400 birds will be fed at different times, and with varying quantities and kinds of food, with a view to compare cost of production and quality of meat.

Birds of five different breeds will be fed with different kinds of grain with a view to determine the effect of food upon the color of the flesh produced.

Experiments with different kinds of food for young chicks have been conducted, and various egg preservatives will again be tested this year.

The above must not be taken as a full statement of the work being carried on at the institution; it is only a statement of some of the more important lines of work being followed.

GEO. A. PUTNAM.

Guelph, Ont., Aug. 25, 1900.

Tomatoes and Cantaloupes in Europe.

One of the American Consuls in Europe in writing to his home government about fruit in Europe has the following to say in reference to tomatoes and cantaloupes:

"English statistics show that of late there has been a large and rapidly-growing importation of tomatoes, the Canary Islands furnishing the supply, which importation amounted to 16,389 tons during the first half of this year. The wholesale price of this quantity was £331,302 (about \$1,655,000). Tomatoes were but a short time ago an article of luxury in Great Britain, only used for the pampered palates of the rich; but now they have become a common dish on the table of the working classes. In Germany fresh tomatoes are sold at high prices (6 to 14 cents a pound, according to season); they are chiefly used to flavor meats,

not stewed. Only the best hotels and the wealthy buy fresh tomatoes, which are supplied to Germany mainly by Southern France. Canned tomato pulp is to be found at the groceries of large German cities, offered at a lower price, comparatively, than the fresh fruit.

"Cantaloupes are a great delicacy—even more so than the pineapple—in German cities. They sell at 2 to 6 marks (50 cents to \$1.50) apiece, weighing 3 to 10 pounds. Some of these are brought from Spain; others are raised in German hothouses. Considering that tomatoes have been sold as low as \$5 a ton in Delaware and New Jersey and that fine cantaloupes can be bought in Philadelphia at 1 to 3 cents apiece, the question arises, Why don't we export fresh vegetables to Europe? The growers of our Atlantic States should form an export association, which—if it will send out men of mercantile ability who can speak German and French—would find the European continent, as well as England, an excellent market for their produce. No country could compete with us in the export of agricultural and industrial products, were we to adopt the mercantile methods of European traders."

With our improved cold storage facilities could not our fruit and vegetable growers divert some of their surplus produce into this channel?—Ed.]

Butter Making.

By Miss Alice Hollingworth, Beatrice, Muskoka.

Perhaps you are expecting me to tell you how to manage a model dairy; but before I do that I want to see the model farmer who will supply his wife with the proper appliances to work with.

I find that, with very few exceptions, the kitchen is used for a dairy in the winter, even by those who have a dairy for the summer, but who lack the means of heating it when cold weather comes.

This is very unfortunate for the butter industry, but since it is so, I think it best to deal with the difficulties which kitchen dairying presents.

The greatest of these, I think, is to obtain a good flavored cream from milk that is set in the kitchen cupboard, where, in addition to the various odors of the food, you are pretty sure to find the all pervading fumes of tobacco.

The most common plan is, I believe, to set the milk in shallow pans. Some think to mend matters by deep setting, which is an improvement if the cans are placed in ice water, but if they are left standing under the stairs or in any odd corner, their use will result in a greater loss of butter-fat than when shallow pans are employed. Ice water is just as necessary in summer as in winter.

THE CREAM SEPARATOR THE BEST METHOD.

The very best method is to use the cream separator. I can speak from experience in this matter. We began with the shallow pan, then adopted deep setting in creamers, and are now using a separator. We have tested the merits of each method by using the Babcock Tester. Let me remark here that it will pay every farmer who follows dairying to have a Babcock Tester. It is easily worked, and will not only tell you whether or not your cows are paying for their board, but will show you how much is lost by careless handling of the milk and cream. I often hear people argue that, when the skim-milk is fed to calves and butter-milk to the pigs, there is no loss. But you will need much better prices for beef and bacon before you can make any profit out of feeding them on butter-fat, especially when you can get flax meal at one-third of its cost, which will do the calves just as much good.

To return to the separator, the separating is done as quickly as possible after milking; the milk is fed fresh and warm to the calves, and, even if no flax-meal is used, the purity and freshness of the milk makes it a more valuable food for the calves than the richer skim-milk which has been standing twenty-four hours or more to become sour and germ-laden and then warmed up in the "calf pan" which may be distinguished from other pans by the layer of burnt milk on the bottom. A separator is a profitable investment under any circumstances, but most particularly so when the kitchen and dairy are one. In collecting cream from day to day, be sure to stir the whole mass well every time fresh cream is added. Neglect of this causes uneven color and curd in the butter. If you are only getting a little milk, it is better to churn at least once a week, in preference to waiting till you have a full churning.

Bitter butter is the result of keeping cream too long from cows that have been milking a long time. The bitterness is due to the development of a germ—a yeast plant.

To obtain the best results in ripening winter cream, it should be pasteurized and have a starter added, but, unless this is done with more care than is usually exercised in the kitchen dairy it had better be left undone.

(To be continued.)

Little Willie—Say, pop! is it true what our teacher says 'bout everybody havin' iron in their systems?

Willie's Pop—Yes, my boy, we have a large percentage in our constitutions.

"Well, then, the kind what prize fighters have is scrap iron ain't it."—*Philadelphia Record.*

The Farm Home

The Preserving Season.

It's now the time when women
Forget about their nerves
And spend their days and evenings
In putting up preserves.
They're peering into kettles,
They're closely watching pans,
And at the proper moment
They're filling jars and cans.

They're making jams and jellies
And sweetest marmalade,
And fruit fresh from the orchards
Is into butter made.
They're paring, seeding, slicing,
A work in which they're skilled,
And when a kettle's emptied
Again it's promptly filled.

And sweet is the aroma
That permeates the air,
The fragrance of the spices
Dropped in with greatest care,
And as afar it's wafted
To Ceylon we then show
That there are other places
Where spicy breezes blow.

The women burn their fingers
And pretty faces, too.
But patiently they're working
Until the task is through,
And, though the hubbys grumble
When women thus prepare,
Just watch them in the winter
And see them grab their share.
—Pittsburg Commercial Telegraph.

"That Old Hen."

By M. E. Graham Ailsa Craig.

