

THE Farming World

Address THE FARMING WORLD

PAPER FOR FARMERS AND STOCKMEN

CONFEDERATION LIFE BUILDING TORONTO

PATERSON'S Red Star Brand


Patent Wire-Edged Ready Roofing

AND HEAVY TARRED FELT PAPER

Economical

Durable

Fire-Proof

 ANY FARMERS ARE SCEPTICS when the merit of some new article is pointed out to them. All the officials of the Paterson Manufacturing Co., Limited, were raised on a farm. We know how often the farmers have been deceived, and don't blame them for being cautious. When we tell you our Heavy Tarred Felt Paper is the best material known to-day for lining Poultry Houses, nothing so warm and vermin proof, and that our Patent Wire-Edged Ready Roofing is better and more economical than shingles, we know what we are talking about, and mean every word we say. Nearly all Hardware Merchants can tell you about our Business Reputation, and any Banker will give you our Financial Standing. You can have samples and further information by addressing

The Paterson Manfg. Co., Limited

Toronto Montreal St. John Halifax

Always Mention THE FARMING WORLD when writing to Advertisers

Purest and Best

WINDSOR SALT

Ask for it and take no other.

Awarded Silver and Bronze Medals, Paris Exposition, 1900.

THE Canadian Salt Co.

Limited
WINDSOR, ONTARIO

MISSOURI COLLEGE OF AGRICULTURE.
Columbia, Mo., Oct. 30, 1901.

The machine (U.S.) did excellent work, and, as a rule, I believe it skimmed a little closer than the others we had in use. The record was invariably .02 of 1 per cent. or lower, sometimes a mere trace of fat in the skim milk.

C. L. WILLOUGHBY,
Instructor.

ILLINOIS COLLEGE OF AGRICULTURE.
Urbana, Ill., June 29, 1901.

Enclosed find records of work done with your 3 cream separators (U.S.) at the Dairy School. These are very creditable records, and we think any cream separator company can feel proud of them. Your machines have not given us the slightest trouble during the semester.

OSCAR ERF,
Prof. Dairy Husbandry.

RECORD AT THE PAN-AMERICAN MODEL DAIRY

DeLaval average skim milk test	.0172	buttermilk test	.121
United States	.0138	"	.109
Gain of U.S. over DeLaval	.0034		.012

The above shows that the DeLaval Separator left 25 per cent. more butter fat in the skim milk than the United States. An immense waste that amounts to a very large sum of money upon the dairy products of the world. Enough to pay for a United States Separator to replace every DeLaval Separator now in use.

PROF. SPILLMAN, Director Washington Experiment Station, in *Ranch and Range*, Seattle, Aug. 15, 1901, reports the following tests of skim-milk from dairymen using the U. S. Separator:

.00, .00, .01, .01, .04

MISS. AGRICULTURAL & MECH. COLLEGE.

AGRICULTURAL COLLEGE, MISS.,
Dec. 13, 1901.

The Separator (U.S.) has done perfect work.

J. S. MOORE,
Acting Professor.

THE ABOVE ARE ONLY A FEW OF THE MANY PROOFS THAT

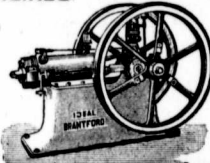
THE U. S. SEPARATOR Stands Without a Peer.

Write for Catalogues.

VERMONT FARM MACHINE CO., BELLOWS FALLS, VT.



BRANTFORD ENGINES.
STRICTLY HIGH GRADE.
2 to 25 H.P.



The Perfected Product of Many Years' Experience.
Also Makers of Steel Windmills and Water-works Outfits, Etc.
WRITE US.



WILSON'S HIGH-CLASS SCALES

SPECIAL PRICES THIS MONTH

On 2,000 lb.

Diamond Steel Bearing SCALES

Write To-day.

C. WILSON & SON

50 Esplanade St. E., TORONTO, ONT.



CANADIAN PACIFIC RY.

SETTLERS' One-Way EXCURSIONS

To Manitoba and Canadian North-West will leave Toronto every TUESDAY during MARCH and APRIL, 1902.

Passengers travelling without Live Stock should take the train leaving Toronto at 1.45 p.m.

Passengers travelling with Live Stock should take the train leaving Toronto at 9.00 p.m.

Colonist Sleeper will be attached to each train.

For full particulars and copy of "Settlers' Guide" apply to your nearest Canadian Pacific Agent, or to

A. H. NOTMAN, A. S. Genl. Passr. Agent.
1 King Street East, Toronto.

CONSTIPATION INDIGESTION TORPID LIVER

These are the great curses which afflict three-quarters of the present generation. Sufferers from either one or all of them must always feel miserable, and sooner or later become chronic invalids, useless to themselves and a burden and nuisance to friends and family. There is one sure, safe and absolute cure which you can test without any expense. Our remedy is Egyptian Regulator Tea, a trial package of which we will send you free and prepaid on request. Unless you find our claims are true, we must be the losers by this liberal act. Shall we send you the trial package, and lead you to perfect health and happiness? Address

THE EGYPTIAN DRUG CO., New York.

Order Your Seeds by Mail....

You Run no Risk as we Guarantee Safe Delivery of all Orders

Evans' Seeds PRODUCE GOOD CROPS

WE WANT TO MAIL CATALOGUE TO SEED BUYERS who are willing to pay a reasonable price for GOOD HONEST SEEDS.



Fac-simile of Catalogue Cover

Evans' Improved Mammoth Saw Log

The largest and best Long Red variety grown, has stood the test for years and taken prizes wherever exhibited. To secure the best results good seed must be sown. Our strain of Mammoth is exceptionally fine and especially grown for our own trade from selected well-shaped roots. Dealers and growers who have used it for years now prefer it to any other long red variety. Has a distinct appearance; roots are massive, straight and regular in size, broad shouldered, small top, free from coarseness and of most excellent feeding and keeping qualities. Per 5 lbs. or over 18c. per lb., 1 lb. 20c., 1/4 lb. 10c.



*Experimental Department,
Ontario Agricultural College,
Guelph, Canada, Nov. 27, 1901.*

Robert Evans Seed Co., Limited,
Hamilton, Ont.

Dear Sirs,—Your letter of November 23rd, enquiring about the Evans' Improved Saw Log Mangel, is at hand. I am pleased to give you the information asked for.

The Evans' Improved Mammoth Saw Log variety of Mangel has been under experiment in our trial grounds at the College for a number of years, and has certainly given good satisfaction. In reference to the yield per acre of the Evans' Improved Mammoth Saw Log Mangel in comparison with other varieties, I make the following quotation from one of my past reports: Among twenty-seven varieties of mangels which we have grown for eight years in succession, the Evans' Improved Mammoth Saw Log stands at the head of the list in yield, with an average of 23.9 tons per acre.

From analysis made in our Chemical Department it has been found that the long red mangels are not quite as rich in food constituents as the Globe varieties, but as the yield of roots per acre of the former is so much greater than that of the latter, the long red mangels produce more dry matter per acre than the Globe varieties. Yours very truly, C. A. ZAVITZ, Experimentalist.



C. A. ZAVITZ.

Evans' New Ontario Purple Top Swede

The hardest and heaviest Swede in cultivation; for weight, size and quality it is unequalled. Our trial will establish its great superiority. Per 5 lb lots and over 20c. lb., 1 lb. 23c., 1/4 lb. 10c.

A PRIZE WINNER

FERGUS, ONT., Dec. 5th, 1901.
Robert Evans Seed Co., Limited,
Hamilton, Ont.

DEAR SIRS,—We have handled your "Evans' Ontario Purple Top Swede" since its introduction, and every year have had to increase our orders for it considerably. Your "Ontario Swede" is considered by the farmers in this district to be the best that is grown, being fine shaped, large, and a splendid keeping turnip. Last year it captured first prize at Fergus Show in the heaviest Swede Class, and this year it has again been successful in capturing first prize in this town, and also at Belwood for 6 best Swede Turnips. Yours very truly,
ARMSTRONG BROS.



Evans' Hamilton Market Garden 50c. Vegetable Collection

We can recommend this collection to all who want selected Vegetable Seeds. QUANTITY OF SEED.—Remember we give the actual weight of each of thirteen varieties sent. The Vegetables in this collection are displayed on the front of our Catalogue cover, and are among the best in our list for a small family garden.

- | | |
|--|--|
| 1/2 pint Beans, Wardell's Kidney Wax. | 3/4 oz. Lettuce, Evans' Hamilton Market. |
| 3/4 oz. Beet, Egyptian Dark Blood Red. | 3/4 oz. Musk Melon, Notted Gem. |
| 3/4 oz. Cabbage, Autumn King. | 3/4 oz. Onion, Yellow Globe Danvers. |
| 3/4 oz. Carrot, Chantenay Half Long. | 3/4 pint Peas, Evans' Extra Early. |
| 1-16 oz. Cauliflower, Early Snowball. | 3/4 oz. Radish, New Rapid Forcing. |
| 3/4 oz. Celery, Evans' Triumph. | 3/4 oz. Tomato, Dominion Day. |
| 3/4 oz. Cucumber, Improved Long Green. | |

We ask larger growers to take advantage of this generous offer and order one of the collection (if only a trial order). Those who do will be satisfied EVANS' SEEDS PRODUCE GOOD CROPS, and we shall look for a larger order another season. Send your name and address for our Catalogue.

ROBERT EVANS SEED CO., Limited HAMILTON, ONT.

Add 4c. per lb. on Mangle and Swede if wanted by mail.

The Farming World

For Farmers and Stockmen

Vol. XX.

MARCH 4th, 1902.

No 9

The Auction Sale Method a Success.

WHEN, a year ago the first provincial auction sales were held, there were many of the leading breeders of the province who expressed grave doubts as to the ultimate success of the movement. But this year's sale at Guelph has demonstrated beyond cavil that the principle of selling pure bred stock by public auction has come to stay. It has also shown very clearly that when a good useful animal is put up for sale in open competition, it will bring its market value and likewise that the inferior beast has to take a lower price. Of the 106 animals sold on Wednesday last we do not think that one of them was sacrificed, while a very large proportion brought from 25 to 30 per cent. more than their owners would have been satisfied with. This is a good showing and considering that there were so many sellers to please and so many animals bred and fitted by different breeders to sell, the splendid results of the sale are nothing less than remarkable. The promoters, and those who have worked hard to make these sales a success may well feel proud of the outcome of the Guelph sale.

It was somewhat unfortunate that there was not sufficient seating accommodation for all those who attended. Had temporary seats been arranged at the eastern end of the sale arena similar to those at the sides, it would have facilitated the work of the auctioneers very much, and made the buying and selling an easier task. Provision of this kind should be made for next year's sale.

It might also be well to consider the advisability of issuing the catalogue a few weeks earlier. When so many different breeders are contributing animals catalogues should be in the hands of prospective buyers, two or three weeks earlier than if all the animals were owned by one individual. In any case no mistake would be made in having the catalogues distributed a month or six weeks before the sale. A little hardship might be entailed on the contributors in having to keep their animals for a longer time for the sale, but the extra advertising that an early distribution of the catalogues would give would more than compensate for anything of this kind.

Besides, if the animals are selected for the sale earlier the contributors will have a better chance to get them in better condition for selling. Had several of the animals offered at Guelph last week, been given a week or two longer in fitting at home it would have added

15 to 20 per cent. to the prices for which they sold. It pays to give a little attention to the fitting of an animal even for the sale ring.

Poultry and Eggs

No special pleading should be needed to convince farmers that the poultry business is one of the most important industries in this country. The demand for eggs and poultry has greatly increased during the past year or two. In dressed poultry alone there is room for an enormous expansion in the export trade. The complaint of every one engaged in the exporting of Canadian dressed poultry to Great Britain is that the supply of the right quality of birds is not nearly equal to the demand. A few weeks ago in referring to this trade we published a statement of Dr. Boulton's, Manager of the Canadian Produce Co., to the effect that there is no chance of the demand for dressed poultry in Great Britain being filled for years to come, even if the production is doubled every year. This is no extravagant claim, but the results of the experience of parties who know and have made a study of this trade.

Then the home trade in poultry is capable of great expansion, if only the right quality is supplied. The articles by Mr. Gilbert and Mr. Hare in this issue, show this pretty clearly. The difficulty with the home trade in the past has been that no effort on the part of our farmers has been made to improve it. No attempt has been made to breed or fatten the birds suitable for this or any market. No attention has been paid to it other than to give the few barn-yard fowls a little extra grain for a week or two before marketing them. But during the past year or two the citizens of Toronto, Montreal, and other large centres, have had a taste of well-fattened chickens and this has strengthened their desire for more. The home side of the poultry trade is then almost as important as the export side and our farmers will do well to develop it as much as possible.

Returning again to the export trade we find that it has been a growing one during the year, notwithstanding the difficulty that dealers have had in getting a sufficient supply of the right quality. No returns are available as to the trade for the season just closed, but, we believe it will show a very large expansion as compared with a year ago. There were more buyers in the field and some very large orders were filled and others received that could not be filled. Prices ruled fairly steady, at from 6½ to 7c per lb. for live turkeys

in the country and from 5c to 5½c for chickens. These, while not high, were fair prices considering the average quality of the birds supplied.

But while the dressed poultry trade is important and is the one perhaps most capable of expansion at the present time, the egg trade is not to be despised. From figures compiled by the Gazette we find that the exports of eggs from Montreal for the shipping season of 1901, show considerable falling off as compared with 1900 the figures being 231,595 cases for 1901, as against 243,302 for 1900. Prices in England, however, where there was a strong demand all season for Canadian eggs, were about 1s per long hundred in advance of 1900.

As a market for eggs, Great Britain is an important one. For the year ending December 31st, 1900 the value of the eggs imported into the United Kingdom was \$26,273,257. For the year ending June 30th, 1900, Canada sent to Great Britain eggs to the value of \$1,457,902, or less than 6 per cent. of the total imported. Here is an opportunity for expansion almost equal to that for butter.

The home trade in eggs is also worthy of attention. To the farmer who caters to it in the right way it is worth more money than the export trade. When a farmer can get from 25c to 50c per dozen for strictly fresh new laid eggs for four or five months of the winter, nothing is more profitable than keeping hens for winter laying. Of course if more farmers were to go into this business and supply eggs in winter prices might not rule so high. But there is little danger of the business being overdone for some time. Even if prices dropped 25 or 50 per cent. it would pay farmers to produce eggs. According to data published in these columns last summer, Mr. Graham, of the Agricultural College was able to produce eggs at a cost of from 5c to 6c a dozen, when prices ruled at from 10c to 12c a dozen.

This is our annual poultry number and we have provided some good practical matter from the three leading authorities on poultry matters in Canada. Read what they say carefully and put into practice the advice given and we are sure you will succeed in making the poultry branch of your farm as profitable as any of the others.

Robt. Beith, M.P., and Lt.-Col. D. McCrae, waited upon the Minister of Customs last week in reference to the importation of American broncos. The matter will be considered. Full particulars next week.

Our Western Letter

Breeders' Meetings—Practical Addresses on Live Topics—Recommendations for Live Stock Commissioner.

Winnipeg, Feb. 24th, 1902.

The conventions are over, and right glad are the secretaries of the various bodies that such is the case. Little does the average member realize, remarked one of these gentlemen, the labor entailed in organizing and successfully conducting a convention such as we hold each year.

The attendance from first to last has been all that could be desired, and needless to remark the interest in the proceedings never flagged from start to finish. All the organizations report satisfactory progress during the year and their financial statements bear out the statement. The work accomplished has in most cases been along the lines followed in former years.

The sheep and swine breeders were the first on the list. The report of the secretary showed that while the association had been active during the year, the business had been mostly of minor importance. After the routine business letters were read from Mr. C. W. Peterson, Deputy Commissioner of Agriculture, for the Territories, asking that the association co-operate with the breeders of the N.W.T. in the effort to secure the removal of the duty on woven wire fencing which has become a necessity to those breeders, and also to secure the free transportation of pure bred rams from Ontario to the North-West Territories. At the evening session Mr. Peterson spoke on the question of live stock judging at country fairs, advocating the appointment of judges by the government, and to permit this being done economically, the fixing of the dates in circuit either by the government, or by agreement of the societies.

The afternoon session was occupied by judging demonstrations by Prof. Ferguson, of Michigan Agricultural College, and Prof. A. G. Hopkins, B. Agr., who dealt with hogs and sheep respectively. The evening session was occupied by the address from Mr. Peterson already referred to, and one from Prof. Ferguson on "Breeding for profit," in which he endeavored to show that if Canadian hog raisers stick to the bacon hog they need not fear the competition of the American, who finds the fat pork trade more profitable, that being the home market, whereas bacon hogs were useful only for export trade. The points brought out in his address were chiefly those which *The Farming World* gives to its readers with commendable regularity.—Choose the breed and stay with it.—Use only mature animals for breeding. In his afternoon demonstration in hog-judging as well as his evening address the professor showed his preference for the Tamworth as the nearest approach to

the ideal bacon hog. Breeding twice in the year and avoiding grade sires were impressed upon all who wish to make profit from hogs.

The cattle-breeders met on Wednesday, and after the routine business, election of officers, etc., resolutions were adopted, favoring an agricultural college and asking that all parties except those in charge of cattle be excluded from the ring, at the Winnipeg Industrial fair, during the judging of stock.

The afternoon was occupied by demonstrations in judging by Professors Ferguson, of Michigan, and Sheppard, of North Dakota, for the dairy and beef breeds respectively. Both expressed strongly their profound disbelief in the dual purpose cow. The material for these demonstrations were furnished by Holstein grade (dairy) and Short-horn (beef). The evening session was occupied by addresses from Professor Sheppard, on Live Stock Improvements. The importance of breeding and feeding when combined and the ineffectiveness of either alone was emphasized, and illustrated, by experiments he had conducted. Ex-Premier Greenway followed with a few brief but well-put remarks. Prof. Ferguson again addressed the convention, his speech being an excellent summary of the addresses and demonstrations he had given in the two conventions.

The common error of breeding from an immature bull was criticized, and its mischievous results demonstrated. This was more true, he said, in dairy than in beef breeding, since it required longer to test the dairy qualities of a bull. An immature sire was practically useless by the time his worth was demonstrated, but a mature sire could be employed to a much greater age.

Thursday was devoted to the Dairy Association which reported a very active year's work. Among the matters mentioned in the report was the Dairy Brand's Act requiring every shipper of a package of ten pounds or more of butter to brand or stencil same with a registered stencil. This act was passed last year by the Legislature at the request of the Association. Reports were read showing the standing of various cheese factories and creameries. Among other points brought out by these was the cost of manufacture and sale, being 4¢ per pound in one creamery and 3½¢ in another. This information was not given for cheese factories. Addresses were given on the oil test churn, by Mr. Wheatland, of the dairy school; points in successful creamery operation, by W. A. Wilson, superintendent of government creameries in the N.W.T.; "The Future of Dairying in Manitoba," by Hugh McKellar, Chief

Clerk of the Department of Agriculture; and Feeding, by S. A. Bedford, Superintendent, Brandon Experimental Farm. Mr. McKellar, did not seem to look for any great expansion in the immediate future, and expressed the opinion that centralization in manufacturing would be the keynote of the future, developing large and well equipped plants at central points instead of smaller outfits, throughout the country as at present. Mr. Bedford spoke of his experiments with brome and speltz, the former of which he considers, will add greatly to the profits of the dairy farm. Supt. Murray, of the Dairy School, gave a practical demonstration in judging butter. The evening was devoted to a lecture from Prof. H. E. Farrington, of Wisconsin, on "The Milk Production of the Average Cow," in which he emphasized the necessity of keeping separate records for the individuals of the herd, in order that the profitable ones may be made more so and the unprofitable ones weeded out.

The horse breeders also held their convention on Thursday. The programme was of the same character as those already reported.

At each of these conventions and at the meeting of the Poultry Association a motion was passed favoring a joint-secretarship and referring the nomination to the executive committees who were to meet in joint session on Friday morning. At this meeting two names were placed in nomination, G. H. Greig, by the cattle breeders, and Geo. Harcourt, by the Horse Breeders, Dairy and Poultry Associations. It was announced that the nominee of the meeting would be appointed Live Stock Commissioner and Supt. of Farmers' Institutes for the province, by the Minister of Agriculture. The meeting however could come to no agreement and both names will be submitted to the minister. This matter has provoked the liveliest discussion at each of the meetings and considerable adverse comment has been passed on the evident wire pulling to secure this expected appointment.

The horticultural convention on Friday was well attended both afternoon and evening. The chief speakers were Prof. W. F. MacCoun of Ottawa; S. A. Bedford, Brandon, and A. Mackay, Indian Head.

The weather throughout the week has been the finest imaginable, unless perhaps, a few degrees of cold night have been an improvement.

There were many other interesting events during the week, but the conventions have, to your correspondent at least, completely overshadowed all else.