When is a hen old? Is it when she has reached the full age of twenty-one years? One would almost think so in passing through some barnyards, which contain fowls that look as if they might be degenerated specimens of the variety kept by Noah.

What is the best method of distinguishing old hens? Probably the leg-band gives best satisfaction, as one can keep a register of each hen's age and qualifications in connection with it. Perhaps, where to tell the age only is desired, the poultry punch will be quite as satisfactory. For example, we may this year punch, in all our pullets, the right web of the right foot, next year the left web of the same foot; this will give us different markings with single holes for four years, and by punching two or more webs we can have combinations that will last for a number of years; in fact, until the pullet of to-day with the right web only punched will be the old hen with her name on the voters' list twenty years hence. Someone has said that "if you cannot tell the old hen from the young, you should go out of the poultry business." With a flock of pure-breds we would naturally

expect the children and grandchildren to bear a close resemblance to the old lady.

All fowls not hatched this year we call old hens, and we must soon decide whether they shall continue to reside on the farm during the winter or whether they shall be sent to the city or take a trip across the ocean.

If we have our hens marked and have improved nest boxes, we know exactly which are the best layers. If we are practising mixed farming, and the hens get but a small portion of our time, we probably have mixed flocks, and have some good layers of large eggs, some layers of plenty of small eggs, and some that lay eggs only as a recreation, and do not indulge in the pastime too frequently. But if we keep our eyes open and are interested in our poultry even without leg-bands and trap-nests, we know many of them to be good layers, some to be good as sitters or good to raise the young birds. Any that we can depend on it is well to care for, for two or three years longer, but if we have a good flock of early pullets we can safely dispose of our old hens, excepting only the few that we are sure possess good qualities. If there is a hen that has found the habit of laying and hatching under the barn or in remote corners of the haymow, she will now need to show extraordinary laying qualities in order to make us consider her worthy of another year's care.

What shall we do with her? Mr. Gilbert tells us of a firm in Toronto that offers thirty-five cents a pair for old hens. That offer may be good if our hens were bantams, but at present prices of meats we cannot afford to sell the old hens of the large breeds at so low a figure. In a few weeks the merchants and poultry dealers will be prepared to receive them at four, five or, it may be, six cents a pound when dressed. I am not sure that this will pay either, if we must buy as many pounds of pork, beef or mutton as we sell of hens. I am told that canning factories pay sixty-five cents a pair for old hens alive. I suppose they will be nicely dressed, cooked and carved and we will purchase them again at twenty-five cents a pound, this time without the bones, which are a comparatively small part of the hen. We will imagine we are having a rare delicacy when we eat our boneless chicken or perhaps turkey, and all the time it is the same old hen for which we were glad to get four or five cents a pound. Why do we not convert our old hens into food for the table? Of course if the family is not large and we have several hundred hens we cannot find a market in our kitchen for all of them. But it will be an easy task, where the

family is large, to dispose of the ordinary farmyard flock. It is true they do not make so delicate a food as spring chicken, but it is also true that they make a much better food than the more expensive and less easily digested food, viz., pork.

We fancy that we will tire of this more quickly, but by using the many methods of cooking we find that even old hen is relished by all the family. I served one recently which was mistaken for roast chicken, when in reality it was two year-old hen, boiled. It was prepared as for roasting, then put on whole in a pot of water and cooked slowly until quite tender. Part of the water was then used for soup and the remainder seasoned and boiled until very little was left. This was put with the hen in a pan in a hot oven until a tempting brown.

Boneless Chicken.—Cut up old hen, put on in cold water and let boil slowly (even if it takes all day) until the bones may be easily removed. Take out the meat and chop it and season to taste, return to the pot where the liquid has been boiling away. There should now be only enough to cover the meat. See that they are well mixed, pour all into a pan, and put in a cold place. This will be nice sliced and served cold for tea, or in sandwiches for picnics.

Chicken Pie.—Cook hens according to above method, but remove only the largest bones. Line a pan with any good biscuit paste, pour in the hot mixture, cover with the remainder of the paste, and cook fifteen minutes in a hot oven, or until the top is a rich brown.

Chicken Soup.—Cook as before, but remove the meat when tender. Add an onion and suitable flavoring to the liquid. Before serving, use a large spoonful of flour stirred smooth in milk or cream. Add this, and let come to a boil before serving. Drippings of biscuit dough may be cooked in this. It will be hard to find a better flavored soup than that made from old hens.

For salads the cold meat will be found equally as good as spring chicken. For threshings, use four large hens. Cut into as many pieces as possible, and put on early in a large pot of cold water. Let boil slowly until tender, which should be by 11 o'clock. Then lay the pieces in bake pans, and put in a hot oven until browned, using enough of the seasoned liquid to keep from burning and to make a rich, brown gravy. This will be found just as appetizing as the best of roast beef, and if any is left it will be relished cold for supper.

For broiled chicken don't use old hens. Fried, ditto; though I am not sure that freshly-boiled pieces would

not be quite nice finished as fried chicken. But—never fry food that can be relished when cooked in any other manner.

Hints by May Manton.

Ladies' Shirt Waist, No. 3613. With or Without the Fitted Lining.

Popular as polka dots have been, there appears no sign of their falling off. The eminently practical waist illustrated is suited alike for such material and to plain or striped flannel, as well as to taffeta and cheviot, madras, linen, etc.

The foundation is a fitted lining over which the waist proper is arranged when the material is wool or silk, but which is omitted when washable stuffs are used. The waist proper is fitted by shoulder and under-arm seams only. The fronts are laid in three tucks at each side of the centre box-pleat, in which button holes are



1613 Ladies' Shirt Waist.
32 to 42 inches bust.

made, and are drawn down at the waist. The back is smooth across the shoulders and is also drawn down at the waist. The one-piece sleeves have the inter seams extending to the elbows only and are shaped to form scallops over the hands. At the throat is a fitted and shaped stock that is peculiarly smart and universally becoming. With the waist is worn a narrow ribbon belt.

To cut this waist for a lady of medium size four yards of material 21 inches wide, 2 3/4 yards 32 inches wide, or two yards 44 inches wide, will be required.

The pattern No. 3613 is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure.

The price of above pattern post-paid is only 10 cents. Send orders to "The Farming World," Confederation Life Building, Toronto.