His Ideal.—First Cat—If you had your choice of all the world, where had you rather live? Second Cat—China! They say there is a wall there 1,250 miles long! Just think of moonlight nights—and a wall like that!

The Guelph Auction Sale

A Great Success. Good Prices for Serviceable Animals.

The second annual auction sale at Guelph, on Wednesday last, under the auspices of the Dominion Live Stock Associations, must be termed a decided success. There was a large attendance and buyers were present from the Western States and from the Eastern Provinces. While the much larger number were there out of a desire to see how the sale succeeded, the number in attendance to buy was by no means small, and the bidding was exceedingly brisk and spirited when anything really good was offered. Pedigrees do not appear to count so much at a sale of this kind, as they do sometimes at private sales. Either the crowd at Guelph did not know much about pedigrees, or they preferred to be entirely guided in their bidding by the quality of the animal itself. With the exception of one or two animals those with a strong pedigree did not appear to arouse any particular enthusiasm in the bidding. We think the crowd acted wisely in this. While the ancestry of an animal is important there must be the individuality behind it. The crowd seemed to be able to size up each animal as it came into the ring pretty closely, and an inferior animal soon put a damper on the bidding. But when anything good was presented the bidding was lively and brisk. This may be gathered from the fact that 106 animals were sold from the time when the sale opened at 10.30 a.m., up to the close at 6 p.m., allowing one and one-half hours for dinner.

The quality of the animals offered generally speaking was much superior to last year, though there were possibly half a dozen, that had better have been left at home and devoted to some other purpose than for breeding stock. With these exceptions, the animals sold were of a kind that will give a good account of themselves on the cattle of the country. For the most part they were well distributed, some eight or ten going to Nova Scotia, a couple to Minnesota and several to the Western ranches.

The cash receipts from the sale totalled \$10,520.00 which was distributed among some 68 or 69 contributors of animals to the sale. The average for the sale was a few cents less than \$100 each or about \$18 per head more than in 1901 when the average for Shorthorns at Guelph was \$81.87. This is a pretty good advance for one year, and we believe that as the years advance and the breeders feel that they can safely bring their very best animals into the auction ring, the averages will be higher. If we eliminate some half a dozen animals that were not in condition and were somewhat inferior in type and which brought prices as low as \$50 and under, the average

for the sale would run considerably over \$100 a head, a good price for animals gathered together from so many sources and accustomed to so many different methods of breeding and handling. There were several animals offered that were not sold, though they would not have been sacrificed had they been sold at the prices offered.

The sensation of the sale was the purchase of the imported bull King Edward by the Ontario Agricultural College. This bull comes of good Scotch stock and was bred by John Young Tilbouries, Scotland, and is eligible for registration in the American Herd Book. He is a handsome red of good individuality and will make a valuable addition to the college herd.

Three Polled Angus and one Galloy were offered but only one sold. The average of the highest bids for the three unsold was about \$91, but the owners decided not to sell at the figures named.

The following is a complete list of the sales made:

LIST OF SALES.

NOTE—The first name is that of the animal sold, the second that of the contributor of the animal, and the last that of the buyer, followed by the price paid.

SHORTHORNS—BULLS.

Rosedale Victor—40586—Calved Dec. 10, 1898: A. M. Shaver, Ancaster; H. J. Kerr, Ravenna, Ont., \$105.
 Archduke—38391—July 5, 1899: A. J. Watson, Castlederg; Fred. Hannaford, Parry Sound, \$75.
 Royal Gem—40606—Oct. 15, 1899: D. DeCoursey, Bornholm; T. Wilson, Everton, \$65.
 The General—32139—Oct. 27, 1899: A. Robertson, Eden Mills, Ont.; F. W. Thompson, Fort Lawrence, N.S., \$80.
 General French—32769—Nov. 1, 1899: Jas. Riddell, Beeton; Geo. Tucker, Drayton, Ont., \$100.
 Conqueror—39571—Dec. 13, 1899: R. L. Holtsworth & Son, Port Hope; Simpson Rennie, Toronto, \$75.
 Corporal John—35212—Jan. 8, 1900: S. G. Little, Hagerman, Ont.; H. W. R. Ironsides, Puslinch, Ont., \$95.
 Royal Prince—38242—March 1, 1900: J. K. Hux, Rodney; F. W. Thompson, Fort Lawrence, N.S., \$185.
 Buccleuch—35930—April 9, 1900: R. Gibson, Delaware; W. H. Gillespie, Orangeville, \$50.
 Bannockburn—35773—April 29, 1900: R. Gibson; James Chisholm, Dunlop, \$70.
 Red Cloud—36486—April 27, 1900: G. D. Fletcher, Binkham; Wm. Shaver, Berlin, \$105.
 Lord of the Valley—37804—May 3, 1900: Geo. Prout, Zepher; Jacob Zeller, Breslau, \$125.
 Chris—37045—May 5, 1900: A. Duncan & Sons, Carluke; Peter Torrance, Lucknow, \$110.
 Oustic Rover—40555—July 27, 1900: H. Oakes, Oustic; Jno. Grant, Waterloo, \$75.
 Royal Wellington—38896—Sept. 20, 1900: C. & G. W. Blyth, Marden; E. V. Thompson, Guelph, \$130.
 Lord Roberts—38791—Sept. 20, 1900: J. G. Chapman, St. Thomas; Joseph Thompson, Magnetawan, \$105.

Duncan Stanley—37324—Sept. 24, 1900: D. K. High, Vineland; B. Switzer, Teeswater, \$115.

Guelph Boy—40533—Oct. 4, 1900: Jos. Kirby, Armstrong's Mills; Simpson Rennie, \$95.

Sir John A.—35574—Oct. 15, 1900: Henry Forester, Eramosa; Ed. Dougherty, Eramosa, \$100.

Village Hero 2nd—40732—Oct. 18, 1900: R. Miller, Stouffville; J. C. Mills, Preston, Minn., \$100.

Roan Sailor—40613—Oct. 27, 1900: W. G. Gerrie, Belwood; Hugh Gibson, Newcastle, \$100.

Maple Bank Sentinel—40880—Nov. 20, 1900: T. Douglas & Sons, Strathroy; A. R. Roberts, Eden Mills, \$100.

Inspector—39302—Nov. 4, 1900: H. K. Fairburn, Theford; W. F. Clark, Parry Sound, \$95.

Justice—39303—Dec. 1, 1900: H. K. Fairburn; D. E. Anderson, Dunganon, \$90.

Maple Bank Judge—39113—Dec. 5, 1900: T. Douglas & Sons; Jno. Hueston, Clatham, \$165.

Wylie—37290—Dec. 7, 1900: Wm. Smith, Columbus; Isaac Andrew, Lucknow, \$85.

Crimson Cruickshank—40581—Dec. 14, 1900: A. Johnston, Greenwood; Thos. Scarf & Son, Durham, \$155.

Royal Duke—40221—Dec. 28, 1900: Peter Stewart, Everton; H. J. Kerr, Ravenna, \$95.

Roberts—39602—Jan. 2, 1901: R. Nicholson, Sylvan; O. Groves, Chatham, \$60.

Don Donita (twin)—40579—Jan. 3, 1901: A. W. Smith, Maple Lodge; Richmond & Hackney, Moore, Ont., \$130.

Don Sevan (twin)—40580—Jan. 3, 1901: A. W. Smith; Albert Partridge, Crown Hill, \$120.

Rule Britannia—39686—Jan. 4, 1901: Robt. Ford, Kimball, Ont.; Joseph Martin, Paris, \$30.

Newcastle George—40521—Jan. 5, 1901: Colwell Bros., Newcastle; H. J. Kerr, Ravenna, \$95.

Moss Trooper—401—Jan. 6, 1901: D. Talbot, Everton; S. Rennie, \$75.

The Doctor—38844—Jan. 15, 1901: E. Jeffs & Sons, Bond Head; Geo. F. Lackner, Hawksville, Ont., \$85.

Royal Warrior—40352—Jan. 15, 1901: D. Talbot & Son, Everton; John Shewan, Palmerston, \$100.

Prince Cruickshank 2nd—40718—Jan. 20, 1901: C. N. Blanshard, Appleby; H. J. Kerr, \$100.

Roosevelt—40559—Jan. 20, 1901: J. W. Cleghorn, Mosboro; T. Wilson, Hnghton, \$75.

Evergl John—40635—Jan. 20, 1901: A. Johnston, Greenwood; J. Gibbon, Marden, \$105.

Lord Minto 2nd—40107—Jan. 20, 1901: Robbie Bruce—40578—Jan. 25, 1901: C. & G. W. Blyth; H. J. Kerr, \$85.

Duke of Camden—40659—Jan. 25, 1901: T. E. Robson, Ilderton; R. A. Fraser, Mount Forest, \$95.

Sir John A.—40706—Jan. 25, 1901: E. Sutherland, Bennington; J. S. Hunter, Shelburne, \$65.

Fergus Stanley—40557—Feb. 1, 1901: H. B. Webster, Fergus; Jacob Horman, Tavistock, \$90.

King Edward 7th—40663—Feb. 2, 1901: W. R. Elliott, Guelph; James Stauffer, Waterloo, \$105.

Lord of Aberfove—38138—Feb. 2, 1901: J. & W. Laidlaw, Guelph; H. Gibson, Dunchurch, \$130.

Lord Chesterfield—40610—Feb. 5, 1901: T. Redmond, Millbrook; D. Talbot, Everton, \$235.

Fergus Stanley 2nd—40558—H. B. Webster, Fergus; Simpson Rennie, \$75.
 Miniature—40730—Feb. 11, 1901: R.

Miller, Wm. Thompson, St. Mary's, \$115.

Bright Boy—39949—Feb. 16, 1901: Jno. McCorkindale, Guelph. A. Luard Burford, \$110.

Roan Prince—40676—Feb. 25, 1901: V. Ficht, Oriol; James Forest, Lebanon, \$75.

White Chief—40636—March 2, 1901: A. E. Meadows, Port Hope; Jno. Milroy, Galt, \$65.

Sir John—39400—March 6, 1901: F. C. Sibbald, Sutton West; E. W. Lick, Beachville, \$75.

Sir Roderick—40708—March 10, 1901: E. Sutherland; D. Rose, Embro, \$65.

Stanley Prince—39979—March 11, 1901: R. & W. J. Thompson, Spires; John Sockett, Rockwood, \$120.

Sir Luke—39401—March 17, 1901: F. C. Sibbald; Arch. McFee, Mount Forest, \$85.

Prince Albert—40674—March 20, 1901: V. Ficht, A. Graham, Westwood \$70.

Stanley—40342—March 27, 1901: W. A. Dickieson, Eramosa; J. Nichols, Beachville, \$75.

Second Duke of Marigold—40609—March 27, 1901: Thos. Redmond, Millbrook; D. Stewart, Hamstead, \$180.

Maplehurst Ambassador—40640—April 1, 1901: J. H. Wooley, Burford; G. C. P. Everett, Mount Vernon, \$85.

Crusader—40238—April 2, 1901: F. Laidlaw, Guelph; W. A. Meadows, Newtonville, \$70.

Lord Minto—40132—April 2, 1901: Alex. Moore, Greenwood; H. G. Vosburg, Beansville, \$130.

Indian Fame 9th—April 4, 1901: R. Nicholson, Sylvan; Adam Mann, Tavistock, \$65.

King Edward (Imp. in dam)—Vol. 18—April 10, 1901: Chas. Rankin, Wyrbridge; Ontario Agricultural College, Guelph, \$315.

Bold Britain—39685—April 14, 1901: Robt. Ford, Kimball; Rich. Luttrell, Oustie, \$45.

Robt. Bruce—40685—April 15, 1901: F. X. Beingsesser, Mildmay; Walter Adam, Macdon, \$70.

Whitehead—40522—April 16, 1901: Colwell Bros.; Geo. McIntosh, Guelph, \$70.

Logan Tom—40607—April 25, 1901: D. DeCoursey; Wm. Hendrie, Hamilton, \$60.

Patsy—39920—Jan. 15, 1901: Jno. L. Howard, Sutton West; August Weicker, Tavistock, \$70.

Innisfail Boy—40643—June 17, 1901: R. A. Thompson, Thornton; F. W. Thompson, St. Lawrence, N.S., \$80.

Red Duke—4164—June 24, 1901: H. A. Potter, Caledon; Hastings Bros., Cross Hill, \$100.

Prince George—40540—July 1, 1901: Thos. Scott, Sutton West; A. J. C. Shaw, Thamesville, \$100.

Chief—39918—Sept. 25, 1901: Jno. L. Howard; Henry Russel, Millbrook, \$80.

FEMALES.

Pansy—28388—Oct. 5, 1894, bred Oct. 30 to Killean—33693—M. Scott, Killean; J. W. Henry Thornton, \$85.

Lady Lorne—31339—Oct. 10, 1897, bred July 15 to Cheriton Champion—33442—T. E. Robson; H. J. Kerr, \$130.

Miss Hislop—41137—Oct. 26, 1897, bred Jan. 1, 1902 to Silver Star 2nd (Imp. in dam); H. Oakes; K. L. Wilkes, Blair, \$110.

Vivandiere—39765—and calf, Nov 25, 1898: R. Gibson; Edwin Battye, Gore Bay, \$150.

Maud Colwill—34909—April 5, 1899, bred Nov. 27 to Brave Baron—23259—Colwill Bros.; H. J. Kerr, \$100.

Wedding Gift 14th—41896—July 14,

1899, bred Jan. 5, 1902 to Meadow Lord (Imp.), Wm. Smith, Columbus; Geo. Johnston, Balsam, \$250.

Lady Beaverbank 5th—Vol. 19—Aug. 23, 1899, bred July 2, to Matchless Sailor—38709—H. B. Webster; Geo. Harris, Canning, N.S., \$110.

Lady Beaverbank 6th—Vol. 19—Sept. 8, 1899, bred to Lord Stanley—22678—H. B. Webster; G. Harris, N.S., \$130.

Wedding Gift 15th—41897—Oct. 2, 1899, bred to Meadow Lark (Imp.), Wm. Smith; David Miln, Ethel, \$205.

26th Maid of Sylvan—41116—Nov. 2, 1899, bred to Chief of Stars (imp.), S. Nicholson, Sylvan; K. L. Wilkes, \$100.

Rose of Exen—Vol. 19—Nov. 2, 1899, bred to The General—32139—A. Robertson, Eden Mills; Albert Smith, Chatham, \$105.

Clementina of Sylvan 2nd—Vol. 18—Dec. 23, 1899, bred to Chief of Stars, S. Nicholson; Geo. Parker & Sons, Wallaceburg, \$160.

Minnie Rosebud—Vol. 19—Jan. 21, 1900, bred to Prince Fragrance (imp.) D. Russel, Brougham; Geo. Harris, N. S., \$170.

Fanny (twin)—Vol. 18—March 11, 1900, bred to Silver Star 2nd (Imp. in dam), W. A. Dickieson; J. H. Gibson, Dunchurch, \$80.

Miss Lizzie—Vol. 19—June 12, 1900, D. DeCoursey; Wm. Hendrie, \$50.

Guinevere—Vol. 18—June 23, 1900, bred to Royal Prince—31241—H. K. Fairburn; David Barr, Jr., Renfrew, \$80.

Lady Stanley—Vol. 18—July 28, 1900, bred to Silver Star 2nd (Imp.), W. A. Dickieson; O. Rhodes, Chatham, \$110.

Rose—Vol. 18—Aug. 20, 1900 D. McMillan, Hillsburg; Geo. Harris, N. S., \$125.

Pepupa—Vol. 18—Sept. 30, 1900: Jno. McCorkindale; Joseph Martin, Paris, \$55.

Minnie May 3rd—Vol. 19—Oct. 20, 1900: A. & W. Whitelaw; James Ramage, St. Helens, \$75.

Verbena 22nd—Vol. 18—Oct. 27, 1901: J. E. Meyer, Kossuth; J. C. Mills, Preston, Minn., \$65.

Countess of Kirklevington 10th—Vol. 18—Nov. 11, 1900: J. E. Meyer; Jos. Martin, \$55.

Minnie May 4th—Vol. 19—Nov. 16, 1900: A. & W. Whitelaw; Geo. Harris, N.S., \$95.

Lady Rosina—Vol. 18—Dec. 22, 1900: E. Copeland, Rockwood; F. W. Thompson, N.S., \$100.

Fancy Maid—Vol. 18—Dec. 29, 1900: E. Jeffs & Sons; F. J. Slade, Centreton, \$110.

Morning Glory—Vol. 18—Jan. 3, 1901: Chas. Rankin; Robt. Harvey, Guelph, \$130.

Rose Elvina 3rd—Vol. 18—Jan. 15, 1901: Robt. Ford; Jno. Tuck, Mosboro, \$45.

Fashion Maid 11th—Vol. 19—Feb. 15, 1901: W. G. Howden, Columbus; J. K. Hux, Rodney, \$175.

Grace W.—Vol. 19—April 4, 1901: G. Whitelaw, Guelph; Wm. Hendrie, \$90.

Fashion Maid 12th—Vol. 19—April 15, 1901: W. G. Howden; F. J. Slade, \$95.

Sutton Belle 3rd—Vol. 19—May 8, 1901: Thos. Scott; O. Rhodes, Chatham, \$65.

Mina—Vol. 18—Jan. 3, 1901: Jno. McCorkindale; Albert Smith, Chatham, \$80.

OTHER BREEDS

Polled Angus bull, Bobs of Rockdale—482—May 23, 1900: H. McDougal, Guelph; H. H. Dunsmore, Granton, \$75.

SHORTHORNS—AVERAGE.

73 Bulls	...	\$ 7,170 00	\$ 98 21
32 Females	...	3,285 00	102 40
105 Shorthorns	10,455 00		99 57

Correspondence

New Ontario the Place.

EDITOR THE FARMING WORLD:

In answer to "A Reader from Scotland," one who has had forty-one years in Canada, beginning in '61, under conditions like your correspondent's, but with less capital, can throw some light on the subject gained by experience.

As to the choice of the part of Canada most suitable to a man with little money and with no practical knowledge of Canada, I would say without hesitation "Go to Northern Ontario," where you can by going far enough get land for nothing. A young man with good courage, good health, and without bad habits may develop with the country, and when middle age overtakes him he should with prudence and forethought find himself with a comfortable competency.

To an emigrant if a single man, the want of capital in the form of money in hand or within reach, can hardly be considered a drawback, as the man with money is much slower in learning the ways of the country and has generally to fool away his capital working out theories which he has brought with him which cannot be adapted to a new country.

The first great necessity is good

land. Of course the emigrant is not competent to judge the quality of the soil or the suitability of the situation of land covered with woods; in this matter he would have to depend in a great measure on the judgment of some disinterested person with more experience than himself.

As to the questions asked relative to the cost of clearing land, buildings, and implements, etc., I would say a young man without capital could clear his land himself and keep what little money he has to meet any great need that may arise; his first buildings need cost him little or no outlay; his own work should do it nearly all. The same with the first rude implements required, an axe, a hoe, and a few of the commonest tools are all that are needed to begin with, and his nearest neighbours will be willing and ready to help him to get settled and will exchange work with the new comer and give him the benefit of their experience.

Above all things the young man starting life in the woods should avoid debt, and next to that the desire to get rich quick, which is nearly as fatal to success; then with good health and lots of courage and perseverance he may by coming to Canada better his con-

dition and leave a home and a name to his descendants that they may be proud of.

To a man more advanced in life the prospects are different, and to him I would say—particularly if he has a family—come to one of the many small towns that spring up rapidly on the outskirts of civilization and let him depend on his former employment at least until he knows a little of the country, then if he would like to try farm life with its greater freedom and harder work he would be able to buy a small place already cleared at least in part, with the capital he brought with him and which he has no doubt guarded carefully for this purpose.

"A Reader from Scotland," and others in a like position would do well to remember that they should not expect to come to a new country and adopt new ways without encountering hardships and having to put up with many inconveniences.

To the man with agricultural knowledge and experience backed up with capital the great prairies of Western Canada might be more to his mind, as there he can begin farming without waiting to clean up the land, but to the man of limited means who wishes to try the freer life of the farm without the restrictions imposed by the older communities, Northern Ontario is far ahead of any field known to the writer.

In the compass of a letter this matter can only be touched on in the most general way, but more particular information could be given to anyone desiring it through *The Farming World*.

An Old Settler.

Muskoka.

Some Points on Butter-Making.

Editor THE FARMING WORLD

In several of your recent issues I noticed that butter-making has been discussed and in many instances not along my line, and I don't wonder at some people getting muddled, as one has called it, if some of these rules are adhered to that we notice in the different papers from time to time. Now, if you will allow me, I will try to discuss a few of the many points in connection with butter-making, which experience has taught, and you can compare my established facts with others which I will be glad to discuss in order that we may further develop this promising industry—Butter-making.

To prepare cream for butter-making is the first point I want to discuss. If you have cream in the vat just after separating that tests 35 per cent. of fat, what is the first thing to do? Take the temperature, and if it is to be churned on the following morning at this time of year or during the period from November 1st to April 1st; have your temperature about 70 F. and ripen at that temperature. As soon as you have tempered your cream at 70 F. add 10 per cent. of good pure-flavored culture starter

and stir well to evenly mix it, but not enough to injure the fat globules. Let it stand at this temperature, stir it occasionally until four-tenths acidity appears when tested with alkaline solution. This is the proper acidity to start to cool your cream. Now, 10 per cent. of a good starter should give you this test in eight hours. Say you add starter at eleven a.m., and at seven p.m. your cream will be ready for cooling. I would cool the cream to 54 and leave the water around it all night, providing you do not use ice; but if the water were so cold that by leaving it around your cream all night it would cool to below 50 F., I would let it run off and place water around the vat at a temperature of 48 F., this will not cool the cream below the churning temperature, which should be 50 to 53 in winter.

A great many butter-makers make a mistake right here; for instance, the churning temperature is 52 and they cool the cream to 46 and raise it to 52 just before churning, and then churn and churn and wonder why they are not getting butter. What is the difficulty? It is just this—they are practically churning at 46, or at too low a temperature. Why, you will say, I heated the cream to 52, but heating to 52 and having the cream that temperature for several hours before does not give the same results. Cream consists of small particles of fat, and to hold these little particles for considerable time at a low temperature these little globules are thoroughly chilled through, and it takes considerable time for a higher temperature to take effect on these so they will be in the same condition as if tempered at 52 for several hours. The same applies to cream at too high a temperature for churning. Cream at a temperature of 60 must at least be kept 3 hours at 52 in order to have the same results as far as churning goes as previous churnings where it was held several hours at 52 before churning. Cream raised from a temperature of 46 to 52 and churned in a few minutes afterwards, will generally give one some trouble to get the granular large enough and occasionally will become round and contain a lot of moisture. Then, again, the higher temperature and cooling to 52 will cause the cream to churn quickly and contain a lot of moisture and buttermilk that will be difficult to separate.

The best system that I can find to ripen cream, as far as temperature goes, is to ripen at 70 and cool so as to have a temperature of 52 F. when ready for churning. Ripening cream consists in the development of lactic acid and the development of flavor to get the best results and have uniform butter, one must have a certain rule and follow it. One cannot have uniformity and have a high temperature one day and a low one the next. If you start to cool your cream when four-tenths acidity ap-

pears, cool to a certain degree and you will have about the same amount of acidity and flavor providing your starter is the same from day to day. Ripening facilitates churning, produces more butter as a rule, improves the keeping qualities of the butter, and gives a better flavor. To secure these results changes in the temperature of cream should be effected gradually. See that your starter is of good flavor. Always ripen at a standard temperature and cools so as to have a temperature of 52 for several hours before churning. The lower the temperature that butter can be churned in a reasonable length of time, the better will be the butter and the better the quality, but from 50 to 53 in winter I think will give the best results.

The point I have tried to make clear by raising and lowering the cream to a certain temperature you will find will be the correct answer for the question asked at one of the Institute meetings. The question was as follows:—"What can I do with hard-churning cream? Sometimes I cannot get the butter at all; then, again, it breaks, but is in such fine particles I cannot gather it together." It is true that when cows are long in lactation it is harder to get butter, and if you have not a thermometer you may be churning at too low a temperature, but providing you have, you will have no trouble if you carry out the system I refer to. But as far as trying such a remedy as churning at a temperature of 80 or 100, I don't wonder at anyone seeing a butter "puddin'" when you looked in your churn. Oh! dear me, how some of us dairy-school fellows get raked over the coals, but I am glad of it. If you do not understand our methods of work we are here to teach you and prove whereof we speak. It is hard, I know, sometimes to swallow all we preach, and a good raking over is not a bad thing.

I purpose writing a letter shortly on "Butter-making in Summer," and will take up then the rest of the work in order to have a first-grade butter if my method is correct.

Hoping that I may have benefited someone in the preparation of cream for winter butter-making.

Robert Ireland,
Inst. Butter-Making, Kingston
Dairy School.

Kingston,
Feb. 17, 1902.

Light Weight Hogs.

Editor THE FARMING WORLD

A good many farmers in Eastern Ontario are still adhering to the very foolish policy of marketing hogs that are too light in weight, and quite unsuitable for packing purposes. The Geo. Matthews Company Limited, report that during the month of January their receipts of hogs graded as follows:

Selects 1398
Light 1840

Light fats	699
Heavy fats	27
Sows	40
Stags	6
Cripples	21
Stores	123

A total of 4,154 hogs, of which only 1,398, or about 33 p.c. were suitable for the manufacture of first class export bacon. If the trade in Canadian bacon is to be increased or even maintained at its present volume, it is absolutely necessary that only hogs of proper weight and quality be sent to the packing houses.

F. W. Hodson,
Live Stock Commissioner.

The Export Egg Trade

The outlook for the egg trade the coming season looks bright. It is expected that all surplus stocks will be cleaned up before the new shipping season begins. In dealing with this trade last week's Trade Bulletin says:

"The great possibilities of our export egg trade with Great Britain can be best understood when the immense imports into that country are considered. For the year ending Dec. 31, 1902, Great Britain imported 170,727,950 dozen eggs, as compared with 168,820,780 dozen for the year previous. Of the above quantity Canada only contributed 7,034,330 dozen against 8,077,020 dozen for the year previous, showing a decrease of 1,042,690 dozen. The imports of eggs into Great Britain last year aggregated in value \$27,478,850, whilst Canada only contributed about \$1,450,000 of that amount. The shipments during the past season, however, pretty well cleared us of surplus stocks, and in fact more money could have been made for a portion of the shipments on this side than what they sold for in England. Held fresh and pickled stocks have been almost exhausted, and are smaller than they were known to be for many years past. Consequently, the new laid receipts this spring should not be mixed with old, as they have been in previous years."

How to Economize with Eggs

Left-over yolks of eggs if put at once into a tumbler of cold water will keep fresh and soft for several days. If dropped into a cup and covered the yolks would be unfit for use the second day. The left-over whites of eggs may be made into macaroons, kisses, or used for meringues. The whites of two eggs with a quarter of a pound of sugar and the same quantity of almond paste will make two dozen macaroons. Where hard-boiled yolks are wanted it is much better to break the eggs, separate carefully the yolks from the whites and drop the yolks into water that is boiling hot; cook slowly for twenty minutes. In this way you save the whites for another purpose.—Mrs. S. T. Rorer, in the March Ladies' Home Journal.

**CHICKENS
DUCKS
GEESE
TURKEYS**

WANTED

DRESSED OR LIVE POULTRY RECEIVED—We will forward empty crates for live poultry and pay charges on all out-going crates. Prompt remittance by Express Order will be made on arrival of shipments less express charges if not prepaid. We do not purchase on commission, but pay in full for all birds on arrival.

Toronto Poultry and Garden Produce Co., Limited
470 Yonge Street - TORONTO



THE CYPHERS INCUBATOR
ON SALE BY RESPONSIBLE CANADIAN AGENTS.

Used with uniform success on thousands of Government Experiment stations in the U. S., Canada, Australia and New Zealand, also by America's leading poultrymen and many thousands of persons in every walk of life. Guaranteed to give satisfaction or price refunded. The original and only genuine non-moisture incubator, fully covered by patent.

WRITE FOR NAME OF CANADIAN AGENT NEAREST YOU.

Agents carry incubators in stock, duty paid, and can save you money. Complete 180-page catalogue for 1902, finely illustrated, free if you mention this paper. Ask for Book No. 111. Address:

Cyphers Incubator Co., Buffalo, N. Y., Chicago, Ill., Boston, Mass., New York, N. Y.

Poultry and Eggs.

Advertisements under this head one cent a word. Cash must accompany all orders under \$200. No display type or cuts allowed. Each initial and number counts as one word.

BROWN Leghorns, Prolific early layers; Strain B' won at Pan-American. Stock for sale—Minorcas, Barred Rocks, Chinese Straits, Eggs in season.
JOHN B. PETTIT, Fruitland, Ont.

FOR SALE—Mammoth Bronze Turkeys, sired by 40-lb. imported yearling tom.
R. G. ROSE, Glanworth, Ont.

FOR SALE. Eggs for hatching. Barred Plymouth Rocks; prize winners, extra large, strong and beautifully marked birds, also Silver Wyandottes. Early chickens always pay best. Write to G. W. KINDER, Strathroy, Ont.

BARRED ROCK COCKERELS, good size, best strains. Pekin Ducks equal to any in Canada. Stock for sale and prices reasonable. MYRON A. GEE, Fisherville, Ont.

FOR SALE. Barred Plymouth Rocks old and young that will win and produce winners. See winnings at Guelph, Ottawa, and Boston shows. Eggs from the above \$3.00 per setting. Wm. McLoud, 332 St. George St., London, Ont.

LYNNHURST POULTRY YARDS. Beverly, N. J. Breeders of high class Light Brahmas, Buff Partridge and White Cochins, Minorcas. Since August last have won 152 first, 105 seconds, and over 40 special prizes. Grand breeding stock for sale cheap. Eggs \$3 per 13. J. S. NEVINS.

SPLENDID Brown Leghorn Cockerels, 31—each Rocks, Buff Cochins, Buff Cochins Bantam and Barred Rocks, White Wyandottes, Indian Games, true blocky type for export; eggs, \$1 for 13. I won leading prizes and sweetpicks at the Ontario, Guelph, and Bradford shows in dressed poultry. Incubator eggs on application.
J. W. CLARK, Onandaga, Ont.

EGGS, EGGS, \$1 per 15, from following breeds: Silver Wyandottes, Buff Wyandotte, Silver Spangled Hamburgs, White Crested Black Polish. Won seven prizes on eight entries at Toronto Winter Show, 1902.
D. S. CULLEN, Drumbo, Ont.

BUFF Opingtons; importations just arrived from England, a number costing \$50 a trio; best strains; eggs from these, \$3 for 13. Also breeders of Barred Rocks, White Wyandottes, Indian Games, true blocky type for export; eggs, \$1 for 13. I won leading prizes and sweetpicks at the Ontario, Guelph, and Bradford shows in dressed poultry. Incubator eggs on application.
J. W. CLARK, Onandaga, Ont.

THREE Light Brahma Cockerels at \$1.00 each, same stock as winner of Earl Minto Cup at Toronto. Eggs from special matings \$2 per setting. Silver Wyandotte eggs only \$1 per setting—cock heading pen was six first prize last winter show.
J. J. PICKARD, Drumbo.

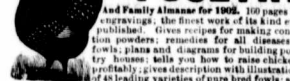
LARGE WHITE PEKIN DRAKE for \$2.00. Light Brahma and S. C. Black Minorca Eggs \$1.00 per setting. Also a few Cockerels for \$1. each.
DAVID G. HOUSTON,
Shannonville Poultry Yards, Ont.



Cramping Machines
Pattening Coops,
Incubators and Brooders
All kinds of Poultry Supplies.
CATALOGUE FREE.
A. J. TORGAN, Mfr., London.

Two Shorthorn Yearling Bulls.
A pen-barred Rock Cockerel, also some silver grey Dorking and silver-spangled Hamburg Cocks.
R. BENNELSON,
Gait Station, Ont.

SHOEMAKER'S BOOK ON POULTRY

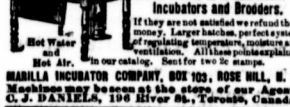


and Family Almanac for 1902. 100 pages 129 engravings, the finest work of the kind ever published. Gives recipes for making condition powders, a most desirable feature for all diseases of fowls; plans and diagrams for building poultry houses; tells you how to raise chickens profitably; gives description with illustrations of 40 leading varieties of pure bred fowls; also

INCUBATORS and BROODERS

and poultry supplies at lowest prices. It is an encyclopaedia of chicken information, worth many times its cost to anyone interested in poultry. You positively cannot afford to be without it. Sent postpaid, on receipt of price, 15 cents.
Address:
G. O. Shoemaker, Box 83, Freeport, Ill.

Satisfied People.
That's the kind that run the **MARILLA** Incubators and Brooders.



If they are not satisfied we refund their money. Larger hatchery, perfect system of regulating temperature, moisture and ventilation. All-steel polished and painted.
In our catalog. Sent for two 5c stamps.
MARILLA INCUBATOR COMPANY, BOX 103, ROSE HILL, N. Y.
Wholesale may be seen at the store of our Agent, G. J. DANIELS, 196 River St., Toronto, Canada.

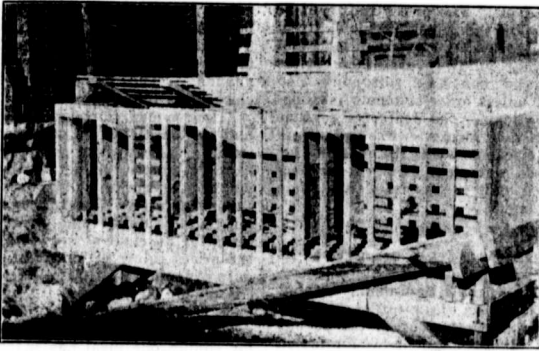
"VIGILANT" NEST
SLIDING—ADJUSTABLE
(Patented Can. & U.S.)

The only nest in the World which positively prevents hens from eating their eggs.
Simple—Effective—Durable
No springs—Eggs cannot break. The inclined nest gathers them safely in lower section. Prevents fleas, or parasites, etc. Everlasting, never failing, comfortable. Thousands now in use. Ask your dealer for it or write to L. F. MORRIS, Inventor, Mfr., 135 Ontario St., St. Hyacinthe, Que.
Price 45c. each. AGENTS WANTED.

C. J. DANIELS
106 River St., Toronto

Is the place to purchase Poultry Supplies.
Send your name and address on a post card for catalogue which will tell you all about it.

HENS PAY
when properly treated. We show you how; every department in charge of a specialist. Big practical paper; treats on chickens from A to Z. 50c. per year 3 years \$1. Sample free.
Canadian Poultry Review
TORONTO.



The New Fattening Crate—showing the doors in the top. Total height of crate 20 inches, height of crate from the ground 16 inches.

Fatted Chickens in Canada

By Mr. F. C. Hare, Chief of Poultry Division, Department of Agriculture, Ottawa

The Dominion Department of Agriculture during the last three years has given every encouragement and help to the export trade with Great Britain in fatted chickens. This work has been conducted by means of chicken fattening stations operated throughout Canada by practical farmers. That thorough Government support and supervision is the most satisfactory way to develop any industry, is shown by the fact that the chicken trade with Great Britain has increased eleven fold in five years.

FATTED CHICKENS SOLD ALIVE.

After Professor Robertson had intimated to the people of Canada the immense possibilities of the British chicken market, where the British consumer desired the chicken fatted for his table, and also had conclusively proven that Canadian chickens could be and were landed in Great Britain in first class condition a number of enterprising export firms were organized in Canada to buy chickens from the farmers and ship them to Great Britain.

Each of these firms preferred fatted chickens to lean chickens, some will pay from one-half cent to one cent a pound more for fatted chickens than for lean chickens, and all buy them alive. Where the farmer has not proper facilities for plucking his chickens, or prefers to deliver them alive at the railway station, the export firms will buy his whole output at a satisfactory price per pound.

FATTED CHICKENS DRESSED AS FOR EXPORT.

Another branch of the poultry industry that has made wonderful progress during the last year is the selling of fatted chickens on the local markets. This trade developed as an adjunct to the export business, but it has at present assumed such gigantic proportions that it threatens to monopolize the whole chicken business.

The question of price at once suggests itself. Will the local merchant pay more per pound for a fatted chicken dressed as for the British market than he will for a thin, scrawny scrub chicken drawn and bled? This question is at once answered in the affirmative.

I shall quote from a few letters the Department has lately received that bear on this point.

The first is from Mr. D. Muirhead, Renfrew, Ont. The Department of Agriculture operated a fattening station in Renfrew, and when the fattening work was completed, Mr. Muirhead secured the use of two crates. The chickens were fatted and when they were ready to ship, Mr. Muirhead wrote as follows: "Kindly let me know who to ship to as we cannot sell to advantage in Renfrew." Several firms were recommended to him, and he wrote later as follows: "I got replies from all the firms you recommended, and shipped them to McDuff Lamb. He paid 11 cents for them. I paid express charges (\$1.40) and fed them about eight bushels of oats and barley, and over 100 pounds of low grade flour

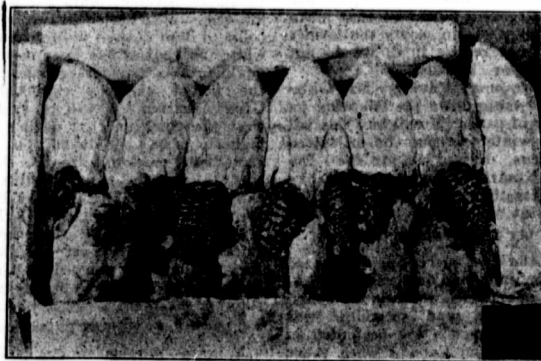
at \$1.00 per cwt. We had lots of skim-milk and mixed all the feed with it. The net weight of the (24) birds was 158 lbs., but McD. Lamb paid for only 156, saying that they had shrunk one pound per box. I got two of the boxes you left at Renfrew. The boxes were too small to hold our chickens, and we had hard work to pack them in. McD. Lamb, in remitting to me, said, that the chickens were in splendid condition, and were very, very nice. I killed and dressed them exactly as you showed me to do. One of the cases of birds weighed 77 lbs., the other 81 lbs. I have been thinking of putting up and feeding two or three hundred next fall, as I have a splendid place to feed them in the barn, along with the cattle. Our stable is warm, light and roomy. I would be glad to hear from you again with any information you may be able to give in regard to feeding next fall."

Mr. Robert Furness, Vernon River Bridge, P. E. I.: "I fatted two lots of poultry since your lot, and I have found that fatted poultry will sell well even in P. E. I. I got 9 cents for the first lot, plucking them the same as we do at our station, and 10 cents per pound for the second lot, and the man I sold to told me that he could sell any quantity of such fowl. I had four chickens that weighed 30 lbs. I see at Amherst the four best weighed 27 lbs. I have been thinking of going into poultry stronger."

The Department has received a number of letters from farmers in Ontario, Quebec and New Brunswick that emphasize the increased price received for fatted chickens, but the above are sufficient.

THE REASON OF THE INCREASED PRICE.

I was talking the other day with a clerk in a provision store in Montreal. I asked him: "Is it difficult to sell fatted chickens for twelve or fifteen cents a pound when you have common chickens that only cost eight to ten cents?" He laughed. "Why no," he said, and walking over to one of the higher



The New Shipping Box—Appearance of chickens when box is opened.

shelves at the end of the store, he took down an ordinary yellow-skinned, torn, unfitted farmer's chicken with a great decomposed crop of food. "There, those are the chickens we have the fun to sell," and all the clerks and myself had a laugh over the appearance of the bird.

Yet, hundreds and thousands of farmers in Canada are placing this type of chicken on the market, receiving a mere nothing for it, and then lamenting the fact that chicken raising is a money losing game, and only suited for the weaker classes of the community. It is high time for this kind of work to end, and for the most progressive farmer to realize the importance of the poultry industry of our country.

The crate fattening of chickens should be carried on by every farmer. Every one that prepares chickens for the market and does not pay any attention to the special fattening of them before they are slaughtered, will see the time when his poultry can only be sold on the market at a loss, and even then, only when the supply of fatted chickens is below the market demands.

Why are fatted chickens readily bought at an increased price? Because, in the first place they supply weight for weight, three times as much edible meat as do lean chickens; all the flesh of the fatted chickens is of superior quality to that of the lean chickens, and also by leaving the blood in the chickens' necks and not drawing the chickens, the flesh is rendered more juicy and rapid decomposition prevented.

FATTED CHICKENS THIS YEAR.

Yesterday I had a conversation with the two largest butchers in Montreal. They were Mr. Henry Gatehouse, 810 Dorchester street, and Mr. McDuff Lamb, 22 University street. Both were enthusiastic in their endorsement of the fatted chicken, and both as strongly lamented the large quantity of inferior stuff that was sent to the Montreal market. "I would rather," said Mr. Gatehouse, "pay ten and eleven cents a pound for well prepared chickens, than pay five or six cents a pound for that mean rubbish. I am sorry the farmer does not realize this; we do not want poor chickens."

Before my leaving, Mr. Gatehouse wrote down the following on a slip of paper: "I will buy this fall and winter 500,000 lbs. of fatted chickens, dressed as for the English market, and agree to pay not less than ten cents a pound for each lot."

WHAT THIS STATEMENT MEANS.