Joyce Mfg. Co.
of Prince Albert

Have you a large crop of Potatoes? I will come and harvest your Potatoes, sort them small from big, and store for three dollars an acre. Apply to

JOHN JOYCE

16 Bond Street, - - TORONTO, ONT.

APPLES FOR EXPORT

All desirous of exporting apples to the British markets will be furnished with reliable information by writing

EBEN JAMES

Board of Trade Building, Toronto, Canadian Agent for

Woodall & Co., Liverpool
Boyd, Barrow & Co., Glasgow
M. Isaacs & Sons, London

Proceeds advised by cable; day of sale remitted same night from Toronto.

When writing to advertisers please mention **The FARMING WORLD.**

Ravages of Consumption

White Plague on the Increase.

A Cure Now Within the Reach of Every Sufferer.

DR. SLOCUM the famous scientist, whose lectures and demonstrations in New York and London this season have astounded medical circles, has at last perfected his new system of treatment for the absolute cure of tuberculosis and all pulmonary diseases. This triumphant victory over the deadly bacilli is far reaching in its effects, for there is no longer room for doubt that the gifted specialist has given to the world a boon that will save millions of precious lives. Dr. Slocum's system of treatment is both scientific and progressive, going as it does to the very source of the disease and performing the cure step by step.

First Step.—Killing the life destroying germs which invest the body.

Second Step.—Toning the entire system and strengthening the nerves—filling the veins with tingling new life.

Third Step.—Building healthy flesh and fortifying against future attacks.

The Slocum system cures grip and its painful after effects, dangerous coughs, bronchitis and every known form of pulmonary disease.

It makes weak lungs sound, strengthens them against any attack, and gives endurance to those who have inherited hollow chests, with their long train of attending dangers. To enable despairing sufferers everywhere to obtain speedy help before too late, Dr. Slocum offers

FULL FREE TREATMENT

To every reader of this paper.

Simply write to **THE T. A. SLOCUM CHEMICAL CO., 179 King St. West, Toronto, Ont.** giving post office and express office address and the free medicine The Slocum Cure will be promptly sent. Sufferers should take instant advantage of this generous proposition, and when writing for them always mention this paper. Persons in Canada seeing Slocum's free offer in American papers will please send for samples to the Toronto laboratories. Let no previous disappointments prevent your taking advantage of this splendid free offer before it is too late.

THE EUROPEAN EXPORTERS' ASSOCIATION

OF TORONTO, Limited.

An Organization Formed for the Protection of Canadian Shippers.

Head Offices: **McKinnon Building, - - - - - Toronto.**

EDWARD STILL,
Manager in England

HON. G. W. ROSS, LL.D., M.P.P.,
President

ERNEST HEATON,
Manager in Canada

The Association is prepared to undertake the following services on behalf of consignors of apples, eggs, poultry and all kinds of fruit and produce—

1. To recommend a reliable Consignee at each port.
2. To arrange freight contracts and effect insurances upon shipments.
3. To give attention, through its agents at ports of shipment, to the proper stowage and prompt transportation of such consignments.
4. To have goods inspected when claims are made by consignees, either for damage in transit, or for alleged non-compliance with contract, and to report thereon.
5. To investigate any complaints and report.

Consignors making small shipments under the auspices of the Association can, by co-operation through the Association, receive all the advantages which can usually be commanded by large shippers only.

APPLE SHIPPERS

who desire the protection of the Association are requested to write at once to the Head Office of the Association, at Toronto, for list of apple receivers, list of sailing dates and instructions for grading and packing of fruit for export.

Consolidated Phosphates Limited

Board of Trade, Toronto, Ont.

Capital Stock, \$150,000.

Shares, \$10.00 each.

Incorporated, 1900.

One of the objects of this Company is to introduce intelligent methods of cultivation by bringing farmers to a clear understanding of the principles involved in manuring.

Travellers and Local Agents Wanted.

WILLIAM J. THOMPSON, B.S.A., Supt. of Agencies.

When writing to advertisers kindly mention **THE FARMING WORLD.**

The Farming World

A PAPER FOR FARMERS AND STOCKMEN.

Managing Director, . . . D. T. McAINSH
Editor, . . . J. W. WHEATON

The Farming World is a paper for farmers and stockmen, published weekly, with illustrations. The subscription price is one dollar a year, payable in advance.

Postage is prepaid by the publishers for all subscriptions in Canada and the United States. For all other countries in the Postal Union add fifty cents for postage.

Change of Address.—When a change of address is ordered, both the new and the old address must be given. The notice should be sent one week before the change is to take effect.

Receipts are only sent upon request. The date opposite the name on the address label indicates the time up to which the subscription is paid, and the change of date is sufficient acknowledgment of payment. When this change is not made promptly notify us.

Discontinuances.—Following the general desire of our readers, no subscriber's copy of THE FARMING WORLD is discontinued until 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 THE FARMING WORLD. Cash should be sent in registered letter.

Advertising Rates on application.
Letters should be addressed:

THE FARMING WORLD,
CONFEDERATION LIFE BUILDING
TORONTO

Veterinary College Opens.

The annual announcement of the Ontario Veterinary College, Limited, Toronto, Canada, for the coming session, has just been received. The college will open on Wednesday, Oct. 10. The number of students attending this popular institution is a marked indication of the thorough instruction in veterinary science its teachings afford, and of the continental reputation of Dr. Andrew Smith, the principal.

Canadian Barred Rock Club.

A meeting of the Barred Plymouth Rock Breeders exhibiting at the Industrial Fair was held in Supt. Daniel's office during the week of the show to discuss the advisability of organizing a club for the further development of this grand variety in Canada. There was a good attendance, and Mr. Thos. A. Duff, of Toronto, presided, and Mr. Geo. W. Miller, of London, acted as secretary.

The many benefits to accrue from the organization of such a club were ably set forth by several of the gentlemen present, and it was decided unanimously that the formation of a club for mutual protection and assistance was in the interest of every breeder of this practical and popular fowl.

On motion of Mr. A. H. Lake, of Toronto, seconded by Mr. A. G. Gilbert, of Ottawa, it was decided that the club should be called the "Canadian Barred Plymouth Rock Club."

At the suggestion of Mr. Duff, the annual membership fee was fixed at \$1 without any initiation fee.

The election of officers was not proceeded with, it being deemed advisable not to go on therewith until the

Why not build your own Coiled Steel Spring Fence?