In the first place, one is amazed at the immense quantity of chickens one dealer alone in Montreal can handle, and secondly, this statement marks the beginning of an epoch in Canada when every producer of market chickens must fatten them before they are dis-

posed of. The prices that will be paid for thin chickens in Montreal this year will be less than last, and as year follows year, these prices will be continually dropping, so that unless crate-fattening is adopted at once, the source of revenue that was formerly received from the chickens when the market demands were less stringent or emphatic will be resolved to a mere nothing.

THE DANGER OF OVER SUPPLY.

There was never a question of this kind brought prominently before the people of Canada without hearing from the more cautious or pessimistic element of the people, that these high prices for fatted chickens might rule now, but that the home market would become glutted and the figure then received would be more like six or eight cents a pound than ten or eleven. The home requirements of only one merchant have been mentioned, and he alone can sell more chickens than were shipped to Great Britain last year, and if we neglect to consider any other market in Canada how long will it take to fill this one demand? It certainly will not be accomplished this year or next year.

But the most important factor in dispelling this over supply question, is that the demands of the home market and of the British market are identical.

THE KIND OF CHICKEN REQUIRED.

I was surprised to learn that the demand in Montreal is for a fatted chicken weighing from three and one-half to five and one-half pounds, dressed weight. By dressed weight is meant a dry-plucked chicken, with its head and feet on, undrawn and not bled. In dislocating the chicken's neck, the head is pulled about an inch and a half away from the neck, and the blood runs into the large vacant space between the head and the neck. The body of the chicken is as well bled as if the chicken were killed by any other means, but by this mode of killing the air is not permitted to enter and dry out the chicken. The price of ten cents per pound is for a chicken killed in this manner, and would correspond to about twelve cents per pound for the same chicken drawn. The color of flesh desired in Montreal is white, so that if one examines the qualifications that are required in the fatted chickens exported to Great Britain, it will be evident that the chickens that realize the highest price per pound on the Canadian markets, are the chickens that are the most suitable to export to Great Britain. The British market is unlimited. If there is an over-supply of these fatted chickens in any part of Canada they can all be shipped to Great Britain, and will realize a handsome profit there.

THE HEAVY WEIGHT CHICKENS.

A large number of our poultry producers have the impression that the popular weight for fatted chick-

ens in Canada is from six to eight pounds each. This is not correct. The preferred weight is for a plump fatted chicken weighing four pounds. The demand for large chickens is limited.

A four pound chicken is sufficient for one meal for the average size family. Regarding the question from a purely monetary standpoint, the majority of consumers cannot afford to pay from one dollar to one dollar and twenty-five cents for an eight-pound chicken at the prices ruling in Montreal. If only a portion of a large chicken is consumed at a meal, its appearance is not inviting, so that the smaller chicken that is sufficient for simply one meal has many advantages.

FULFILLING MARKET DEMANDS

Now that the requirements of either the home or export chicken markets are understood, it will be advisable to consider how these requirements can be most profitably and satisfactorily fulfilled.

THE AGE OF THE CHICKENS WHEN MARKETED.

Experiments that were conducted by this Department last year with large numbers of growing chickens determined that from sixteen to twenty weeks was the most profitable time to place chickens on the market. A prominent English provision merchant states the age question concisely: "The watch-words for the export trade should be uniformity of size and appearance, and quick-developing, plump-breasted birds. To assist in the latter, cram all the feed into them they will take for the first fifteen or eighteen weeks and get them on the market. After that age the feed eaten is practically so much wasted as the chickens will not realize prices commensurate with the extra cost."

THE BREED OF POULTRY REQUIRED

The American breed of poultry that will produce the most satisfactory market chicken in Canada or Great Britain is the White Wyandotte.

The Buff Orpington is an English breed of chickens that is demanding the attention of Canadian poultrymen for its general utility qualities. Experimental tests will be instituted this year at the Government hatching, rearing and fattening stations between Buff Orpingtons and White Wyandottes to determine the merits and demerits of each breed.

Individual strains of Barred Plymouth Rocks produce chickens that are suitable for fattening at the proper age, but the large percentage of Plymouth cockerels cannot be properly fatted for market until they are six or seven months old, and will then weigh six pounds each. If placed in the fattening crates when they are three months old they do not fatten sufficiently to plump up and make first class market chickens.

A letter received to-day by the Department of Agriculture from



The New Chicken Box. First Row of Chickens Packed, and two Chickens in the Second Row.

the agent of the Department in Liverpool, Eng., will emphasize this point.

"Referring to 2031 cases chickens shipped by The consignor told me to-day that the only "out" about the consignment was that some poorly fed birds were shipped. There is the demand here for four pound birds, but they must be well finished shipped some birds weighing about four pounds, but the frames were large enough, if properly fed, to have made birds weighing six pounds or over. Well fed birds of four pounds are O. K., but frames weighing four pounds are not wanted."

HOW TO REAR THE CHICKENS.

Artificial incubation and brooding is more satisfactory than the natural method of hatching when two hundred chickens or over are reared each season. The chicks are not allowed liberty for the first two months. Moveable wire frames from twelve to fifteen feet square are placed around each brooder or coop of chickens. This frame is moved to fresh grass every second week. Small grains are scattered in chaff to induce exercise, and mashes of meal and

sour skim-milk fed. Fifty chickens are placed in each brooder.

FATTENING THE CHICKENS.

When the chickens are three or three and one-half months old they are placed in the fattening crates.



Barred Plymouth Rock Chickens Six Weeks Old.

They are fed a thin mash of meal and some sour skim-milk, and tallow is added to make their flesh more juicy. In four weeks they are ready for market.

The evidence of Professor James W. Robertson on the "Fattening of Chickens" will this year contain a

large amount of valuable information about this important and rapidly-growing branch of poultry farming. Photo-engravings accompanying this article show the improved chicken fattening crate, and also the new mode of packing chickens for export, and of which detailed information will be given.

THE IMPORTANCE OF FATTENING.

In conclusion, I would like to impress upon every farmer in Canada the importance of the work of fattening chickens for our home market. The fattening of chickens will pay a substantial profit. Encouragement should be given the younger members of the family to take hold of the work.

Last week I received a letter from a large provision merchant in Canada desiring a capable young man to institute chicken fattening amongst the farmers about his city. I will give a quotation from it. "I know for a fact, there are thousands of pounds of poultry sent to this city which if properly fattened would bring almost double

the price. I would like to know if you could put me on to a first class man who understands the fattening of poultry, as I would carry on that matter in connection with my business."

The young man that is undertaking this work is a farmer's son. He has had practical experience in hatching, rearing, fattening and marketing chickens, and will enter the establishment on a salary far above what an average man receives in other lines of work. This is only one case, two others have come before my notice, and in each a large field of labor was before the fatterer, and every opportunity afforded him to develop the business without limit.

Chicken rearing and fattening will be a large industry in Canada. Every young man that enters the field now will have the most favorable opportunity to carry on the work successfully and profitably. Other large provision merchants, packers and exporting firms will be calling out for capable men to manage the fattening branch of their business, and some of these men who take hold of this work at once, will receive these positions as opened. However, this salary question is after all only secondary. I have



Chickens Three Weeks Old Scratching for Millet Seed.

stated here a few of the advantages of fattening chickens for the Canadian market. The British market has hardly been mentioned, and yet that market is unlimited. The prices received in Great Britain this year gave better returns in Canada after deducting all ocean expenses, than the home prices I

have published in this article. Fattening will grow in popularity in Canada, there will be a uniform type of chicken produced in Canada and these Canadian fatted chickens will be as well and as favorably known on the British market as is any other food product imported from our Dominion.

cost and of excellent quality. The Buff Orpingtons are comparatively a new comer from England, but experience with them so far has shown them to be of rare merit as winter layers and rapid flesh makers. They have light legs and white flesh, which make them well suited for the home and English markets. They will doubtless take a first place on account of their intrinsic merits. The light colored legs and white flesh are two strong strings to the Buff Orpington bow. At this point it may possibly be said, "For years past you have been advising the farmers of the country to procure Barred Plymouth Rocks and Wyandottes, and they have done so. Now you advocate a new comer. Is such a course consistent?" To this the reply may be made that it is my duty as experimentalist to give all points of merit, in relation to breeds, from time to time. If a breed comes to the fore with more favorable points than any other, it is my duty to lay the points of vantage before the farmers of the country. The situation is something like this. If the farmers have Plymouth Rocks and Wyandottes and are doing well with them, let them hold on to them and perfect their strains. If beginning to keep poultry, let the beginners try the new comer. At present both Buff Orpington eggs and stock are held at rather high prices. But when in greater numbers in the hands of breeders and farmers, doubtless both eggs and birds will be cheaper. That Plymouth Rocks and Wyandottes have heretofore acceptably filled the English demand is proven by the statement of Alderman Ruddin of Liverpool, England, who said in a recent communication to the press, "That no better quality of poultry came to England than what he received from Canada, but the farmers of that country must be careful to keep up the high standard of their poultry flesh. No scrubs or ill-dressed poultry of any kind should be sent to the English market." Past shipments have for the greater part been composed of Barred Rocks and White Wyandottes.

HOW TO PROCURE THE EGGS IN WINTER.

Space will not permit of detailed instructions as to the obtaining of the eggs in winter, but the following methods by a farmer, Mr. Wm. J. Moe, of South Franklin, Que., are simple and have evidently been effective. Perhaps on account of their simple nature they will be all the more acceptable to other farmers. Mr. Moe writes: "I made last season \$219 from 80 fowl. My fowl are pure bred. I do not believe in mongrels for they do not make good winter layers. The cost of keeping the 80 hens was for one year \$69.35, which deducted from \$219 leaves a net balance of \$149.65. This is not counting the eggs, or dressed poultry used in our house. The feed we gave the fowl was as follows:

"Morning—Mash composed of cut

Poultry for the Farmers

The Markets and Their Requirements. Eggs in Winter and Fleshy Chicks in Summer. The Breeds Which Will Fill the Bill. Will the Farmers Take Advantage of Their Opportunities?

By A. G. Gilbert, Manager Poultry Department, Experimental Farm, Ottawa

No department of the farm has made more rapid development in the past few years than that of poultry. Notwithstanding the marked progress made the demand for a superior quality of poultry flesh for home and English markets is far greater than the supply. This is in a great measure owing to so many farmers still keeping the barnyard nondescript rather than the rapid flesh making of pure breeds. In a letter to the writer, Dr. Boulton, the manager of the Canadian Produce Co. of Toronto, remarks, "We hold orders from an English firm for many hundred tons of poultry. The most serious aspect of the affair is that we cannot get the birds of the quality we require in quantity sufficient." In a recent conversation with the same gentleman the whole situation was fully talked over. The statement was made by Dr. Boulton, during our conversation, that what was now required by some English firms was a three months old chicken, and they, the Canadian Produce Company, wanted that chicken from our farmers for shipment, as early as possible. For that chicken they were prepared to pay the highest price. The raising of a three months old chicken is a cinch for our farmers.

THE HOME MARKET.

So much for the English market. On the occasion of the same visit Mr. J. M. Wilson, manager of the Toronto and Garden Produce Co.'s extensive establishment at Eglinton, near Toronto, was seen. He said, "We hear a good deal about the great English market and doubtless it is a good one, but as a matter of fact, we cannot get enough of the superior quality of birds to supply our own home market. Tell the farmers not to breed scrubs. We get too many of them and they are useless to us."

PURE BRED VS SCRUB.

There are two great markets for poultry flesh open to our farmers. We have also the plain statement that our farmers do not produce enough of the superior quality to fill the demand. The remedy is plainly in the hands of the farmers. Some time ago there might have been some reason for the exclamation

so frequently heard, "Where can we sell our pure bred chicks. We get the same value for them as we do for our scrubs?" This cannot now be said. Abroad, the scrub will not be tolerated. At home our tastes are becoming more cultivated and the scraggy chicken is no longer wanted. As still more against the scrub, experimental work has conclusively shown that it does not cost any more, if, indeed as much, to put flesh on the pure bred, as on the scrub. In one notable case, at our Experimental Farm Poultry Department, Ottawa, a barnyard cockerel (No. 8) weighed four pounds 6 ounces, while Nos. 25 and 26 Barred Plymouth Rock cockerels of same age and with same treatment, weighed nine pounds and seven pounds respectively. An important difference.

THE MARKETS—THE FARMERS' OPPORTUNITIES—THE BREEDS FOR THE FARMERS.

The urgent demand from the great purchasing centres of Canada to-day is for new laid eggs in winter and the rapid flesh making chickens as early in the summer as possible, the latter for home and foreign markets. The requirements are of dual character. They permit of two opportunities, whereby the farmers may make money. Are they equal to, or willing to take advantage of their opportunities? Doubtless the farmers in some districts are more favorably situated than others as regards access to a good market, but in most cases railway facilities are not far distant. Before the farmers, however, can take advantage of their twofold opportunities they must be equipped with the breeds which will permit of their doing so; experiment all work of fourteen years permits of certain conclusions being given in this respect. Plymouth Rocks, Wyandottes and Buff Orpingtons afford the farmers the means of so doing. Of the Plymouth Rock and Wyandotte families, all varieties will give good results, but the Barred variety of Rocks, and the White Wyandottes have been and are recommended because held in so great numbers and for that reason are likely to be had at cheap

clover, potatoes, or turnips, all boiled together, and rounded up firm with ground wheat, or other ground grain. This was fed warm in winter.

"Noon—Grain thrown in the litter on the floor of the scratching sheds. We have the scratching shed plan of house. We threw the grain in the litter to make the hens exercise in scratching for it.

"Afternoon—A good feed of grain so as to send the birds to roost with their crops full.

"We had green food in the shape of small apples, or turnips. We had also grit, lime and pure water before the layers all the time. We paid strict attention to the details and kept strict account of expenses and receipts. We sold our eggs in Montreal during the winter at 40c to 45c per dozen, and in summer at 15c per dozen. Chickens at 58c to 64c per pair."

The foregoing letter is valuable as coming from a farmer. What one farmer did, surely another can likewise do. Where green bones or meat can easily be procured one pound of either should be given to every 15 fowl three times per week in lieu of the mash. A regular supply of roots or other form of green food, exercise, variety in the rations and the strict attention to details are indispensable to successful poultry keeping. The following form of mash as used by a farmer in the vicinity of Brockville and described by him, may be useful.

Morning ration for 250 hens and pullets: One and a quarter bushels of roots pulped and made crumbly with provender. When provender alone is used boiled meat is used. It is likely that the meat is a form of waste.

HOW TO REAR THE CHICKS.

The chicks may be hatched out in number by incubators and reared in brooder houses or brooders. If in limited number hens may be used, but unless the hens lay well

in winter there will not likely be early setters sufficient to have early chickens in desirable numbers for that reason many farmers are now using incubators and brooders, and in some cases brooding houses. In order to have the chicks make a rapid growth it is necessary that they should be cared for from time of hatching. Experience has shown that farmers will get best results from chickens hatched during the first two weeks in May. This does not of course, apply to broiler raising. After the chickens are hatched they should remain in their nests for 24 or 36 hours until thoroughly "nest

ripe." The mother hen and brood should then be placed in a slatted coop on the grass outside. Before doing so the hen should be given food and water, as she has likely partaken of neither for 36 or 48 hours while hatching out her chickens. The slatted coop should be so arranged that it can be securely fastened at night, with due regard for ventilation. Through the slats the chicks can run on the grass outside while the hen remains inside. Sand to the depth of two inches should be placed on the floor of the coop. The best food for the newly hatched chickens is stale bread crumbs. Next day give stale bread soaked in sweet milk (skimmed preferred) and squeezed dry. This should be fed a little and often. Leave no food to turn sour. Add granulated or "pin head" oatmeal to the bill of fare and keep this treatment up for nine or ten days, when a mash composed of cooked ground grains with stale bread mixed with it may be given. After 12 or 14 days grain may be given, preferably wheat, a little at a time, until the chicks are used to, and can thoroughly digest it. As the chicks progress the table and kitchen waste, excepting salt and fat food stuffs, can be mixed into the mash. Particular care should be given to the chicks during the



A Typical White Wyandotte.

first five weeks of their existence, or until fully feathered. At the age of three or four months the chickens should be placed in crates and fed for three weeks on a ration composed of finely ground oats mixed with skimmed milk to the consistency of thin porridge. A satisfactory fattening ration has been found to be the following: Two parts ground oats, one part corneal, one part buckwheat meal. Keep the crates and chickens free from lice and dirt. Filth and lice are generally found together.

PRODUCE THE SUPERIOR QUALITY IN QUANTITY

There is no danger of overproducing the superior quality. Should a farmer or a combination of farmers desire to reach the English market with their fleshy chickens let them communicate with Prof. J. W. Robertson, the Commissioner of Agriculture and Dairying, and he will arrange for the transit in cold storage from point of shipment to the desired point.

In the above the different opportunities for the farmers making money, by means of poultry, and the simplest methods of doing so are pointed out. It now remains for the farmers to take action and so make money for themselves and the country.

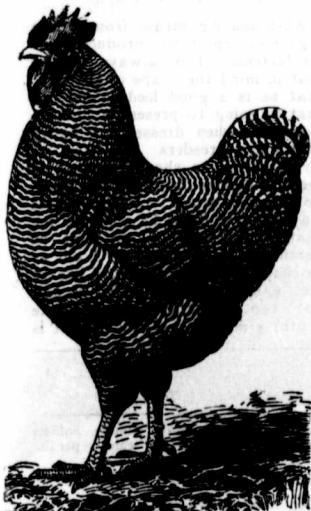
Suitable Breeds and How to Select

By J. W. Clark, Onondaga, Ont.

Since there is a constant and increasing demand for table poultry in the English market, and that the raising of poultry for export here in Canada has developed into quite a prominent industry which has—the most of us think—come to stay, it will be well for us to watch closely and see that the exacting tastes of the pernicky chicken consumers in England are

not hampered by too many vexatious variations.

They want birds that come up to their standard of perfection. Something that exactly suits their eye. A heavy compact body with white flesh and white legs and skin. It is to our advantage to raise poultry that possess certain good qualities. We must have some eggs for incubation but that is of se-



A Typical Barred Plymouth Rock

condary consideration. It is to our advantage to get a breed that will stand forcing, and one that will thrive well under even unfavorable climatic conditions such as we frequently get. We want a chicken that will make a rapid growth on comparatively inexpensive food, and reach an early maturity.

Egg laying machines such as we have in the Leghorns, Andalusians, and Minorcas, will not suit our purpose. These breeds may be all right in their place but their place is not in a feeding crate. I have fed some of that type and believe that I have pumped into them many dollars worth of feed from which I got no profit.

We hear a great deal about the Buff Orpington breed now, I have only a few of them yet, but I am very much pleased with those which I have and have ordered a number from England. We cannot speak too highly of the Barred Rock. They are a breed with which all are acquainted. A breed that excels in the production of winter eggs. If we take a flock of one hundred well bred Barred Rocks we are certain of getting eighty or ninety good birds for feeding. Perhaps the one objection to that breed is their tendency towards yellow legs and skin. But this can be overcome to a certain extent by systematically weeding out our breeding stock which show this tendency, breeding only from whiter skinned and whiter legged birds—and also by feeding a ration that will make white flesh.

The Wyandottes are also a very good breed. I have no doubt that the fanciers of this particular breed could tell you of many points

where they excel the Barred Rocks. From the experience that I have had with them I am not prepared to say that they fit my needs quite as well. Nevertheless they are a very excellent fowl; and for crossing with an Indian Game cock, are perhaps as good as the best.

The same principles that should be observed in selecting breeding animals of the beef breed, should be observed in selecting a cockerel and hens to raise table fowls. It is a block of meat of the best quality that is wanted. You would find it quite as difficult to make a good carcass of chicken out of an egg laying machine as you would to make an ideal carcass with a Jersey steer.

I believe it is wise and essential to the highest degree of success to raise your chicks from hens that are nearly pure bred, and from a pure bred cock. If your breeding hens have a strain of Leghorn in them your chickens will not likely be so uniform. There is more apt to be a larger percentage of culls. There will be some that show the back breeding. But I believe that we get stronger chicks by crossing a pure bred male of one breed with hens of another breed.

An ideal bird for the export trade might be described as having a short neck with a wide head, bright eyes, and a short heavy bill. The legs should be short, squarely set and well apart. The back should be wide and strong. The breast should only be of moderate depth, having plenty of room for a large quantity of meat. The skin, flesh and legs should have a healthy white appearance.

colored legs. From this it will be seen that such birds as Black Javas, Langshans, and Brahmans are more or less handicapped. It would also appear that our most popular fowls the Plymouth Rocks and Wyandottes would have a serious objection in having both yellow flesh and yellow legs, the color of the latter we cannot change, but the color of the flesh is much more easily handled, as its color is more or less influenced by feed; in fact some of the whitest fleshed fowls I have ever seen were Plymouth Rocks which had been fattened on oats and skim-milk. Then again we have the Dorking, a bird fulfilling all the requirements, but one that is not very popular in Canada and under many farmers' care is rather tender although there are some notable exceptions to this. The Indian Game is naturally a yellow fleshed bird, but like the Rock this can be overcome by feed; still the legs being the same color as the Rocks, is some objection. The game certainly has a great development of breast meat. Its most serious objection is in the fact that as a rule the hens are not good layers. We have another breed, a new one to most of us which bids fair to equal if not surpass our old friends the Rocks and the Wyandottes, and this is the Buff Orpington, a bird that has naturally white flesh and white legs; it is as large as our Rocks, and in many cases larger; a good winter layer and in fact it has, so far as I have been able to see, all the good qualities of our Plymouth Rocks; but we must bear in mind that this breed has not been thoroughly tested in Canada as yet and it might be advisable for one to consider well before making the change of breed.