The strongest and most durable frost-proof Wire Fence known.

Save agents' and factory profits. Build it yourself with the

LONDON FENCE MACHINE

JUST OUT!

The Fastest and Cheapest Machine in America. Anyone can operate it, and weave 40 to 60 rods per day. EVERY MAN WHO OWNS A FARM SHOULD HAVE ONE. It is built of malleable iron and steel. Its stays do not slip or warp the fence. Don't fail to get a catalogue and price. Manufactured by

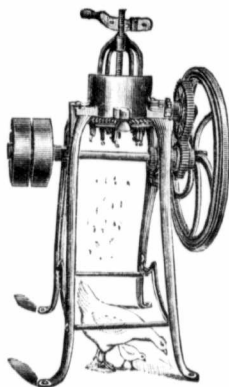
THE LONDON FENCE MACHINE COMPANY

RESPONSIBLE AGENTS WANTED.

Office: 151 York St., London, Ont.

Machines

For Cutting Green Bones, Gristle and Vegetables for Poultry Food



No. 4.

By feeding Green Cut Bones you will increase the number of eggs and keep your flock in better condition. It is also CHEAPER THAN ANY OTHER KNOWN FOOD

The Malleable Iron Co.
19 to 29 Mill St. MONTREAL, Que.

Bigger Profits

Your cheese and butter making will pay you bigger profits if you use

Windsor Salt

Pure, soluble, even crystals; economical to use.

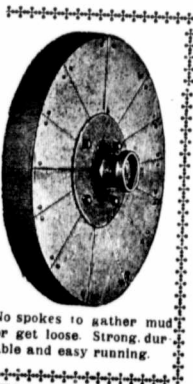
THE WINDSOR SALT CO.
LIMITED
WINDSOR, ONT.

OUR FOUR INCH READING-GLASS.

If you're a paid-up subscriber to THE FARMING WORLD you can have one of our famous four-inch reading glasses, sold regularly at \$2.50, for \$1.00 Carefully packed for mail. Postage paid.

LOW WAGON WHEELS

MADE TO FIT ANY SIZE SKEIN
THEY CANNOT BE OVERLOADED



No spokes to gather mud or get loose. Strong, durable and easy running.

The Advantages

Of a Low Wagon on a farm and elsewhere cannot be over-estimated. We make a specialty of the manufacture of Low Wheels for the ordinary wagon, making it possible for the farmer and teamster to possess a low wagon by simply removing their high wheels and placing these upon their wagons. The great advantage thus derived in loading logs, wood, grain, stone, fodder, hay, manure, hogs and various other things, is very evident. By lowering the wagon bed you lessen the labor of loading anything off the ground. It is much easier to lift a load when it is on a level with the knee than when it is on a level with the shoulders.

The Speight Wagon Co., Markham, Ont.

winter show at Guelph in December, when it was hoped there would be a larger representation of breeders present. Mr. Geo. W. Miller was appointed Secretary-Treasurer *pro tem*.

The honor of being the first member to join belongs to Mr. W. F. Garland, of Hintonburg, Ont. The membership list now includes the following breeders:

W. F. Garland, Hintonburg; Thos. A. Duff, Toronto; W. J. Hill, Yarker; A. G. Gilbert, Ottawa; A. H. Lake, Toronto; J. W. Kedwell, Petrolia; Geo. W. Miller, London; Wm. McNeil, London; J. E. Bennett, Toronto; H. B. Donovan, Toronto; Jas. McCormack & Sons, Rockton; R. Oke, London; S. J. Plastow; Rockton; John Ramsay, Owen Sound; I. K. Milliard, Dundas; Robt. M. Patterson, Agincourt; Allan Bogue, London; Chas. Stewart, London; Mrs. Thos. Inson, Scarboro; Elias Snyder, Burgessville; Jas. A. Carroll, London; J. W. Smith, Toronto; W. J. Graham, Guelph; Henderson & Billings, St. Mary's; R. B. Milliard, London; Wm. McLeod, London; Josiah McKay, Clochan; Thos. Conibear, Chatham; Geo. Angus, London Junction; S. Butterfield, London; L. G. Jarvis, Montreal; Joseph Jeffery, St. Catharines.

Apple Market Report.

"Bow Park," Brantford, Sept. 19, 1900.

Messrs. Simons, Shuttleworth & Co., Liverpool, cable to-day that the market for good sound apples continues strong, with a tendency upward. The following quotations are for first-class, well-packed fruit: Gravensteins and Kings, 15 to 18s.; Fillbaskets, 14 to 16s, 6d.; Colverts, Holland Pippins, 20 oz. apple and Greenings, 10 to 13s.; Maiden Blush, Cabashaw, Blenheim Pippin, 20 oz. or King Pippin, 12 to 14s. 6d.; Jenectings, 9 to 11s. Owing to light receipts prices are firm and rule nearer the highest quotations.

Messrs. Simons, Jacobs & Co., Glasgow, cable that their apple market is very active and prices are hardening. They anticipate a strong demand for good fruit.

J. E. SHUTTLEWORTH.

Exhibition Number.

SOME PRESS OPINIONS.

The Exhibition number of THE FARMING WORLD is a fine one. In its 80 well-written and illustrated pages there is much that should commend it to the farmers of Canada.—*Hamilton Evening Times*.

THE FARMING WORLD has issued a fine "Exhibition Number" in an illuminated cover and filled with illustrations. All of interest to the farmer.—*Harrison Tribune*.

A Practical Farmer Wanted

We want a capable man with a knowledge of Soil, physics, and Agricultural Chemistry, to travel. Must have practical knowledge of farming, or ex-student of Guelph College.

CONSOLIDATED PHOSPHATES, Limited
Board of Trade
TORONTO

FOR SALE

**Ohio Standard
Feed
Cutters**

Nos. 9, 11 and 13

From stock, at Cut Prices.

Write

The Jenckes Machine Co.

SHERBROOKE, QUE.

FOR SALE

20 Good Shearing Ewes; 15 Ewes, two and three years old; three Shearing Rams, and 50 Ram Lambs. All registered Cotswolds, and in good condition.

Address: JOHN RAWLINGS,
Ravenswood, Ont.