Such breeds as the Leghorns, Andalusians, and Minorcas are not adapted for fattening purpose, neither in shape nor disposition, so we practically do not consider them.

THE SHAPE OF BIRDS.

When mating birds from whose eggs you expect to produce birds for fattening it is always well to bear in mind the shape of the bird; that he is a good feeder, and one that is going to present a fine appearance when dressed. I notice that many breeders pay little or no attention to shape, so long as the bird carries its ancestor's name no matter what confirmation it may have, it must be all right for that is the breed. I am not so particular as to breed as I am as to shape or confirmation: I like to see a bird with a broad breast, not too deep, but of moderate depth; a deep breast is one that is

Fattening Chickens at the Agricultural College

By W. R. Graham, B.S.A., Poultry Manager.

Perhaps no branch of the poultry industry in Canada is receiving as much attention as the fattening of chickens both for the home market and for the export trade. To many the thought occurs that this business is going to be overdone, and that prices are sure to decline. To such I would say that prices are as high now for dressed poultry as they have ever been in my recollection. There is practically an unlimited market in England and our home market is increasing. I have several firms wanting to buy well fattened chickens in quantity but we are not nearly able to supply one

of these firms. Weekly we are in receipt of letters asking us to ship the buyer all the chickens we have, that he cannot get half enough.

In considering how to fatten chickens we have to deal more or less with the following branches: the breeds, the sizes or ages best suited, methods of feeding, and the feeds to be used.

In considering the breeds best adapted for fattening purposes it is well to bear in mind the demands of the English market. There, white flesh is preferred to yellow, feathers on a bird's legs are an objection as also fowls having black

TABLE No. 1.

	First Two Weeks.				Last Nine Days.				Total Cost.					
	Grain lbs.	Milk lbs.	Cost cts.	Lbs. of gain.	Grain lbs.	Milk lbs.	Total Cost.	Lbs. of gain.	Cost of lb. gain.	Total cost.	Total gain.	Cost lb. gain.	Sold for per lb.	
Fed in Crate	41	41	54.12	12.	4.51	30	30	39.6	3	13.2	93.7	15.	6.21	10 cts.
Fed in Crate and from the Crammer	40	40	52.8	12.75	4.14	36	48	53.4	9	5.93	105.2	21.75	4.88	11 cts.
Fed in Loose Pen (5 sq. ft. of floor space per bird).	38	38	50.16	8.	6.27	24	24	31.68	3	10.55	81.84	11.	7.44	9 cts.



A Barred Rock with a Big Egg Record.

Liverpool, told me last year that he did not care to have birds over five pounds in weight when dressed. These facts call for an early maturing chicken, also one that is always plump. The day for the 10 to 12 pound cockerels appears to be passing by. Our experiments in connection with fattening poultry appear to indicate that a bird weighing about 3½ pounds when about 3 to 4 months old is the most profitable size for fattening. Birds heavier than this weight or birds weighing four pounds and over cost much more when fed to produce a pound of gain. It appears from our experiments that a bird weighing 2½ pounds is much more profitable than are the heavier ones, but the 3½ pound birds gave the best returns. By referring to our books I find that chickens weighing 38 pounds to the dozen when crated gained in twenty-four days feeding 21 pounds at a cost of 4.88 cts. per lb. while those weighing 48 pounds to the dozen gained 22 lbs. at a cost of 5.68 cts.

METHODS OF FEEDING.

As to the methods of feeding there seems little doubt but that the fattening crate is far superior for feeding the birds than in the loose pen. It is somewhat different as to the use of the cramming machine. No doubt the use of the crammer makes a nicer bird, but whether the additional cost for labor, or in other words the extra time taken is compensated for in the extra gain is a question not yet settled. With birds that had always been fed moderately well I think the crammer would pay, but where birds have been practically forced to hunt their own food from a chick up to the time of being put into the crates it appears somewhat doubtful if its use is a necessity. I give in table 1 the results of an experiment conducted here which will show the difference in the cost of producing a pound of gain, also the number of pounds of gain made by the different methods of feeding.

FEEDS

As regards feeds we must bear in mind that such feeds as corn, turnips, yellow carrots, and cotton seed meal have a tendency to make yellow flesh while such foods as oats, buckwheat and milk tend to make a white flesh.

When feeding chickens for fattening great care must be exercised not to overfeed the birds at the start. There is no doubt but what a great many of the failures on the part of those who have been trying to fatten chickens has been due to overfeeding at



A Cheap Poultry House.

the beginning. I consider that 2 pounds of grain per day for 12 birds is sufficient. I think it best to divide this into 3 equal feeds if convenient, if not 2 feeds daily answers very well, after the first week the birds should be fed all they will consume readily but no more, great care must be taken not to allow any food to remain in the trough from one feed to another. Generally speaking we are able to get 12 birds to eat 3½ pounds of grain per day during the latter part of the second week. Our experience leads us to believe that it is seldom wise to feed birds for more than 24 days, by the end of this time they will have made about as many pounds of gains as can be put on profitably. No doubt they will gain more, when fed for a longer period but the amount of gain made will not in all cases compensate for the food fed.

Our method is to crate the birds and feed them from the small trough in front of the crate for the first two weeks, the next week or ten days the birds are fed from the cramming machine.

The following table will give some idea of the best kind of foods to use and the amount of gain that can be made under ordinary conditions. I might say that we generally aim to feed 1 pound to one and one half pounds of milk with each pound of grain:

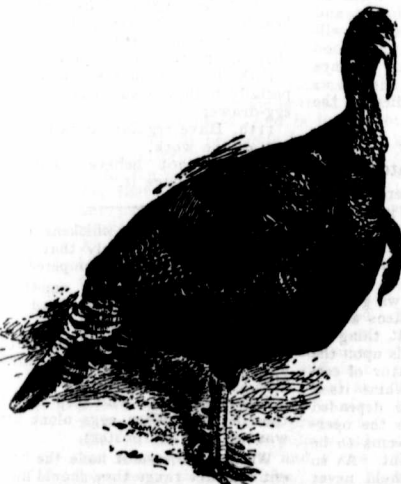


A Good Shaped Barred Rock Bird.

hard to make appear plump unless it is accompanied by extreme width and in many instances a bird in good condition is rendered unsightly by having a very high breast bone, when had the breast bone been an inch or so less in depth the breast would have appeared plump and meaty; we also want a broad back, a good width at the shoulders and extending well back to the tail-head. These are the main points to be considered in body shape. As to leg we want rather a fine bone but yet large enough to be consistent with fair size and good constitution; the legs of moderate length, not leggy, and set well apart with little or no inclination toward bending inward when the bird is standing naturally. The neck should be of fair length and well arched indicating vigor, and the head should have a short, stout, well curved beak, the eye bright and active. Always bear in mind that constitution and vigor are a necessity.

THE SIZE.

We have recently heard that our fowls that are being exported to England have been a little too large, one firm stating that a three and a half pound bird is what is wanted. Mr. Ruddin, from



First Prize Bronze Turkey at the Pan-American Exposition.

GROUP II.—Cornmeal 2 parts, ground buckwheat 2 parts, pearl oat dust 1 part. Cost per cwt. \$1.22.

	Weight when put in crates.	After two weeks feeding.	Gain.	Grain consumed.	No. of lbs. of grain for 1 lb. gain.	Milk consumed.	Cost of 1 lb. of gain.
1st Trial*							
2nd Trial	48 5	65	16.5	42	2 54	42	3 363
3rd Trial	48	63	15	40.5	2.7	41	3.56
Average	48.25	64	15.7	41.25	2.62	41.5	3.461

*This food was not used in the 1st trial.

GROUP III.—Cornmeal 4 parts, ground buckwheat 2 parts, pearl oat dust 2 parts. Cost per cwt. \$1.25.

	Weight when put in crates.	After two weeks feeding.	Gain.	Grain consumed.	No. of lbs. of grain for 1 lb. gain.	Milk consumed.	Cost of 1 lb. of gain.
1st Trial	45	53	8	35	4 375	35	5.797
2nd Trial	47.5	63	15	41	2.66	41	3.63
3rd Trial	50	62	12	40	3.3	40	4.416
Average	47.5	59.33	11.6	38.66	3.445	38.66	4.614

GROUP V.—Pearl oat dust. Cost per cwt. \$1.50.

	Weight when put in crates.	After two weeks feeding.	Gain.	Grain consumed.	No. of lbs. of grain for 1 lb. gain.	Milk consumed.	Cost of 1 lb. of gain.
1st Trial	48	60	12	34	2 83	34	4 83
2nd Trial	49	63	14	40	2.85	40	4.57
3rd Trial	47.5	60	12.5	40	3.2	40	5.12
Average	48.166	61	12.8	38	2.96	38	4.84

The following prices per cwt. were paid for grain:—Cornmeal \$1.10, ground buckwheat \$1.20, middlings or shorts 90 cts., animal meal \$1.60.

Some Practical Points on Turkey Raising

The average farmer's wife in this country is more or less familiar with the raising of turkeys, geese and ducks. And yet how different are the results obtained even on adjoining farms. On one farm nearly every turkey hatched will be reared and fattened for market, while on the very next lot, three-quarters of the young birds die before they are a month or two old. The reason is to be found in the better care and management in the one case than in the other—the attention to the little details in the care of the young birds. By knowing somewhat of the habits of the birds a person is better prepared to give them the proper care and attention. The following extracts from a recent work on practical poultry keeping will be found of value to every poultry raiser:

Cross a bronze gobbler with common hens, and allow six hens with each gobbler as a limit, though fewer are better. Each hen will lay from twenty to forty eggs, according to management. The period of incubation is thirty days. Sixteen eggs constitute a setting for a hen. Allow the young ones no food for twenty-four hours. Then feed often (but avoid over-feeding), giving food at least every two hours until they feather. The reason of this is that the growth of feathers on young turkeys is very rapid and demands a constant supply of nutrition, hence a single omission of food for a few hours sometimes proves fatal. The feed at first should be coarse corn meal, which is added to a mixture of milk and eggs. This should be cooked, and an onion chopped up and added to it. After they are three days old, feed mashed potatoes, chopped onions, ground oats and eggs well mixed with milk, and cooked. Milk is always excellent. After they are a week old the egg may be omitted, but a portion of cooked meat and a little ground bone should be allowed. They may then be allowed grain of all kinds

(corn being ground), cooked vegetables and milk. The water should be fresh and clean, one-quarter of a teaspoonful of tincture of iron to be given in every pint of water.

One of the secrets of raising young turkeys is never to allow them to get wet or chilled. The damp grass is fatal. Keep them in a coop with the hen for three or four days, and then allow them to ramble with her on dry days only, keeping them in a roomy place on the approach of damp weather. They cannot be confined like chicks, as it is not their nature, but if carefully watched until they are beyond danger they are very hardy and can take care of themselves. Do not attempt to raise turkeys unless you have ample room for them to forage upon, as they are fond of straying off to long distances and easily fly over the highest fences. Keep the male away from the hens while the latter are setting, or he will eject them from their nests. When on the nest the hen sticks closely, and will nearly starve before she will leave it, consequently her food should not be neglected. Turkeys are subject to the same disease as chickens, and the remedies in the case of one apply to the other.

Operating Incubators.

The question of brooders and incubators is becoming an important one in Canada. For rearing chickens on a large scale these are about the only means of making the business profitable. If one understands the natural laws governing the hatching of chickens an incubator is not a difficult thing to manage. Success depends upon the observance by the operator of certain rules and the machine itself must not be altogether depended upon. The following on the operating of incubators seems to be practical and to the point: As to the heat required it should never exceed 104 degrees, as it is impos-

sible for eggs to be warmed to a greater degree under hens. When under hens, it is well known that the hen often leaves them to seek food, the time during which the eggs are exposed varying from ten to thirty minutes. This fact teaches us that should the heat in the incubator be lost to such an extent as to reduce the temperature to that of the atmosphere, for a short time only, no danger will occur. It is even believed that this cooling process is essential to the success of the chicks in the shells, but it is certain that they should not be kept cool for a long period. The moisture is only necessary to saturate the atmosphere surrounding the eggs, as water enters largely into their composition.

During the three weeks in which the eggs are subjected to warmth, it must be fully up to 103 degrees on an average. If below this, the chicks will come out weak, and if above such limit, they will become deformed or die in the shell, from too much loss of moisture. Turning the eggs simply prevents adherence of the contents to the shell, though it also equalizes the distribution of the heat. Do not give too much moisture. This may be indicated by the moisture condensing on the shells, and when it happens the chicks will be suffocated, as the water closes the pores of the shells. To give the rules in a condensed form, we will state—

1st. Keep the temperature as near 103 degrees as possible.

2d. Turn the eggs twice a day.

3d. Cool them well once daily.

4th. Place wet sponges in the egg-drawer, from which to impart moisture.

5th. Avoid handling the eggs, using gloves if necessary.

6th. Allow plenty of ventilation in the room where the incubator is operated.

7th. When the chicks are coming out, do not open the drawer, as cool air is then injurious.

8th. Let the chicks dry well before removing them to the brooder.

9th. Select eggs only from strong healthy stock, rejecting those that are very small, extra large, misshapen, or otherwise imperfect.

10th. Keep strangers away, especially if they wish to inspect the egg-drawer.

11th. Have regular hours for doing all the work.

12th. Do not believe that "a child can manage it."

Caring for young chickens does not in any way imply that they should be coddled or pampered.

Two-thirds lard and one-third coal oil will kill the large head lice on the young chickens.

When chickens are fed and cared for so as to keep them at a stand still the food is thrown away.

Unfertile eggs will keep longer than fertile. When eggs alone are wanted keep no roosters.

When fowls cannot have the benefit of a free range they should have meat twice a week.

The Sugar Beet World

Devoted to Sugar Beet Culture in Canada and Allied Industries. Specially
Representing the Farmers' Interests

Edited by JAMES FOWLER

Sugar Beetlets.

The three Bay City sugar factories dispersed \$204,860 to their beet growers January 15th. The Michigan factory paid out \$59,860, the Bay City \$94,000, and the West Bay City \$51,000. These amounts were paid to farmers for beets, and are exclusive of all wages and salaries. The amount paid out for sugar beets this campaign now amounts to nearly \$1,000,000, and the new German-American Co-operative factory is only just beginning operations, so that more than that sum will be paid the farmers here this year.

The Rocky Ford, Col., Enterprise says: "This is going to be a good winter for testing the value of beet pulp as a stock feed. At all events there is a great deal of it being fed, though it is fed mainly in a way to test its commercial value rather than its food value. The shortage of the corn crop and other feed crops last summer makes the demand for beet pulp extraordinary, and beet growers are not only taking their quota of pulp returnable to them under their contracts, but a ready market is found for the surplus among the local feeders of sheep and cattle. The sheep in particular are taking very kindly to pulp, so that much of the mutton which goes into market from this locality next spring will be made of beet pulp. Cattle also are being fed up to the limit, especially milch cows and young stock, and only so much hay and corn as is absolutely needful to finish and fit the meat animals for market, will be fed."

Sugar Beets gives a description of the manner of handling the residuary pulp from the Loveland, Col., factory. The product is taken by a conveyor: "The trestle extends out from the factory a distance of about forty rods, and beneath it is a large wooden tank, which is covered on the bottom and sides with a plank, and is intended to hold the beet pulp from time of manufacture until it is disposed of to the farmers or fed to stock. The beet pulp can be deposited at any part of this immense tank or receptacle and will keep indefinitely. As the pulp is full of water it probably represents a greater weight than the original beets before running through the slicer, so that the Loveland factory must be prepared to take care of 60,000 to 70,000 tons of the pulp. As food for sheep ten pounds per diem is a sufficient quantity for each animal, and as a food for cattle from forty to sixty pounds per day is the proper ration, so that a ton of pulp would last a sheep 200 days, and a cow from forty to sixty days."

The Wisconsin Beet Sugar Com-

pany closed its first season's run on January 18th. The factory began operations the fore part of November, and in that time the factory has reduced in round numbers 20,000 tons of beets to pulp, out of which it has extracted and refined in round numbers 4,000,000 pounds of white granulated sugar. In addition to this, there have been thousands of tons of beet pulp sold for food for stock, which have been freely bought and prove satisfactory for all kinds of stock. The sale of the pulp for fodder netted the company \$20,000.

At Lansing, Michigan, 4,000 sheep are being fattened on sugar beet pulp, and the experiment has progressed so favorably that a profit of \$2 per head is figured on.

The beet sugar industry in Michigan is making more rapid strides than in any other section of the country. This year over 83,000 acres of beets are going into sugar. Next year the 17 factories will require 5,000 acres each, or a total of 85,000 acres. This is rapid development, but when it is remembered that it will take 300,000 acres of beets to supply enough sugar to supply Michigan alone, it can be seen that the industry is far from being overdone. It also indicates the possibilities of the sugar beet culture in the United States.

Limestone in Sugar Making.

A limestone containing too much silica will have a tendency to fuse and if overheated will adhere to the walls of the kiln.

Stone in too small pieces, or stone and coke not properly distributed will sometime "scaffold" or bridge, and will prevent the downward progress of the stone and lime. The admission of too little air to the kiln results in an imperfect combustion and an excess of carbonic oxide in the gas, and as these items are of vast importance, therefore it is necessary that a great deal of care should be exercised at the kiln and in the solution of the limestone. The stone is burned in the factory instead of using the prepared lime, for the reason that in burning large quantities of carbonic acid gas are driven off and utilized in the manufacture for purifying.

The burned lime is put into the juice either in dry form or as milk of lime in the first process after the juice is sufficiently warm. The object of this is to have the lime unite with the impurities in the juice both chemically and mechanically, and then by injecting the carbonic acid gas, by bubbling it through the lined juice a union is made, and this practically forms the original substance with the

limestone before burning.

The limestone should be pure and as large quantities are used should be cheap. Magnesium is not objectionable so far as the kiln is concerned, but is objectionable in the purification of the juices.

Sulphate of calcium has the same objections, silica and aluminum cause great inconvenience also. Excessive moisture reduces the temperature of the kiln when charging. Many other ingredients are harmful and it is necessary to make a careful analysis.

Popular Prejudices Against Sugar.

A pamphlet has been issued by the Austrian Sugar Manufacturers' Association and distributed widely amongst the general public. It was written by W. Berkfield, Ph.D., of Aschersleben, Germany, and deals with the most prevalent prejudices against the use of sugar. As many of these prejudices are still current in the United States, and sugar manufacturers may wish to have, in concise form, the most important arguments in favor of the use of sugar, the important matters in the pamphlet are here-with given in translation.

The prejudices against the use of sugar are a good deal like the superstitions with respect to witches and other popular delusions. For this reason they are difficult to fight and all the more so as the real cause and origin of these prejudices has never been definitely ascertained.

There is, for instance, the idea that the use of sugar is injurious to the teeth. This prejudice has been frequently met by calling attention to the fact that those people who use the largest amount of sugar are the ones that possess the best teeth. Reference has also been made to the fact that negroes working in the sugar plantations can consume unusually large amounts of sugar. They suck it from the cane during their work and claim that, without taking this sugar, there were unable to perform the amount of hard work which is required of them.

Of late years, however, science has succeeded in proving in a simple but indisputable manner how utterly untenable this prejudice is as far as the effect of sugar on the teeth is concerned. The chemist Dantine demonstrated that people with sound teeth, after eating two grams of sugar, do not have the slightest taste of sugar in the mouth after the expiration of fifteen minutes, and that even where the teeth are diseased all the sugar disappears in the mouth in from thirty to forty minutes.

THE FARMING WORLD

OTTO WEINSHAUSEN, Pres., Treas. & Mgr.

Authorized Capital \$250,000.

American Copper, Brass and Iron Works

MANUFACTURERS OF COMPLETE EQUIPMENTS FOR

Brewers, Distillers, Beet Sugar Factories,
Refineries, Glucose Works, Etc.

WILL CONTRACT FOR COMPLETE PLANTS IN ANY PART OF THE WORLD

TELEPHONE MAIN 1296
Cable Address "WEINSHAUSEN" A.B.C. CodeESTABLISHED 1867
INCORPORATED 1890

113-119 Michigan St., cor. La Salle Ave., - CHICAGO, U.S.A.