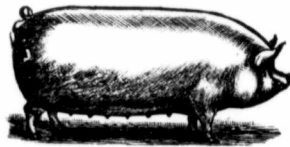
**Ayrshires
FOR SALE**

I have for sale two first-class bulls fit for service. Also bull and heifer calves. All sired by White Prince (Imp.), and from (Imp.) cows and cows sired by Silver King (Imp.). Prices right.

Also pure large Yorkshire for sale.

JOHN H. DOUGLAS,
WARKWORTH, ONTARIO

OAK LODGE TYPE OF YORKSHIRES.



We Lead; others follow.
Acknowledged to be the highest class of bacon hog. Won all best prizes offered at the largest Canadian exhibitions in 1899.
Grand Sweepstakes over all breeds and for dressed carcasses at Prov. Winter Show. The quality of your hogs may be improved by using Oak Lodge brood.

BERTHOUD & SAUNDERS
BURFORD, Ontario

Ayrshires, Guernseys, Yorkshires and Shropshires

ARE OUR LEADERS



All high-class pedigree stock. Those desirous of purchasing thoroughbred animals should write for particulars at once. Orders booked now in rotation for present and future deliveries. Address—



ISALEIGH GRANGE FARM, Danville, Que.

J. N. GREENSHIELDS, Prop.

T. D. McCALLUM, Mgr.

When writing to or purchasing from our advertisers, it will be to your advantage to mention THE FARMING WORLD.

EXTRA!

SCOTCH COLLIE PUPS from Scotch importation. Pedigreed. Very cheap. Write for particulars. MRS. PHILIP HART, Belleville, Ont.

FOR CHOICE

AYRSHIRE BULL CALVES

Six months old, sired by Rosland of St. Ann's.—8901— from deep milking dams; fancy color. Will sell at reasonable prices.

DAVID LEITCH

Cornwall, Ont

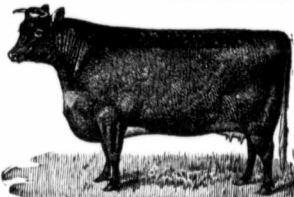
"FAIRVIEW FARM."

SMITH EVANS, GOUROK, ONT.

Breeder and Importer of registered Oxford Down Sheep. Selections from some of the best flocks in England. Stock for sale at reasonable prices. Inspection invited.



Arthur Johnston



offers for sale at moderate prices

SHORTHORN CATTLE.

11 imported and home-bred bulls,
13 imported cows and heifers,
35 home-bred cows and heifers,

Many of the latter from imported cows and by imported bulls. Catalogues on application.

My post-office and telegraph office is Greenwood and my railroad stations are Clarendon, on the Canadian Pacific R. R., and Pickering, on the Grand Trunk R. R., 22 miles East of Toronto.

Market Review and Forecast

Office of THE FARMING WORLD,
Confederation Life Building,
Toronto, Sept. 24, 1900.

Wholesale trade has shown a little better feeling during the week owing to the cooler weather. Storekeepers are ordering with more confidence. Conditions of trade, both wholesale and retail, continue active. Payments continue satisfactory for this time of the year in most lines of trade. Money is easy, and call loans are quoted at 5 per cent., and mercantile paper is discounted at 6 to 7 per cent. according to name and nature of the account.

Wheat.

Though values have fluctuated there has been a steady advance in the price of wheat in Chicago due to more export buying and more speculative investments. The Montreal *Trade Bulletin* sums up the situation as follows: "The last weekly statistics were not particularly bullish, the visible supply in the United States and Canada showing an increase of 2,192,000 bushels to 53,927,000 bushels, as compared with 39,322,000 bushels, being an increase of 14,605,000 bushels. The visible supply of wheat in the United States and Canada and the amount of wheat and flour now in transit to Europe are equivalent to 80,487,000 bushels, against 66,088,000 bushels a year ago, which shows an increase of 14,399,000 bushels. But notwithstanding statistics a bullish sentiment appears to have prevailed, and one significant feature reported by a Chicago commission firm a few days ago was to the effect that all their Northwestern correspondents sent in buying orders almost exclusively, which would seem to indicate that they were induced to buy on the crop out-turn.

The wet weather of the past week has interfered with harvesting operations in the West, and accounts from that part of Canada are more gloomy. It is feared that damage to an already small crop will be great. Deliveries of Ontario wheat in this province have been light. The sample is excellent, and it is expected that millers will not have to mix so much Manitoba wheat with it this year, so that higher prices may be looked for.

The price of wheat at Chicago has advanced 4c. since our last report. No. 1 Manitoba hard has moved up to 88 to 88½c. softest Fort William, which means 96 to 97½c. Montreal. Red and white are quoted here at 66c. west and spring at 67c. east. On Toronto farmers' market red and white bring 71 and 71½c., spring 71c., and goose 69 to 69½c. per bushel.

Oats and Barley.

The oat market is quiet under a slow export demand. There is some complaint among dealers that new oats are badly damaged by rain. No. 1 white is quoted here at 25c. east and No. 2 white at 23 to 23½c. west. On farmers' market oats bring 29 to 30c. per bushel.

The barley crop has been badly damaged by rain and the sample is not good. If this were not the case there might be a good market worked up for our barley in the United States, as the crop over there is generally a poor one. Barley is quoted at about 40c. at local country points for good quality. On Toronto farmers' market barley brings 46 to 49c. per bushel.

Peas and Corn.

The market for peas keeps steady. New peas are quoted at Montreal at 69½ for fair samples. The market is steady here at 60c. east and 58c. west. On farmers' market they bring 60c. per bushel.

Corn is quiet. No. 3 American yellow being quoted at 49c. on track Toronto.

Bran and Shorts.

Ontario bran is quoted at Montreal at \$14.50 to \$15 and shorts at \$16.50 to \$18 in car lots. City mills here quote bran at \$13.50 and shorts at \$16 in car lots f.o.b. Toronto. At

points west of here bran is quoted at \$12 and shorts at \$14 in car lots.

Eggs and Poultry.

The egg market continues firm and active. The exports this season show an increase of 19,518 cases or over 100 per cent. Fresh fall gathered stock is quoted at 14½ at Montreal in case lots. The market here is firmer, choice lots are quoted at 14 to 14½c. and other quality at 9 to 11c. On Toronto farmers' market eggs, new laid, bring 16 to 20c. per dozen.

The export market for dressed poultry has not opened up yet. On Toronto farmers' market chickens bring 50 to 80c and ducks 50 to 90c. per pair and turkeys 12 to 13c per lb.

Potatoes.

Potatoes are quoted at 45 to 50c. per bag at Montreal in large lots. No car lots are coming to this market yet. On farmers' market here potatoes bring 45 to 50c. per bag.

Fruit.

The export trade in fall fruits has not been very encouraging this season. Fall fruit has ruled from 40 to 50 per cent. lower in England than at this time last year. Some recent account sales scarcely cover freight and expenses. Dealers are inclined to discourage the exporting of early fall fruit. Some account sales netted only 35 to 45c. per bbl. at point of shipment. Buyers are somewhat cautious about contracting for winter fruit. Some contracts have been reported at Ontario points at 40c. per barrel up to 75c. for the fruit, while in some sections \$11 has been paid, which is considered high. It is the opinion of many in the trade that the apple crop has been greatly over-estimated. The wind storm has brought a lot of fruit to the ground, though not as much as one would expect. Receipts on Toronto fruit market have been light, and stocks have sold out satisfactorily. Choice apples are quoted at 50c. to \$1 per barrel, peaches being all the way from 20c. up to 75c. per basket for Crawfords.

Hay and Straw.

The market for baled hay seems to be improving. Sales of car lots of No. 2 are reported at Montreal at \$8.50 to \$9 in car lots. Country dealers are advancing prices. No. 1 timothy is quoted here at \$9 to \$9.50 for cars on track. On Toronto farmers' market hay brings \$12 to \$13, sheaf straw \$11, and loose straw \$4 to \$6 per ton.

Seeds.

Red clover at Montreal is quoted at \$5.25 to \$6.50, alsike at \$5.25 to \$6.25 and timothy seed at \$1.25 to \$1.75 per bushel. There is a steady demand for alsike here, which is quoted at \$6 to \$7 per bushel for good to prime and \$7.50 to \$7.75 for fancy lots. Red clover is quoted at \$5.50 to \$6 per bushel and timothy at \$3.75 to \$5 per cwt. by dealers.

Cheese.

The cheese market is firmer and higher, Montreal quotations being 11½ to 11¾c. for finest westerns and 11¼ to 11½c. for finest easterns. At the basis of prices paid at country points these quotations would need to be higher to cover cost. Cables report a decidedly firmer feeling for Canadian cheese and an advance of 1s. is reported with a good demand at the rise. Finest Canadian is quoted in London at 56 to 57s. and fine at Portland this season so far show an increase of 176,829 boxes as compared with the same period last year. The combined exports from this side show an increase of 305,699 boxes for the same period.

Only a fair amount of business has been done at the local markets the tendency being for factorymen to hold. Prices ruled at from 11 to 11½c. with 11¾c. being reached at Brockville on Thursday most of the sales were made at 11½ to 11¼c.

Butter.

One of the reasons given for the recent decline in the English market is that prices had reached a point at which it became profitable to bring out cold storage butter, which in turn brought values down. While Canadian butter is down 2s. in England there is a better feeling reported at Montreal, where 20¼c. has been freely paid during the week. There is a feeling that present prices are low and buyers are laying in a stock for a future market. From 19¼ to 20¼c. are the prices reported at the factories.

The decrease in shipments this season so far from Montreal as compared with the same period of 1899 is 119,441 pkgs. Creamery is steady here at 23c. for prints and 22c. for packages. Choice dairy butter is in good demand and scarce at 19c. for choice rolls and 18 to 18½c. for tubs. On Toronto farmers' market lb. rolls bring 23 to 26c. each.

Cattle.

The general tone of the cattle situation is about the same with inferior quality not selling so readily. Cables are reported good, and on Friday American cattle were quoted at 12½ to 13¼c. per lb. At Toronto cattle market on Friday the run of live stock was fairly large, comprising 735 cattle, 2,080 hogs, 1,955 sheep and 40 calves. The quality of fat cattle was generally only medium, few first-class being offered. Trade was a little brisker than for several markets. Prices for exporters were easier and it would require extra well finished cattle to bring \$5 per cwt. Butchers' cattle of choice quality were scarce, while medium quality were plentiful with prices easier.

Export cattle.—Choice lots of these sold at \$4.75 to \$4.90 per cwt. and light ones at \$4 to \$4.50. Heavy export bulls sold at \$4.12½ to \$4.25, and light ones at \$3.12½ to \$3.35

The Farmers' Leisure Time

HOW TO MAKE EXTRA MONEY

WE have planned pleasant and profitable work for the young men—and the older men too—of the farm during the leisure winter months. In every township in Ontario, Quebec, Manitoba, and other parts of the Dominion we want an active, intelligent farmer to canvass for subscriptions to THE FARMING WORLD. You are a reader of the paper and you know its many excellent points. We are prepared to give generous remuneration for the work done. Will you be the first to offer from your township?

Address all letters to

THE FARMING WORLD,
Confederation Life Building, TORONTO.

per cwt. The bulk of exporters sold at \$4.65 to \$4.90 per cwt. Loads of good exporters' and butchers' mixed sold at \$4.25 to \$4.37 1/2 per cwt.

Butchers' Cattle—Choice picked lots of these, equal in quality to the best exporters' and weighing 1,000 to 1,100 lbs. each, sold at \$4.40 to \$4.60, good cattle at \$4.20 to \$4.40, medium \$3.65 to \$3.80, and inferior to common at \$2.50 to \$3.25 per cwt.

Feeders—A few heavy feeders are coming forward, and well-bred steers 1,000 to 1,100 lbs. in weight bring \$3.60 to \$4 per cwt. Light steers, 700 to 900 lbs. each, sold at \$3.25 to \$3.35 per cwt.

Stockers—Yearling steers suitable for the Buffalo trade, 500 to 600 lbs. in weight, sold at \$2.25 to \$3, and other quality at \$2 to \$2.25 per cwt.

Calfes—These have been in moderate demand at Buffalo, where quotations are \$8 to \$8.25 for choice to extra, and \$7.50 to \$8 per cwt. for good to choice. At Toronto market on Friday forty calves sold at \$3 to \$8 each.

Milch Cows—About 15 milch cows and springers sold on Friday at \$30 to \$50 each.

Sheep and Lambs.