The objection to sugar on account of its effect upon the teeth is based upon the supposition that it produces lactic fermentation in the mouth. This claim is proved absolutely false by Dantine's experiments, since it is impossible for lactic fermentation to be generated within a few minutes, especially in view of the infinitesimal amounts of sugar which remain in the mouth. But even if these traces of sugar remaining in the mouth were able to induce lactic fermentation, the lactic acid would have to overcome the alkalis contained in the saliva, which covers the teeth before it could attack the teeth themselves. It is not denied that sugar, especially in crystallized form, painfully affects the exposed nerve of a diseased tooth, and this is done even to a far greater extent by many other foods, as salt, apples, fat, sour milk, and even by cold or warm water, or mere difference of temperature in the air. It would be necessary, therefore, to charge all such foods with at least equally injurious influence upon the teeth. This is probably not done, for the reason that most of them are believed to satisfy hunger. It is one thing, however, if an article of food affects the exposed nerve of a diseased tooth, and quite another thing if it attacks a sound tooth and causes it to decay.

Another objection which has no better foundation, and yet persists in recurring, is that sugar has an unfavorable effect upon the stomach and the intestines by inducing lactic and oxalic acid fermentation. This claim can refer only to a sick stomach, since a healthy one suppresses all foreign fermentation by its own acid. If this claim was true, what would be the effect of sour milk upon a healthy stomach, since it became sour only by a lactic fermentation? There are many people who cannot take sour milk without sugar and are able to digest it only after eating sugar. This effect is caused by the exceedingly rapid digestion of the sugar, and this property, which is the primary condition for a sick stomach in taking food, also accounts for the fact that sugar does not cause the least trouble, even in a sick stomach, when it is no longer able to digest most other foods.

It is also a fact that of late years thousands of persons afflicted with stomach troubles have had this experience in their own cases, and one of the most celebrated physiologists of the century, Moleschott, in 1892, cured some cases of chronic gastric catarrh, which had resisted all previous efforts of medical art, by simply putting the patient on a diet of sugar.

It is more in the nature of praise than condemnation that sugar is said to make people fat if used in abundant quantities. Unfortunately, this prejudice is not based upon fact. If it were true, no better proof could be found for the nutritive value of sugar. Unfortun-

nately, there is no substance in the world which in itself makes fat, not even sugar, as is well known by the farmer who wants to fatten stock. It is here as everywhere, the fact that the excess of food produces this effect. Sugar, therefore, unless used to excess, does not make fat, but produces in the first place muscular energy. In the second place, by promoting digestion, it exercises a very favorable influence upon the metabolism in the system, and it is only in the last place that, like every other carbohydrate, it causes deposits of flesh and fat.

There are many other popular prejudices which prevent the greater expansion of sugar consumption, but reference is had to only one other form of this popular superstition, which is just as untenable as those already referred to. There are many people who seriously claim that the continued use of ample quantities of sugar can produce diabetes in a system otherwise healthy. Such a superstition can exist only with total ignorance as to the character of this disease. Diabetes is a chronic derangement of nutrition, whereby, from causes, which still remain unexplained, the grape sugar produced in the blood is excreted without being assimilated. This excretion of sugar is a symptom of diabetes, but only in connection with other organic defects. The mere occasional excretion of sugar, where abundant quantities are consumed, may occur at times in a perfectly healthy system and has absolutely nothing to do with diabetes.

All these prejudices, being based upon pure fiction and absolutely groundless, would probably not

have survived to the present day if all men knew what it is that they introduce into their system by the use of pure natural sugar.

There are two classes of substances to be considered in nutrition. First, plastic matter, including carbon, hydrogen, sulphur, phosphorus, chlorine and some metals. In the second place, those which supply heat or energy, as fats, excess albumen, gluey matter, oxygen and grape sugar. Whether we eat milk, potatoes, bread, leguminous vegetables, of fresh fruit, we find that in all cases a large part of these foods reaches the blood in the form of grape sugar. The same thing is true of cane or beet sugar, which is also converted into grape sugar before it reaches the blood vessels. In other words, grape sugar is the form in which all the bodies in a large group of food articles, i. e., those which supply heat or energy, pass into the blood. Of the most common of foods, potatoes supply 20 per cent. of grape sugar; wheat bread, 50 per cent.; beans and peas, 52 to 53 per cent.; rye and wheat flour, 69 to 72 per cent.; barley and rice, 76 to 78 per cent.; starch flour, 82 per cent.

This grape sugar is the source of energy and is used chiefly to replace the energy consumed in the work of the muscles.

For this reason the most eminent physiologists consider sugar a singularly useful nutriment for the muscles. Besides, being very readily digested, it is better suited than any other food quickly to restore the energy consumed by an exertion of any kind.

(Continued on page 218.)

The Kilby Manufacturing Co.

FOUNDERS AND MACHINISTS

Corner Lake and
Kirtland Streets,

Cleveland, Ohio

New York Office:
220 Broadway.Builders of Complete Machinery for Beet, Cane and
Glucose Sugar Houses and Refineries.

The Agricultural Gazette

The Official Bulletin of the Dominion Cattle, Sheep and Swine Breeders' Association, 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, \$1.

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 10,000 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.

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.—A good man to work on a farm near Brantford for about nine months of the year, say from March 15th to December 15th. Must be steady, trustworthy and used to general farm work. No. 907. a.

Wanted.—A young man to work on a farm ten miles from Toronto, with experience in farm work and kind to stock. Wages \$180 a year and board. No. 908. a.

Wanted, an unmarried man to take charge of 50 sheep in the back country; must have experience and be sober and industrious. Wages \$18.00 a month. A comfortable little shanty with bedding, cooking utensils, stove and furniture provided. No. 909. a.

Wanted.—A man to work on a farm near London, who is experienced in general farm work. Must be sober, reliable and a good worker, and have good references. Will engage for eight months with the opportunity of engaging by the year afterwards. Highest wages to good man. No. 910. a.

Wanted.—By April first, two reliable men accustomed to dairying and market gardening, must be strictly sober and reliable. If married, a comfortable house,

wood and other privileges. Liberal wages. No. 911. a.

Wanted.—A strong boy for general farm work, must be able to plough and milk. Liberal wages by month or year. No. 912. a.

Wanted.—By 1st of April, an experienced man to work on a farm, reliable, good worker and capable of managing a team and willing to milk occasionally. Must be sober, wages \$145, for 8 months. No. 897. b.

Wanted.—Unmarried man for general farm work, who is able and willing to do any kind of farm work. Will hire by season or by year. Good reference required. State wages expected. Address P. O. box 58, Wyoming, Ont. No. 898. b.

Wanted.—A married and single man to work on a dairy farm, three miles from Toronto. Good brick house and modern stables. Married man must be capable of taking full charge when required, board three men and give good references. No. 899. b.

Wanted.—Man to work on farm, either married or single, constant work to suitable person. Must be experienced in farming and understand the feeding and caring of stock. Free house, garden and fire wood to married man. Could commence work now or 1st of April. References required. No. 901. b.

Wanted.—A single man to hire for 8 months from 1st of March, or by the year, on 150 acre farm near Barrie. Must be a good milker and kind to stock, trustworthy and experienced. Good wages and board. No. 902. b.

Wanted.—A man experienced in all kinds of farming to work on a 100 acre farm. Wages \$175 a year. No. 903. b.

Wanted.—A young man about 18 years old to work on a farm near Toronto. General farm work in summer, attending stock in winter, must be agreeable, quiet with stock, and willing to assist in milking. Duties to commence at once.

Will engage by the year, highest wages to good man. No. 904. b.

Wanted.—A man experienced in general farm work, must understand the care of horses, be reliable, sober and active. Wages about \$220 a year, yearly engagement. No. 905. b.

Wanted.—A good all round gardener, must be able to milk and help with the other small jobs. Wages \$25 a month for 8 months. No. 906. b.

Domestic Help Wanted.

Wanted.—A good girl for farm house near Georgetown. No outside work and four of family. Good wages. No. 913. a.

Wanted.—On a farm, a good strong woman to assist with house work where a chore boy is kept, four cows, and a separator used. No. 914. a.

Wanted.—Girl or woman to assist with house work on a farm, must be experienced and willing to make herself generally useful and give references. Family consists of man and wife and would be an excellent home for middle aged woman or widow wanting such. No. 900. b.

Situations Wanted.

Wanted.—A position by a man 50 years of age, taking care of stock; who has had a great deal of experience in feeding and caring for prize stock; or a position with a private family, where a few horses and cows are kept, and would take charge of the garden, lawn, etc. No. 978. a.

Wanted.—A position on a dairy farm or creamery as butter maker, by a young man who has had a great deal of experience and is competent of taking full charge of a dairy farm, having taken the full course at the Dairy School. No. 979. a.

Young married man wishes a situation on a farm, over ten years experience in general farm work with good references and no bad habits, at liberty 1st of March. No. 975. b.

Two Englishmen desire work on a farm, experienced, steady and willing. Address G. Davenport, 251 Ferguson Ave., Hamilton, Ont. b.

Wanted.—A position by a married man who has had a great deal of experience in farming, dairying and taking charge of high class stock and a knowledge of diseases prevailing among stock. Age 40 years, not afraid of work and a Scotchman by birth. No. 977. b.

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

Eastern Ontario Poultry Association

REPORT OF THE SECRETARY

I have to congratulate the Association on the large increase in membership for this year, also the large entry for our show. Although the show is held at a later date than usual, both the exhibits and the number of exhibitors have increased in numbers. As you are all aware, the present dates were chosen, in order that the Poultry Show might unite with the Live Stock Associations, and have a cattle exhibit and sale combined with the Poultry Show. The object aimed at is to reach a greater number of people, and also to reach the people, who, while they are the largest producers of market poultry, would be more likely to attend a poultry exhibition combined with an exhibition of Live Stock. Mr. F. W. Hodson, Dominion Live Stock Commissioner, has been untiring in his endeavors to strengthen the poultry associations, and the present change in their position is due to his efforts.

The poultry industry of this Province, both fancy and commercial, is in the hands of the poultry associations. It is their business to develop it. How far our market for poultry is extended, depends to a great extent, on the work of the poultry associations. For some years the Ontario Department of Agriculture has given aid to the poultry associations, to assist in this work. They have done a good work by encouraging the raising of a better class of poultry, by means of the competition at exhibitions. Without the work done by the poultry associations in the past, the poultry industry would not be in the advanced stage it is to-day. This is no reason, however, why we should not make the most of our present opportunities, continue on progressive lines, and develop the poultry industry to its greatest extent. We have great opportunities. There is no other line of agricultural products capable of such a large proportionate increase. Those engaged in the export of poultry state that only a small percentage of the amount they require, can be procured. The Minister of Agriculture of Ontario, recognizing the importance of the work, increased the grant to the Poultry Association, and also gave to the Eastern Ontario Poultry Association, considerably more territory to take under its charge. This grant is now one thousand dollars, (\$1,000.00). The responsibility of the Association is proportionately increased. Your special work will be to arouse more interest in the poultry industry, to encourage the raising of more poultry, to feed that poultry better, and to place it on the market in a finished condition.

How shall we do this work? Our poultry show should not be an exhibition only. It should bring out exhibits of the very highest quality. This can only be done

by encouraging strong competition. But the poultry show should be a grand "round-up" of poultry fanciers and poultry feeders, where practical subjects relating to the poultry industry are discussed from a commercial standpoint.

In addition to the work done at our show, I believe we should also work through the local poultry associations and through the Farmers' Institutes. The local associations should be induced to take up the educational work in their own districts. During the winter months fortnightly meetings could be held by the local societies. There are good poultry men in every district who are capable of giving good practical talks on poultry subjects. Occasionally it might be possible to arrange for outside help. Special attention should be taken to have a local association organized in every district where no local organization now exists. This is the only way in which the entire Province can be reached and the poultry industry boomed. The Eastern and Western Associations would in this way have affiliated with them all the local poultry associations in Ontario, and they would make a strong organization, able to take the part of poultry fanciers, and able to obtain just and necessary concessions from corporations or other bodies, should occasion arise. There should be concentrated effort on the part of these two Associations. I would recommend that your Executive Committee be authorized to take the matter up with a committee from the Western Ontario Poultry Association, with the power to act as they think best, so as to carry out these objects.

Our future policy should be to co-operate with the Poultry Experiment Stations; to use our best endeavor to unite into one organization all poultry raisers in our district; to create more interest in commercial poultry through local poultry associations, and by inducing local Farmers' Institutes to hold special poultry meetings in their district, promote the educational as well as the exhibition features of our poultry show.

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 the Superintendent he will be put in direct communication with the Institute that has carried on the work.

G. C. CREELMAN,
Superintendent Farmers' Institutes

Poultry Pointers.

BY G. R. COTTRELL

Reported by Superintendent G. C. Creelman.

"1st. There is an unlimited market, both at home and abroad, for first-class poultry."

"2nd. A better class of poultry than at present offered for sale would greatly increase the consumption."

"3rd. Quality must be improved if we expect higher prices."

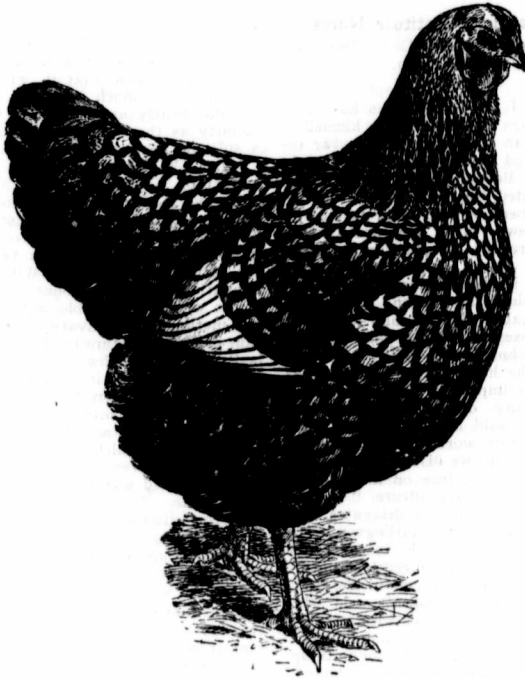
These three headings were the points from which Mr. Cottrell preached a poultry sermon at Strathroy Dairy School last week. In dealing with the first point, Mr. Cottrell took occasion to say that there was a good market right at home for first-class poultry. In the city of Toronto, for instance, the market is glutted each week with poor, scrawny chickens, selling at from 25 cents to 50 cents per pair while plump young birds, from 3/4 to 5 lbs. each, easily bring from 80 cents to \$1.25 per pair.

"I have," said Mr. Cottrell, "no trouble in getting 10 cents per lb. for all the chickens I can raise. Then there is a great demand for poultry in the Old Country markets. At one time this fall, Mr. Riddin, the Liverpool Commission Merchant, had one million chickens in cold storage in Toronto, and there are other firms in that city, as well as in Montreal and other places, who are taking all the chickens they can get for shipment abroad. There is, therefore, no trouble about the market."

In his remarks on the second point, which discussed the question of better chickens increasing the consumption of poultry, Mr. Cottrell said, "As a rule, city and townspeople who can afford it have poultry on their tables two or three times a week, and the wholesale and retail dealers in Toronto tell me that their customers invariably come back after having eaten some birds that have been properly fed. It is the tough, scrawny chickens that spoil the consumption."

"In the third place, we must improve the quality by better methods of breeding and feeding. Most authorities now agree," continued Mr. Cottrell, "that the Plymouth Rocks and the Wyandottes are the two best general purpose fowl for the farmer. They can be made to lay when eggs are high priced, and they mature early for the market. Good table fowl should have a broad breast, should be wide between the eyes, good stout legs placed well apart, and good feet. After the chickens are three or four months old they should be put in fattening crates and fed for three or four weeks. This fall I fed three hundred chickens in this way for shipment to the Old Country, for the last three weeks giving them nothing but sifted oat meal mixed with skim milk. They had all they could eat three times a day but as soon as they left off eating the trough was cleaned out and a fresh supply put in."

Mr. Cottrell then described the fattening crate, saying, "I make my crate 10 feet long and 16 inches square, slatted on three sides, top, bottom and front. A crate this size will be divided into four compartments, each compartment holding four birds. One trough



A First Prize Silver Laced Wyandotte.

runs along the entire length of the crate and the birds put their heads out between the slats and eat the soft food.

"The birds must be dusted with sulphur about once a week to keep off the vermin, and at the end of the second week should have a feed of gravel—about a pail and a half to two hundred birds. This soft nutritious food makes excellent flesh. The birds not having any exercise, the muscles become tender and juicy and the fat which is laid on gives them a nice plump appearance so that they sell well when taken to market. They should be starved for 36 hours before being killed. This will ensure there being no food in their bodies that might ferment and cause decay in a long ocean trip."

"They should be killed by pulling their necks, if they are to be shipped to the Old Country, or by bleeding in the mouth, piercing the brain and then letting the blood out back of the neck, for the home market. Old Country people are suspicious about any wound on the body, and even where they are bled in the mouth or head they seem to think that a bird might have been killed 'to save its life.'"

"The birds should be plucked dry immediately after they are killed, before the body gets cold, commencing at the breast and working back to the wings and legs. This allows the blood to have drained toward the neck before the feathers are plucked from the extreme parts and there will be no disfigurement by the blood rushing to fill the holes left where the feathers are taken out.

ing a run out, so that the air in the room will become completely changed. If the room is a cold one at night, it will materially help to have a drop curtain in front of them, which should be rolled up in the day time.

"Laying hens," continued Mr. Cottrell, "must be kept with a good appetite all day long. I feed my laying hens in winter some mangels whole about 9 a. m. At noon I give them some meat, either ground bone or table scraps. If you can get hold of a young calf and boil it, bone and all, it makes excellent food for the chickens. About 4 p. m. I feed a mash, consisting of one part oat meal, two parts bran, and to every pailful add two handfuls of slacked lime. When mixed I throw in a couple of handfuls of chopped clover hay. After they have eaten this up clean I throw a handful of wheat or corn into the out straw in the scratching pen and let them work away at this until night. Some grit in the shape of crushed granite or fine gravel must be kept where the chickens can get at it from time to time, and of course, fresh water must always be within reach."

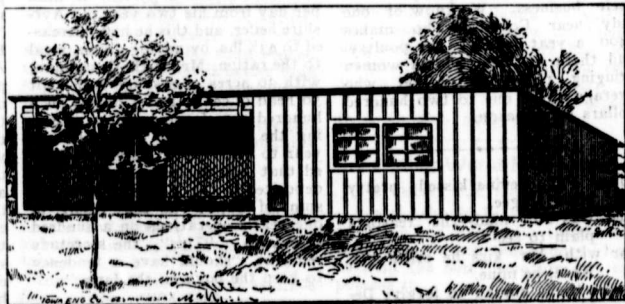
SETTING HENS.

"How do you treat setting hens?" someone asked. "I separate them from all the other hens," said Mr. Cottrell, "and put them in a nest apart. After the hen is comfortably settled I leave some solid food—usually in the form of grain—and some water handy to the nest so that she will not have to stay off long and allow the eggs to get cold. On the seventh day I always examine the eggs. By holding them up to the sun or a candle you can always detect those in which the embryo is forming. You should at once remove all the clear ones, as they will soon spoil, and a bad egg in the nest has an injurious effect on the young germs that are hatching."

Mr. Cottrell went on to say, "The hen should be dusted with sulphur when first put on the nest, and once or twice while hatching. After the chickens are hatched allow them to dry off well before removing from the nest, and take them to a 'v' shaped slatted crate, without a bottom, so arranged that the hen cannot get out, but giving the chickens their

EGG PRODUCTION.

In answer to a series of questions Mr. Cottrell then took up the subject of "Egg Production in Winter." "The first thing to be noticed," said Mr. Cottrell, "is the poultry house. Too many farmers expect their chickens to roost in the cow stable, scratch in the manure heap, pick up what grain they can get on the barn floor, and lay eggs every day. If a farmer keeps poultry at all he should keep them for the money he can make out of them, and it will pay every time to have a comfortable house for them, and one that can be ventilated without having a draught immediately on the birds. It is not necessary to have a series of ventilating shafts, but the door and window ought to be arranged so that the roosting places does not come between them. They should be left open part of each day in winter while the chickens are hav-



A Cheap and Convenient Poultry House.

freedom. Better to have a board or small platform in front upon which to feed, and after sprinkling some sand on this, which will supply them with grit, they will soon take to eating solid food."

"More chickens are killed," said Mr. Cottrell, "by feeding too soon and feeding food that is too heavy on the start, than in any other way. They should be fed very small quantities of stale bread mixed with sweet milk, and then squeezed out dry."

"This should be given three or four times a day, but only in such quantities as will be eaten up clean. At the end of the first week they may be fed small quantities of shorts and corn meal, then gradually they will take solid food, first in the form of millet and finally whole wheat. They should, where possible, be given sweet milk to drink from the very first."