Sheep are stronger at Buffalo, but lambs were 10c. lower on Friday. At Toronto market the same day prices were steady for sheep at \$3.50 to \$3.75 for ewes, and \$2.75 to \$3 per cwt. for bucks. Spring lambs sold at from \$2.50 to \$3.50 each.

Hogs.

There is an advance of 12 1/2c. for bacon hogs since our last report. Best select bacon hogs, 160 to 200 lbs. in weight, sold on Friday at \$6.25, and thick and light fats at \$5.50 per cwt. Unculled car lots sold at \$6 to \$6.20 per cwt. Montreal market is firm at \$6 for light bacon hogs, and \$6.75 for heavier weights. The *Trade Bulletin's* London cable of Sept. 20th, re Canadian bacon, reads thus: "The market has ruled steady all week at the advance last quoted, with a good business reported in Canadian."

Horses.

At Grand's Repository, on Tuesday last week, the last sale of rejected military horses was held. These were a lot of very desirable horses, only about ten per cent. being slightly injured in the cars, the rest being sound. Some 87 or 88 horses were sold in all, at prices ranging from \$60 to \$130 each, the average being about \$75. There is some inquiry for heavy work horses, with quotations at from \$100 to \$125 each. On Tuesday of this week a car load of heavy horses, mostly mares, will be sold. These are a desirable lot, and good prices are looked for.

Mr. Hodson's Address.

We have been asked by Mr. F. W. Hodson, Dominion Live Stock Commissioner, to announce that his post-office address is Ottawa and all communications should be addressed to him there. A great many letters are still addressed to him at Toronto, Guelph, and even at London, where he formerly resided, thus necessitating considerable delay in correspondence. Parties desiring to correspond with him will kindly remember that Ottawa is his address.

IF NOT, WHY NOT ?

If you are a paid-up subscriber to **THE FARMING WORLD** you may have a \$2.50 4-inch reading glass for \$1. This glass shows how clear small type appears when viewed through its lens. It is a great comfort to those whose eyesight is not strong and is valuable in examining seeds and insects.

The Horse Market

Demands Sound Horses Only

Lame horses sell at less than half their actual value and are neither desirable for use nor sale. The remedy is easy. A few bottles of



will work a permanent cure for Spavins, King-bones, Splints, Curbs, etc., and all forms of Lameness. It cures thousands of cases annually. Such endorsements as the one following are a guarantee of merit.

Kilnsgrove, Penn., Aug. 18, 1888.
Dear Sir: After using your Spavin Cure for Cuts, Splints, Spavins, etc., I found one of my horses had a Splint, I thought I would try a Cure, which cured it. Since that time I have cured one other Splint and two Spavins. Now I am not afraid to recommend it to all. I remain,
Yours truly,
H. A. LAWRENCE.

Price, \$1.50 for \$2. As a Remedy for Family use it has no equal. Ask your druggist for Kendall's Spavin Cure, also "A Treatise on the Horse," the book free of charge.
DR. B. J. KENDALL CO., Enosburg Falls, Vt.

IN all correspondence with advertisers in these columns, mention **THE FARMING WORLD**. This will oblige the publishers of this paper as well as the advertiser, and will frequently be of distinct advantage to you.

ROCK SALT FOR STOCK

60c. per 100 lbs.; 500 lbs. or over, 55c. f.o.b.

JAS. DUNLOP

127-129 John St. South
HAMILTON, ONT.

CHAMPION Fruit EVAPORATOR

Dries all kinds of Fruits and Vegetables. Product of superior quality.



Cut shows cooking stove size. We make four larger sizes, suitable for home or market use. All are fire-proof and portable. **CATALOGUE FREE.**

THE G. H. GRIMM MFG CO.
84 Wellington St., Montreal, Q.

\$20 If you Want to SAVE MONEY

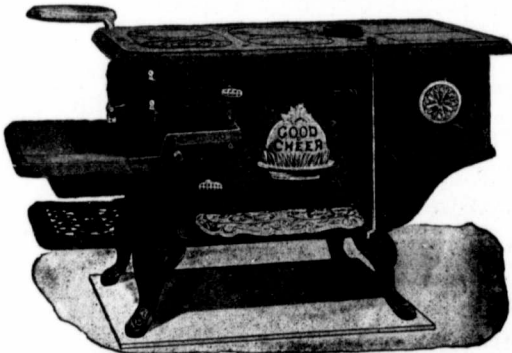
and get the best machine at lowest wholesale price, now is your chance. Buy direct from factory. One profit. All attachments free. 30 days' trial. Warranted beyond. \$40 VICTOR.....for \$20.00 \$55 HOMESTEAD.....for \$22.50 \$65 HOMESTEAD.....for \$24.50
THE BAILEY DONALDSON CO.
30 Foundling St., MONTREAL, Que.
Illustrated catalogue and testimonials free.
Other machines at \$17.50 and \$19.00. KEY F.W.

When writing to advertisers please mention **THE FARMING WORLD.**

DES MOINES INCUBATOR CO.--The Best and the Cheapest
95 PER CENT. hatches are often reported by those who use these Incubators. One reason for this record is absolute uniformity of temperature in egg chamber. Correct instructions for operating; has fire-proof lamp. A great mistake it would be to purchase an Incubator or Brooder without first getting a copy of our 148-page Catalogue. Send 8 cents for Illustrated Catalogue of Incubator, Brooder, Poultry and Poultry Supplies. **THE POULTRY'S GUIDE**, New Edition, 15c. **O. BOLLAND**, Sole Agent for the Dominion. 4 St. Salpice Street, Montreal.

THE "GOOD CHEER" COOK

BRINGS GOOD CHEER TO THOUSANDS OF CANADIAN HOMES.



A first-class stove in all particulars.

A steel-plate oven cooker, assuring satisfaction in the cooking of all foods.

Economical in the use of wood or coal—will burn either.

An ornament in any kitchen—and more moderate in price than you would suppose for a high grade stove.

SOLD BY ALL LEADING DEALERS EVERYWHERE
Circular will be mailed on application

The James Stewart Manufacturing Co.
WOODSTOCK Limited ONTARIO

Remainder of this year FREE to all New Subscribers for 1901.

Farming World Barometer Premium

IS A GREAT FAVORITE

It would seem as though nine out of ten orders that come to us for premiums—whatever else may be ordered—include a STANDARD BAROMETER. It is seldom that one has the opportunity of securing for the home or study or office a good reliable Barometer such as this for a practically nominal sum.

WHAT THE BAROMETER WILL DO

1. If the weather is to be fine, the substance of the composition will remain at the bottom, and the liquid will be clear.
2. PREVIOUS TO RAIN the substance will rise gradually and the liquid will be clear, with small particles moving about.
3. BEFORE A STORM OR HIGH WIND the substance will be partly at the top, and will have a feathery appearance, and the liquid will be heavy and in fermentation. In this it will usually give notice TWENTY-FOUR HOURS BEFORE THE WEATHER CHANGES.
4. IN WINTER, generally, the substance will rise rather high, in snowy weather or white frost it will be white, with small stars in motion.
5. IN SUMMER, the weather being warm and dry, the substance will be quite low.
6. To know what quarter the wind or storm comes from, you will observe the substance will lie closer to the bottle on the opposite side to that from which the storm or wind comes.

One Dollar is the value of this indispensable instrument. Anyone sending us one new subscription to THE FARMING WORLD will receive this Barometer free, or anyone renewing his or her subscription and adding twenty-five cents will have one sent free of any expense.

FARMING WORLD WATCH PREMIUMS

Lady's Breast Watch

A handsome and dainty lady's outside or breast Watch will be sent postpaid to any subscriber sending us eight new yearly subscriptions to THE FARMING WORLD, giving FARMING WORLD from present date to January, 1902, and 20c. to cover cost of packing and postage. Or any subscriber, not in arrears, may have one for \$2.50.

Lady's Gold-Filled Watch

A lovely gold-filled lady's watch—guaranteed to keep color for at least five years—an excellent time-piece—will be given to any subscriber sending twenty new subscriptions to THE FARMING WORLD, giving FARMING WORLD from present date to January, 1902, adding 25c. extra to pay postage and packing. Or send ten new subscriptions at \$1 a year, together with \$2.50 extra, and the watch is yours. A subscriber not in arrears may have one of these watches, sent postpaid to his address for \$5.50.

Great Boy's Watch

This is a nickel-finished case, stem-wind, and is a fully guaranteed time-keeper for at least a year. Any subscriber sending five new subscriptions to THE FARMING WORLD, giving FARMING WORLD from present date to January, 1902, and 10c. extra to cover postage, will receive one of these watches free. A subscriber not in arrears may have one for \$1.10.

THE FARMING WORLD

Confederation Life Building, Toronto

Subscription price in advance, \$1 a year.

Remainder of this year FREE to new subscribers for 1901.

Remittance Blank for Convenience of Subscribers

THE FARMING WORLD 190...

TORONTO

GENTLEMEN,—Enclosed find sum of \$....., for which send THE FARMING WORLD every week, from present date to January, 1902, to my address as below, and to addresses as per enclosed list. This will entitle me to premiums as follows :

.....
.....
.....
which send per terms of premium offer to my address as below.

Name.....

Address.....

BE SURE AND WRITE NAME AND ADDRESS PLAINLY



BIBBY'S CREAM EQUIVALENT

REARS CALVES WITHOUT
NEW MILK

This meal is fed to calves with or without separated milk, as a substitute for new milk. It has proved to be **ECONOMICAL** and **EFFECTIVE**, and can be relied upon to give entire satisfaction. Our products are extensively used in the British Isles, **OUR MILLS BEING BY FAR THE LARGEST OF THEIR CLASS IN THE WORLD.**

Directions for use in each bag.

Manufactured By

J. BIBBY & SONS,

10 Bay Street, TORONTO.

"This Cream Equivalent does well beautiful. In most ways I was a calf."

Farmers, Nurserymen, Contractors
and Fence-builders
LOOK!



HALL'S IMPROVED PATENT
BEAVER POST-HOLE DIGGER
works in the driest of sand or
hardest of clay. You can dig
any sized hole. Hit out stones,
and chop off roots. It will do the
work of almost anything but solid
rock. It will pay for itself in time
and labor saved on one small
job.

The machine is built of solid
steel and iron.

HALL & SON, Toronto
The London Fence Machine
Co., London

BELL PIANOS AND ORGANS

Built to last a lifetime

The materials used are the best.
The mechanical and case construction is modern and durable.
The **BELL** tone is distinctly different from others, and satisfies the most
critical musician.

In buying a **BELL** you make no mistake; there are none better.
Made and guaranteed by the largest concern in the business.

The **BELL ORGAN AND PIANO Co., Limited, Guelph, Ontario.**

Catalogue No. 41 Free

Quick Cure For Lump Jaw

Not one case in a hundred that cannot be cured by one
to three applications of



Fleming's
**LUMP
JAW
CURE**

Trade Mark Regd.

Lump Jaw has heretofore baffled treatment. It has
infected herds and pastures, and caused loss of hun-
dreds of thousands of dollars. This new remedy cures
quickly, thoroughly, and permanently. Leaves jaw
smooth and sound. Easy to apply; costs but a trifle
compared with results.

GUARANTEE.—Every package sold under positive
guarantee; money back if it should ever fail to cure.

Sent everywhere by mail, Price, \$2.00.

FREE

A valuable illustrated treatise on cure of
Lump Jaw sent free to readers of this
paper.

Address: **FLEMING BROS.**

Chemists, ST. GEORGE, ONTARIO

Another DeLaval Alpha Performance



PRIVATE CREAMERY.

E. D. Tillson, Proprietor. J. D. MacLeay, Manager.

THE ANNANDALE FARM

Breeders of Famous Thoroughbred and High-Grade
Holstein Cattle.

Tilsburg, Ont., September 7, 1900.

THE CANADIAN DAIRY SUPPLY CO.,
Montreal.

Gentlemen,—Your favor of yesterday to hand and note con-
tents. The DeLaval separator you sent us has now been working
for about six weeks and has given us entire satisfaction. It is an
A1 skimmer and cream uniformly smooth, and in all, a first-class
machine, and in running I save 50 per cent. fuel.

Yours truly, E. D. TILLSON.

Write for our New **WORTH**
ALPHA HAND
SEPARATOR CATALOGUE. READING

CANADIAN DAIRY SUPPLY CO.

327 Commissioners St., MONTREAL.

Western Branch, 236 King Street, WINNIPEG.