"Chickens raised in this way," said Mr. Cottrell, "and then given plenty of food and let run loose, should weigh from 3½ to 4 pounds at four months old. They are then ready for the crates to be finished for the market. If they are allowed to wait until they are six or seven months old they begin to show spurs and the commission men, on this account, will not pay as much for them. If they are shipped to England they will bring two cents per pound less than if they had been fattened under five months."

In answer to a question, Mr. Cottrell said that potatoes might be fed if cooked first and mixed with a bran mash.

"How many eggs should a hen lay in a year?" was asked. Mr. Cottrell said he expected his hens to average 180 eggs. To do this, however, pullets alone must be kept, and they only from hens that have been good layers. "There is a good deal in pedigree," said Mr. Cottrell. "By this I do not mean a pedigree on paper, but the eggs should be set only from the hens that have a good record as egg layers. In this way you can work up a good laying strain from almost any breed."

Mr. Cottrell was kept busy right up until dark answering questions in reference to poultry matters, and it is evident from the interest taken that farmers are beginning to realize the importance of the poultry industry as an adjunct to their business. We know of one lady near Cobourg who makes \$400 a year out of her poultry, and there are hundreds of women bringing poultry to market who average from one to two hundred dollars each season.

When Pat Devine kissed pretty Kate Magee,
She was not mad—the reason's plain to see—
For with his kiss he cried: "O, Kate, be mine."
To 'er 'twas human to forgive Devine.

—Standard and Catholic Times.

Farmers' Institute Notes.

By Superintendent G. C. Creelman,
Toronto.

DUNDAS.

Mr. J. P. Fox always has good meetings in Dundas. He himself is no mean speaker and this year introduced the subject of "The needs of the Bacon Market." He complimented the farmers on the improvement of their hogs during the past few years. He noted with pleasure the disappearance of the short, thick, fat pig and the increase in the number of those approaching the bacon type. Mr. Fox stated that he had letters in his possession from a pork packing establishment in Ottawa saying that the hogs received from Dundas has improved more than those from any other county. "This proves" said Mr. Fox, "the value of Institute work, as it is through this medium we distribute information and literature on all subjects pertaining to agriculture."

One of the regular delegates was Mr. A. W. Peart, Burlington. He dwelt strongly on the introduction of clover as a fertilizer for the introduction of nitrogen in the soil. "If we buy nitrogen" said Mr. Peart, "as a fertilizer we must pay from 15c to 20c per pound for it. Clover, however, works for nothing and more than pays for its board. On the roots of the clover plants are small tubercles caused by a bacterial growth. In those tubercles the nitrogen is extracted from the air and is stored up in the soil in the form of available nitrogen for future crops."

Prof. Hart of the Kingston Dairy School was present and talked on cattle feeding. He showed clearly the loss sustained by the farmer in feeding a ration that was not properly balanced. He pointed out the value of ensilage and timothy hay, but at the same time pointed out that these are not complete foods in themselves but must be mixed with bran, gluten meal, peas or clover, in order to make a balanced ration.

Mr. Fox reports that as usual they had a keen discussion upon the value of corn ensilage and as is the case each year a few more conversions were made for this valuable dairy food.

Results.—Mr. A. Kennedy reports a yield of 6,300 lbs. of milk from his cow during the last season; Mr. A. Clark, a yield of 35 lbs. of milk per day from his two year old Ayrshire heifer, and this he had increased to 43½ lbs. by adding gluten meal to the ration. Mr. W.H. Casselman, with 30 acres of ensilage corn kept 50 head of cattle and 5 horses on a hundred acre farm, besides increasing the fertility of his land from year to year. Mr. Casselman stated that one of his neighbors had deposited in the Molson's Bank the sum of \$1,600 as the result of one year's operations on a hundred acre farm. "This," the secretary remarks, "should have a tendency to keep the boys on the farm."

EAST KENT

At the regular meeting held at Croton on January 20th, Mr. R. S.

Stevenson discussed the subject of "Corn growing and Ensilage." This evoked a lively discussion and the secretary writes that it will be productive of much good, as silos are not nearly as plentiful in that vicinity as they should be in such a splendid corn growing district.

Mr. C. W. Nash introduced the subject of "Chemistry of the Soil" and gave a splendid explanation of how to retain the soil moisture. This is coming to be one of the most important questions before the farmers of Ontario. With an annual rainfall of about thirty inches we should be able, with proper methods of cultivation, to retain enough moisture in the soil to last through the dry spells which frequently come on in July and August. Many of our farmers have learned to appreciate the value of constant cultivation in hot weather keeping a soil mulch at the surface and thereby preventing as much evaporation of water from the soil as possible. Mr. Nash's address, and the discussion following it, was according to the secretary's report much appreciated by the farmers present.

SOUTH ESSEX.

This Institute usually holds a two-day meeting at one point. This year it was held at Essex, and as usual turned out a great success. The two-day Institutes seem to be taking, and their advantages are,

1st. The delegates remain long enough to get fairly well acquainted with the people and learn their needs.

2nd. The farmers get sufficiently acquainted with the delegates to feel perfectly free to ask questions and discuss their difficulties.

3rd. Plenty of time is available to thoroughly discuss any subject which may be introduced. We are of the opinion that many other Institutes might with advantage copy Essex in this respect and hold at least one two-day meeting each year at some central point where they could count on a good attendance.

WEST VICTORIA

James Keith, the secretary, got out most attractive programmes for his meetings this year, which leads us to say that good advertising always helps. At the Woodville meeting there were 65 present in the afternoon and 260 at night. The meetings were carried out on practical lines, even at the evening meeting discussing such subjects as "Stock Raising", and "Poultry Production." At this meeting Mr. A. E. Silverwood, of Lindsay, was present. This gentleman has done much good among the farmers of that district by stimulating an interest in poultry matters. Last year he sent out hundreds of settings of eggs free to the farmers and then paid them good prices for their chickens. This is the kind of co-operation we like to see between the buyer and seller, and take pleasure in making a public acknowledgment to Mr. Silverwood for the help he has given to the Farmers' Institute, of Peterboro and Victoria Counties.

The Farm Home

The Hens' Strike

Where are the hens, the faithful hens,

That daily used to lay
The shells in which the food we liked

Was neatly stowed away?
What have we done to give offense
To these long, patient fowls
That they should go on strike and cause

Among us groans and scowls?

We used to hear their songs of joy,
Their cackling long and loud,
When they beheld the little spheres
Of which they were so proud.

But now their songs are few and short,
For only now and then
We hear the old-time notes of pride

From some still loyal hen.

And eggs! Well, they now come so high

They're nearly out of sight
Of every man who wants to soothe
An humble appetite.

In fact, so dear have they become
That they are luxuries
Just suited for a millionaire
With palate hard to please.

There's mourning in the restaurant.

Within the home there's grief,
For eggs have gone up at a rate
That challenges belief.

And what is worse, we cannot tell
How high they yet will rise,
Or whether we shall e'er again
The inside scrutinize.

If we've offended any hen

That ever laid an egg
Down on our knees we'll promptly drop,

And pardon humbly beg,
And if they're striking for more feed

We'll furnish it by kegs;
Indeed, we'll give them anything
For more and cheaper eggs.

—Pittsburg Chronicle-Telegraph

Cooking Lessons at the O. A. C. Dairy School.

No. 7.

VEGETABLES AND CEREALS.

In beginning her talk, Mrs. Joy said there was a much larger range of foods to be found in the vegetable kingdom than in the animal kingdom, but the nitrogenous elements found in vegetables were not in such a good or easy form as those found in meat.

The carbonates are obtained from the vegetable world, which is also very rich in ash or mineral matter.

Fats procured from plant growth are quite extensively used. Olive oil, cotton seed oil, cocoa nut butter, etc.

Besides the high percentage of water found in vegetable foods, there is also considerable unavail-

able cellulose which is valuable to the mucus membrane of the intestines.

The seeds of some plants are used as foods; of others it may be the roots, stalks or leaves.

Of all the grains wheat is the most useful, not that it contains more nitrogen than oats, but the nitrogen is in a better form.

Oats are used largely in the form of porridge or oat cakes. Rolled oats are better than cracked oats as the cellulose in them is more finely shredded. To make porridge properly four cups of water should be used to every cup of oatmeal. Let it boil up until it stops frothing, then cook in a double boiler for at least an hour, adding sufficient salt. Porridge should be made sufficiently stiff so as to remain in the mouth long enough to be well mixed with the saliva.

For some it is considered too heating to the blood, while for infants and invalids, unless strained, it contains too much cellulose.

Barley is mainly used for soups and broths, there being the pot and the pearl barley. It contains a high percentage of salts and is very strengthening to the bones.

The nitrogenous part of rye when mixed with water, forms gluten and is used in combination with wheat flour to make bread.

Mrs. Joy emphasized the importance of corn as an article of food and said it was a great pity more of it was not used in our country as it was a rich, wholesome, grain.

Hominy is corn treated with a bath of caustic potash.

Rice is one of the best and easiest digested cereals, there being less waste matter in it than any other grain.

It is a grain very deficient in salts and fats. The smaller grained rice is considered the better flavored and nicer than the large long grained varieties. The latter does nicely to garnish dishes or for a curry as it keeps its form when cooked.

Beans and peas are rich in vegetable casein. In some countries in Europe, cheese is made from beans.

Roots and tubers hold quite place on our bill of fare.

Carrots, parsnips and young beets are wholesome vegetables. Turnips are not so easily digested, as the cellulose in them is harder.

Raw cabbage dressed with vinegar is more digestible than cooked cabbage. Cauliflower is better than cabbage as it does not contain so much sulphur.

Spinage is valuable for the potash and phosphates it contains and there is an old saying.

"Spinage and meat,
Keep the skin sleek."

Celery and asparagus act on the nerves while lettuce and onions are valuable as anti-scorbutic vegetables.

Our purest form of starch is made from arrow root. Sago is manufactured from the pith of the sago

palm and tapioca from the cassava plant.

Macaroni is a good food, not as much used as it might be. It is made from the flour of hard-glutinous wheat.

Mrs. Joy said she must say a few words in commendation of our many edible fungi. They make a delicious change and it is a pity more people do not use them. No one can go astray in using the fairy ring mushrooms or the puff balls. The latter sliced and cooked in a little butter in a covered saucepan make a splendid dish.

At the close of her talk Mrs. Joy prepared the following dishes:

MACARONI TOMATO.

3 sticks macaroni, broken into two inch lengths and boiled in salted water for twenty minutes. Scald and strain one cup of tomatoes and add to them one tablespoon each of flour and butter which have been previously cooked together without browning, also add two tablespoon grated cheese, half a teaspoon salt, half teaspoon sugar and a quarter teaspoon pepper. Drain the macaroni, put into a hot dish and pour over it the prepared tomato sauce.

STEAMED RICE FOR DESSERT

Wash one cup of rice, put it in a double boiler and add two cups of water or milk, let steam until all the liquid is absorbed and until the rice breaks down readily when pressed between the fingers. Served with grated maple sugar and whipped cream.

WHITE PARFAIT PUDDING

White sugar $\frac{1}{2}$ cup, $\frac{1}{4}$ cup water, boil until it threads or forms a soft ball, when tried in cold water. When a little cooled pour this syrup over the well beaten white of one egg. Let stand until cold and then add to it 2-3 of a cup of cream which has been whipped until stiff. Some chopped almonds candied cherries, or angelica, may be stirred in or it may be simply flavored with rose water or vanilla. Pour into a well buttered mould—a large baking powder can with a tight-fitting lid answers, grease carefully around the lid, it is a good plan to tie a strip of paper around it. Pack well in ice or snow using plenty of salt. Let it remain 3 or 4 hours to season and freeze. To remove the "pudding"—it is really more like ice cream—from the can, dip the can just a moment in warm water.

Laura Rose.

O. A. C., Feb. 25th, 1902.

Farming World Helpmates.

A THIRST FOR KNOWLEDGE.

A girl should be sent to school until she has acquired a thirst for knowledge, which will induce her to read the best literature and to possess it.

She should be given the accomplishments for which she shows

Andrew Carnegie says,

"There are even greater opportunities for young men to-day than when I landed in New York penniless."

Are you ambitious for business success? Then prepare for it. Plenty of positions for those fitted to fill them. Take our

Home Correspondence Business Course

and while continuing present duties fit yourself for something higher. Short-hand Course prepares for positions in offices, courts, newspapers, etc. All needing competent help. Good salaries. Benefits "Wig Study Short-hand" Free. "Why Study Short-hand?" The Home Correspondence School, Temple Building, Toronto



are all busy helping this world to grow better.

M. E. Graham.

The Best Way to Color Easter Eggs.

Procure packets of aniline dyes of the various colors you desire: pink, light blue, pale green, yellow, crimson, and purple or mauve are effective. Dissolve the dye in hot water and boil the eggs in it until they are colored the shade desired. Make a large nest of moss, or of green crepe paper cut in strips, if you cannot obtain moss, and place the eggs in it as a centerpiece on the breakfast-table. If you wish to give each child one egg as a keepsake have a little nest by each plate with the egg in it.—March Ladies' Home Journal.

Hints by May Manton.

WOMAN'S ETON JACKET, NO. 4071.

To be made With or Without the Square Collar.

Eton Jackets fill a definite need and are exceedingly fashionable both for suits and separate wraps. This smart model is shown in



4071 Eton Jacket.

32 to 42 bust.

etamine, in black, with bands of taffeta, stitched with corticelli silk, and small silk buttons, and makes part of a costume, but the same material, cloth and silk, are all used for general wraps, while all suitings are appropriate when jacket and skirt are made to match.

The back is seamless and fits with perfect smoothness. The fronts are pointed and extend slightly below the waist line. At the neck is a square collar that adds greatly to the effect, but which can be omitted when a plain finish is preferred, or it is desirable to reduce either weight or warmth. The sleeves are in coat style, slightly flaring at the wrists.

To cut this jacket in the medium size 4 yards of material 21 inches wide, 3½ yards 27 inches wide, 1½ yards 44 inches wide, or 1¾ yards 50 inches wide will be required, with ½ yard less in any width when collar is omitted.

The pattern, 4071, is cut in sizes for a 32, 34, 36, 38, 40 and 42-inch bust measure.

The price of above pat-

tern post-paid is only 10 cents. Send orders to The Farming World, Confederation Life Building, Toronto, giving size wanted.



This Marvelous Extra Early Potato originated by HARRY N. HAMMOND SEED CO. Ltd. Box 226 BAY CITY, MICH.

Largest growers of seed potatoes in America. 30 best varieties. Northern Grown always best. Blight proof. Numerous yielders, highest quality. Lowest price for 10, 25, 50, or carload. Elegant postage E bargain sheet Catalogue FREE. Write for it today.

CONSUMPTION CAN BE CURED.

Consumption uninterrupted means speedy and certain death. The generous offer that is being made by Dr. Slocum, the great lung specialist. Sunshine and hope for stricken families.

Confident of the value of his discoveries, he will send free four sample bottles upon application, to any person suffering from throat, chest, lung and pulmonary affections.

TREATMENT FREE.

Dr. Slocum, whose treatment has proven a triumphant victory over this deadly disease, has demonstrated that there is no longer room for doubt that he has given to the world a treatment 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 a cure step by step, killing the life-destroying germs which infest the lungs, toning up the entire system and strengthening the nerves, filling the veins with tingling new life, building healthy flesh and fortifying against future attacks.

The Slocum treatment is revolutionary because it provides a new application for every stage of the disease. The failures of inoculation by Paris scientists are overcome by Dr. Slocum through progressive drug force. The diseases leading to Consumption are also mastered so that once the bacilli are removed from the lungs, there remains no other germ-breeding menace.

The Slocum System cures Grip and its baneful after-effects, dangerous Coughs, Bronchitis and every known form of pulmonary disease.

It makes weak lungs sound, strengthens them against any ordeal and gives endurance to those who have inherited hollow chests with their long train of attendant dangers.

To enable despairing sufferers everywhere to obtain speedy help before too late, Dr. Slocum offers

FULL FREE TREATMENT

CONSISTING OF FOUR LARGE SAMPLES to every reader of this paper.

You are invited to test what this system will do for you, if you are sick, by writing for a

FREE TRIAL TREATMENT and the Four Free Preparations will be forwarded to you at once, with complete directions for use.

The Slocum System is a positive cure for Consumption, that most insidious disease, and for all Lung Troubles and Disorders, complicated by Loss of Flesh, Coughs, Catarrh, Asthma, Bronchitis and Heart Troubles.

Simply write to the T. A. Slocum Chemical Company, Limited, 179 King Street West, Toronto, giving post office and express address, and the free medicine (the Slocum Cure) will be promptly sent.

Persons in Canada seeing Slocum's free offer in American papers will please send for samples to Toronto. Mention this paper.

capability; trained in the work and management of a home, particularly cooking, hygienically and economically, and to be neat and tasty in all the appointments of her dress, home and table.

In short, I would have her so trained that though not accustomed to farm work she may have confidence in herself to grasp the untried and carry it to a successful issue.

T. M. Lewis.

The strong point in this answer is in the words, "hygienically and economically." There are cooks who can make delicious foods if one does not consider health and money, but to cook "hygienically and economically requires more skill and much deeper training.)

SOME SUBSTANTIAL POINTS.

The question is, in my opinion, a very important one, and one which requires much attention from the mothers of farmers' daughters of to-day.

Farming no longer is a business which any useless man can follow, but it is fast taking its place among the professions. Since the wives of men in the professions are carefully educated so should farmers' wives be also.

Firstly, I would insist on a willingness for work and to work systematically. To employ the spare moments in reading, music and painting. To be a good cook, a good butter-maker and a good sewer. Lastly, to have a good substantial education. These acquirements, together with the good natural traits of character, such as prudence, thrift, etc., will, I think, enable the farmers' daughter to take her place as the wife of the up-to-date, progressive farmer of to-day.

Fidels.

In conclusion, I must thank all the helpmates for responding so readily to my request for knowledge on this important subject. Perhaps there are readers who think we have given this undue prominence, but who so important in this world as the up-to-date farmer and his successful helpmate. I met a number of these at Guelph during the Winter Fair, and I do not speak only of those who till the land by their own exertions, but I include the Ministers of Agriculture, the editors of farm journals, and Farmers' Institute workers, those who do and those who direct others to do, and I find they

The Farming World.

A PAPER FOR FARMERS AND STOCKMEN.

Publisher, D. T. MCANISH.
Editor, J. W. WHEATON, B.A.

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 publisher 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 addresses 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.

QUESTIONS AND ANSWERS

Lucerne or Alfalfa as Pasture.

H. C. Elfrida, Ont., writes: "I would like to ask if lucerne clover is good for pasture. I have heard it recommended for feed when cut, but would like to know if it would be profitable to turn stock on to it to pasture."

Under suitable climatic and soil conditions, where the plant will thrive well, alfalfa or lucerne makes excellent pasture. It makes a splendid hog pasture though care should be taken not to have it pastured too closely so as to injure the plant. Horses and sheep are frequently pastured on alfalfa in some of the Western States, where the plant grows well, though great care has to be exercised with sheep as they are liable to bloat. Horses being close eaters, are liable to injure the plant when pastured on it.

As a rule it is better not to pasture alfalfa till the third year after sowing. It has been pastured the second year but it is safer not to do so till the third year. Never pasture alfalfa the first year after sowing. To get the very best results and especially for hogs, the pastures should be cut frequently as the plant is much fresher a few days after cutting. It grows quickly and soon freshens up after mowing. In colder climates, where the winters are very severe alfalfa can be pastured with less safety.

But it is as a soiling crop that alfalfa is of the most value. As a plant for cutting green for summer feeding it has no superior where it can be successfully grown. It is especially of value for soiling dairy cows. As a hay crop alfalfa is also of value.

Though alfalfa has many strong supporters in Canada it is not grown as much here as it might be. We should be glad to hear from any readers of The Farming World who have had any experience in pasturing alfalfa or in utilizing the crop in other ways.

Horse Show Arrangements.

The Horse Show Committee met on Monday last, when satisfactory arrangements were made for the show to be held at the Armouries on April 10th, 11th and 12th next. An increased entry in the breeding



TORONTO, Feb. 26th, 1902.

J. J. SEITZ, ESQ., Gen Mgr.

Creelman Bros. Typewriter Co., City.

DEAR SIR:

Nearly four years ago, I purchased my first Underwood Typewriter, and on account of the great satisfaction this machine has given me, I have gradually increased my equipment until now I have eighty machines in daily use—sixty of which are Underwoods.

I have given the typewriter question most careful attention during the past few years, owing to the increased demand for expert operators, and after watching results carefully, I have no hesitation in most heartily endorsing the Underwood machine.

I find that the pupil can learn the art of typewriting with very much less effort on the Underwood as compared with other makes, as the writing is continually in full view of the operator. This is a decided advantage, and I would consider it a retrograde step to confine pupils to machines on which the carriage has to be raised to inspect the writing.

As a further proof of this, I may state that the Agent of the Remington Typewriter Company recently offered to replace my entire outfit of machines, none of which are four years old, with an equal number of new Remingtons of the very latest pattern even up.

I declined the proposition as our school must be up-to-date in every respect, and especially so in the Shorthand and Typewriting Department, in which I cannot afford to use antiquated machines.

You may be pleased to learn that I propose, during the ensuing year to give every pupil who attends our school an opportunity to learn Typewriting, and that I intend to increase my present number of Underwood machines to an even ONE HUNDRED, so that I shall have the very best Typewriting equipment to be found on this American continent.

I remain, yours truly,

W. H. SHAW, Principal,
Central Business College.

Special to Our Readers

The publisher of THE FARMING WORLD exercises the utmost vigilance in excluding from the advertising pages of the paper all business announcements of a questionable character. He believes every advertiser represented in this issue to be thoroughly responsible, and that the goods offered will be found as described. Persons writing to the advertiser will usually find it to their advantage to mention THE FARMING WORLD.

OUR ANNUAL HORSE NUMBER will appear in April, and will this year be larger and more interesting than ever before. An unusually large edition of the number will be printed. Advertisements for that issue should be handed in early.

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

classes is expected this year, while an effort is being made, though the dates are a little too early, to have the exhibits of high-class harness and saddle horses beyond all previous standards. The show this year will be the week before the Boston show, and it is hoped that a number of large exhibitors from the United States and Canada will show first at Toronto before going to Boston. The prize list will be ready in a few days. Mr. Geo. W. Beardmore is chairman, Stewart Houston manager, and Henry Wade secretary of the show.

Popular Prejudice Against Sugar.

(Contd. from page 210.)

In the second place the liver is able to convert the excess grape sugar into fat, which is called glycogen. This fat is stored up in certain places and is used in case of need, especially in disease.

Moreover, sugar has another property which might become very profitable to thousands of people. It has been shown by the most eminent scientists that sugar absorbed in water has a prompter effect on the muscles than alcohol, without possessing any of the drawbacks of the latter substance, such as the reaction which always follows its use. The farm hand working without protection in the heat of the sun, will find a few swallows of sugar and water much more refreshing and invigorating than whisky. Sugar and water will refresh and strengthen even in cases where water has become offensive to the taste by standing in the heat of the sun.

Some experiments made in the German army show not only that the men, without exception, like to eat sugar, but that it satisfies both hunger and thirst to an eminent de-

gree, and also furnishes a prompt restorative in cases of weakness and collapse. It was also noted that the pulse of men who used considerable quantities of sugar was much slower than that of others, and that their weight increased beyond that of those who did not have sugar in their diet.

Two German scientists, Fick and Wislizenus, for the purpose of experiment, went to the mountains, and, while undertaking the hardest excursions on foot, ate nothing but sugar and starch flour, and reported that they felt scarcely any signs of fatigue. Dr. Strohmmer of Vienna says with reference to this effect, that sugar is a far better stimulant for sportsmen than alcoholic beverages. The use of alcohol may be likened to the blows of a whip which compel fresh exertion on the part of the flagging energies, whereas sugar actually supplies fresh energy.

In a similar way sugar refreshes and invigorates the human mind. Extensive experiments are in progress, particularly in the schools, under the direction of eminent physiologists, for the purpose of ascertaining the influence of sugar on the mind, and the results obtained so far leave no doubt of the fact that no other article will restore the mental energies so quickly as sugar and water without any injurious effects.

It would be a blessing for many thousands if sugar was used more extensively in the nutrition of weak, anemic persons, and particularly in the diet of the poorer classes. Sugar is proper in all places where it is desired to produce a wholesome, easily digested and strengthening food at comparatively low cost, no matter whether the sugar is cooked with other dishes or taken dissolved in water. —Beet Sugar Gazette.

Poor Soils

are made richer and more productive and rich soils retain their crop-producing powers, by the use of fertilizers with a liberal percentage of



Potash.

Write for our books—sent free—which give all details.

GERMAN KALI WORKS,
93 Nassau Street, New York City.

Thomas-Phosphate

I will deliver this valuable Phosphate at any station in Ontario at one cent per lb. two bag lots and upwards. Cash with order. Special prices on car lots.

ALFRED BOYD

28 Toronto Street, - Toronto

Dealer in Nitrate of Soda, Bone Meal, Sulphate of Potash, Muriate of Potash, Kainit, etc. etc.

Legislating for the Farmers.

Two important pieces of legislation were discussed at Ottawa and Toronto last week of importance to farmers. At Ottawa a bill was presented asking for power to compel railways to improve the cattle guards at railway crossings, and to make them responsible for all loss occurring through defective or inefficient guards.

At Toronto, a bill has been introduced by the Minister of Agriculture, providing for the general destruction on the request of the localities affected, of the barberry shrub which is largely used for hedges and ornamental fences. According to evidence submitted by Prof. Lochhead and others, the barberry shrub is the cause of rust in wheat, even miles away, owing to the influence of the wind. Provision will be made to prevent the cultivation or sale of the shrub in future.

How A Woman Paid Her Debts.

I am out of debt, thanks to the Dish-washer business. In the past three months I have made \$600.00 selling Dish-washers. I never saw anything sell so easily. Every family needs a Dish-washer and will buy one when shown how beautiful it will wash and dry the family dishes in two minutes. I sell from my own house. Each Dish-washer sold brings me many orders. The dishes are washed without wetting the hands. That is why ladies want the Dish-washer. I give my experience for the benefit of any one who may wish to make money easy. I buy my Dish-washers from the Mound City Dish-Washer Co., St. Louis, Mo. Write them for particulars. They will start you in business in your own home.

L. A. C.

A FEW PROOFS OF THE EXCELLENCE OF

BIBBY'S CREAM EQUIVALENT

FOR CALF REARING

It has the largest sale of any article of its kind.

Its sale is steadily increasing.

It is superseding other articles which had previously been used for the same purpose.

Price, 50 lb. bag, \$2.00; 100-lb. bag, \$3.50, freight prepaid to nearest railroad station. To be obtained from local dealers or direct from

J. BIBBY & SONS

10 BAY STREET

TORONTO

Stock


J. A. RICHARDSON, South Marsh, Ont., breeder of J. Holsteins, Dorset Horned Sheep, Tamworth swine.

E. PANNAECKER, Fairview Farm, Hespeler, Ont., breeder of reg. Holsteins. Stock for sale.

FOR SALE


Shorthorn Bulls, from 10 to 11 months old. Color, red. Low set-down fellows.
JAMES BROWN, Thorold, Ont.

FLEMING'S LUMP JAW CURE




Easily and thoroughly cured. New, non-toxic method, not expensive. No cure, no pay. FREE. A practical, illustrated treatise on the above rare cure of Lump Jaw, free if you ask for Pamphlet No. 227. Fleming Bros., chemists, 30 Front St., West, Toronto, Ont. Trade Mktk.

OXFORD DOWN SHEEP



Durham Cattle. "Milk-Strains". Yorkshire Pigs; Plymouth Rock Poultry. John Cousins & Sons, Harriston, Ont.

OXFORDS AT BRANT FARM



Choice ewe lambs and ewes of all ages. Prices to suit times. Orders booked any time for show stuff for 1902. Fitting a specialty. Burford Station. Graph & Phone. **J. H. JULL & SONS**, Mt. Vernon, Ont.

FARMER WANTED

We want a reliable man with a horse and rig in every township to take subscriptions for THE FARMING WORLD in connection with our New Cabinet Sewing Machine at half price. If you are in a position to work hard for two or three weeks, write us today, name the township you wish reserved for you, and at the same time give us the names of two good men as references. We will name terms that will surprise you.

See advertisement of machine on another page. Write to-day. Address: THE FARMING WORLD, Confederation Life Building, TORONTO.

SCOTCH SHORTHORNS



of the most approved type and breeding for sale. Young Bulls—ear old and under, reds and roans of choice breeding. Write for prices.
J. ROSS & SONS, Streetsville, Ont.

MAPLE LEAF HERD OF LARGE YORKSHIRES

...Young Stock for Sale
ROBERT NICHOL, BRUSSELS, ONT.

HENS PAY Canadian Poultry Review TORONTO.

when properly treated. We show you how; every department in charge of a specialist. Big practical paper; treats on chickens from A to Z. 50c. per year 3 years \$1. Sample free.

White Wyandottes
S.C. Black Minorcas
S.C. White Leghorns
Pekin and Indian Runner Ducks
Eggs for Hatching
Now ready to ship, from prize-winning pens of above breeds. Address:
Ingleside Poultry Yards, COMPTON, QUE.

Dispersion Sale of Shorthorns

Thursday, Mar. 20th, 1902

Comprising **IMP. BULL SCOTLAND'S FAME**, 26063.
8 other Bulls.
2 imported Scotch-bred Heifers.
18 head breeding cows, which will be bred or have calves by their sides from Scotland's Fame, also some young heifers from same bull.

Farm is 4 miles from Streetsville Junction, C.P.R.
6 miles from Brampton, G.T.R.
7 miles from Port Credit, G.T.R.
All trains will be met on morning of sale.

JOHN TH. Auctioneer.

F. A. GARDINER, Britannia, Ont.

Fifty Pairs of English Pheasants for Sale at \$5.00 per Pair.

These birds have been in a large uncovered run all winter, and are therefore in beautiful plumage and fine condition for breeding.

Canadian Pheasantry, Hamilton, Ont.

ANNANDALE STOCK FARM HAS FOR SALE

4 Holstein Bulls, 1 month to 12 months
10 Improved Yorkshire Boars, 2 months to 10 months
8 Sows, 2 months
The above are eligible for registering, and certificates will be furnished.
6 Holstein Grade Bulls, 2 months to 10 months, from the best milkers in the Annandale herd.
Correspondence promptly answered. Inspection specially invited.

The Annandale Stock Farm
Tilsonburg, Ont.

Rapids Farm Ayrshires

Reinforced by a recent importation of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leasing Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at Toronto, London and Ottawa.

Come and See, or Write for Prices

Young Bulls and Heifers for sale, bred from high-class imported stock.

ROBERT HUNTER, Manager for W. W. Ogilvie Co., Lachine Rapids, Quebec

"WOODBINE FARM HERD" of Holstein Friesians

Offers a few choice bulls now fit for service, sired by Homestead Albino Paul De Kol out of dams sired by Dora Bee's 3rd Pieterje Netherland.

For particulars and prices address:
A. KENNEDY, Ayr, Ont.

DAVID McCRAE, Janesfield, Guelph, Canada, Importer and Breeder of Galloway Cattle, Clydesdale Horses, and Cotswold Sheep. Choice animals for sale.

JOHN DRYDEN BROOKLIN, ONTARIO

BREEDER OF

CRUICKSHANK SHORTHORNS and CHOICE SHROPSHIRE SHEEP
Choice Young Bulls and Ram Lambs for sale. Write for prices.

IMPERIAL HOLSTEIN-FRIESIAN STOCK FARM

10 Young Bulls from one month to four months, bred from Wisconsin's De Kol.
W. H. SIMMONS, New Durham, Ont.

Glen Crescent Shorthorns and Oxfords

Two Young Bulls by imp. "Precious Stone" and imp. "Blue Ribbon" for sale. Can spare a few more Oxford females.

J. W. WIDDIFIELD, Uxbridge, Ont.



ROCK SALT for horses and cattle, in ton and car lots. **TORONTO SALT WOKKS**, Toronto

Auction Sale

(Date to be announced shortly)

The Entire Herd of Pure-Bred Ayrshires

Comprising three exceptionally fine Bulls, Blair Athol and two yearlings, bulls sired by White Prince; 25 head cows, 9 2-year-old heifers, 10 yearling heifers.

JOHN H. DOUGLAS, Warkworth, Ont.

International Stud Barns

Importers of Clydesdales and Shire Stallions

Our last importation was Sept. 6. Our next importation will arrive March 16. A few Canadian stallions for sale cheap. Write for particulars. Remember, next arrival March 16.

J. B. HOGATE, Sarnia, Ont.



OAK LODGE YORKSHIRES



Years of CAREFUL BREEDING have made the OAK LODGE YORKSHIRES the Standard of Quality for IDEAL BACON HOGS.

The championship against all breeds has been won by this herd for 4 years at the Provincial Winter Fair, on foot and in dressed carcass competition.

Prices are reasonable.
J. E. BRETHER, Burford, Ont.

PURE-BRED STOCK

NOTES AND NEWS FROM THE BREEDERS

These columns are set apart exclusively for the use of breeders of pure-bred stock and poultry. Any information as to importations made, the sale and purchase of stock and the condition of herds and flocks that is not in the nature of an advertisement will be welcomed. Our desire is to make this the medium for conveying information as to the transfer of pure-bred animals and the condition of live stock throughout the country. The co-operation of all breeders is earnestly solicited in making this department as useful and as interesting as possible. The editor reserves the right to eliminate any matter that he may consider better suited to our advertising columns.

Horses

A notable sale of Shire horses was that of the Sandringham stud, the property of His Majesty King Edward VII. It took place on Feb. 4th, and the parade of live stock before the sale commenced was witnessed by Her Majesty the Queen and other members of the Royal Family. The sale was a good one, for though the average was not a record one, nor were any sensational prices made, the general result was one that demonstrates the genuineness of the English demand for Shire horses.

In brood mares the most notable sale was that of Solace by Lord Arthur, dam of Victor's Queen, who made 600 gs. in the 1898 sale. She did not, however, make that figure, going to Lord Rothschilds for 575 gs., the top price of the sale. In yearling fillies the highest price was 350 gs., which was paid for Mountain Echo. In two-year-olds there was strong competition, the top price being for Ruby Glimpse, who sold for 450 gs.

The brood mares averaged £233 12s. 6d. the stallions £336 and the average of the 45 animals sold was £192, 12s 4d.

Cattle

It is seldom that such a well-bred lot of cattle has been offered at public auction as those which Mr. F. A. Gardner, of Britannia, will dispose of on March 20th. He has no intention of quitting the Shorthorn business, in fact he intends to continue it on an even more extensive scale, but he has concluded to build new barns which of course necessitates tearing down

the ones he has at present, leaving no accommodation for his stock. So he has decided to sell all his Shorthorns—reserving none.

The pedigrees are rich in the blood of the best Scotch families; Lavenders Secrets, Cicelys, Victorias, Minas, Mysies, Brawith Buds, Clarets.

The Kilblean Beauty bull, Scotland's Fame (Imp.)—26063—Scotch Thistle (Imp.) (also of the Kilblean Beauty family, members of which have recently brought four figures at public auction), and Roan Empress (Imp.)—34250—form an attractive trio of imported ones. As to the others, while they lack the (imp.) after their names, must be seen to be appreciated.

Chester White Breeders.

At the annual meeting of the American Chester White Breeders' Association held on January 14th last, resolutions adopted and kept in force were, That a breeder may become a member of the Association by sending in pedigree and one dollar fee, each, until thus 20 pedigrees and \$20 have been sent, when a Certificate of Membership will be issued. That members may record the pedigrees of pigs that they sell, for 50 cents each; provided that the pedigree is sent in for record within sixty days after date of sale. Send all pedigrees and fees to Carl Freigau, Dayton, Ohio.

The crowding together of young chickens is productive of more evil than any other from mismanagement.

NO SUBSTITUTE for "The D. & L." Menthol Plaster, although some unscrupulous dealers may say there is. Recommended by doctors, by hospitals, by the clergy, by everybody, for stiffness, pleurisy, &c. Made by Davis & Lawrence Co. Ltd.

MAKE A NOTE OF IT, when you are leaving home to buy "The D. & L." Menthol Plaster. It is guaranteed to cure the worst case of headache, hiccups, stitches. Avoid everything said to be just as good. Get the genuine made by Davis & Lawrence Co., Ltd.

EIGHTH

Canadian HORSE SHOW

Toronto Armouries: THURSDAY, FRIDAY and SATURDAY
April 10th, 11th and 12th

Entries close Monday, March 31st.

Address HENRY WADE

Parliament Buildings

REDUCED RATES ON ALL RAILWAYS

GEORGE W. BEARDMORE,
Chairman,

STEWART CLOUSTON,
Manager.

HENRY WADE,
Secretary.

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.



WILL NOT SCAR OR BLEMISH.

GOMBAULT'S CAUSTIC BALSAM

is the safest and most effective lotion or blister for ailments of

HORSES and CATTLE

and supersedes all caustery or firing.

It is prepared exclusively by J. E. Gombault, ex-Veterinary Surgeon to the French Government Stud.

As a HUMAN REMEDY for Rheumatism, Sprains, Sore Throat, etc., it is invaluable.

Every bottle of Caustic Balsam sold 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 descriptive circular, testimonials, etc. Address:

THE LAWRENCE-WILLIAMS COMPANY Cleveland, Ohio,
or 21 FRONT STREET WEST, TORONTO, ONT.

CHAMPION EVAPORATOR

Not a single feature of the "Champion" Evaporator could be dispensed with and leave a perfect Evaporator. Durability, rapidity, and high quality of product, with saving of fuel, are its features. Our sectional pan-system makes it easy to handle, and everlasting. Write for catalogue, state number of trees you tap, and an estimate of your requirements will follow.



The GRIMM MFG. CO.,
84 Wellington St.
Montreal, Que

WOOD ENGRAVING, PHOTO ENGRAVING, HALF TONES

168 BAY ST.
J.L. JONES ENG. CO.
TORONTO
please mention THE FARMING WORLD.

Spooner's "PHENYLE"
Powder
"Phenyle" GERMICIDE DISINFECTANT.

KILLS CHICKEN LICE

and Lice on Horses and Cattle, and Ticks on Sheep. Keeps them Healthy. Easily applied; no dip required.

60lb. boxes, 1lb. packages,.....25c. lb.
70lb. pails,.....15c. lb.
400lb. barrels,.....10c. b

If your Druggist does not sell it, send direct to

ALONZO W. SPOONER,
Laboratory, PORT HOPE, Ont
Will cure and prevent hog cholera.



Grand's Repository

53 to 59 Adelaide St. W., Toronto.

Auction sales horses, harness, carriages, etc., every Tuesday and Friday, at 11 o'clock.

Great Annual Spring Sale

MARCH 11, 12, 13 & 14.

TUESDAY, MARCH 11th.

The catalogue will be published on the morning of the sale, so that it will contain full particulars of all the entries, consisting of Clydesdale and General Purpose Mares, Geldings and Stallions, all purchased direct from the farmers and breeders specially for this great sale. This will positively be the finest collection of heavy horses and medium weight blocks ever offered by auction in Toronto. The usual trial and warranty will be given with every horse.

WEDNESDAY, MARCH 12th.

The following is a short description of a few of the strictly high-class roadsters, trotters and high steppers to be sold. Only horses of the highest type will be offered on this day, so that purchasers who want the best will be able to satisfy themselves. All the horses for Wednesday's sale will be on view at the "Annex," Simcoe and Nelson streets, from now to the day of the sale.

The sale will commence with the following consignment of highly-bred and exceptionally well-selected trotting stock, the property of Messrs. Bedford Bros., Chatham, who are selling their entire racing stable on account of Mr. A. G. Bedford having accepted a position as trainer with an extensive breeder of trotters. Special attention is called to the "Wild Brinos" in this lot. It is a well-known fact that there is no safer investment than the produce of this wonderful Canadian stallion, standing, as he does, third in the list of great speed-producing sires of America for the year 1901. Wild Brino, 2.19 1-4, is the sire of:

DAN FINISTER—Bay stallion, 15.2 hands; foaled 1898; bred by William Henson, Louisville, Ont.; owned by Bedford Bros., Chatham, Ont.; by Roadmaster, 2.26 3-4.

First dam, by Black Diamond, full brother to Little Joe, 2.17.

Second Dam, by Kentucky Jack.

Third Dam, Thoroughbred.

Roadmaster, 2.26 1-4 (sire of Harold H., 2.04; Roady, 2.12 1-4; Master Roy, 2.20 1-4; Paddy D., 2.18 1-4, and several other fast ones yet unmarked) by Hambletonian Downing, Dam by London Traveller.

Note.—This colt, although perfectly green, has racehorse speed right now, and certainly looks and acts like the real thing; he will show for himself on day of sale; should pace in 2.10 next season if given a chance.

LITTLE JACK, 2.39 1-4—Bay gelding, 15.3 hands; foaled 1895; bred by John Mount, Chatham, Ont.; owned by Bedford Bros., Chatham, Ont.; by son of Wild Brino.

First dam by Wilkes Chief, son of Red Wilkes.

Second dam by Old Rooker, dam of Engaretta, 2.14 3-4, sire of Nellie Rooker, 2.10 1-4; Maud Pollard, 2.13 3-4, and several others, and sire of the dam of Attor, 2.11 1-4; Frank Rysdike, 2.08 3-4; Roady, 2.12 1-4; Ella Eddy, 2.12, and several others better than 2.15.

Third dam by Blenkiron.

Note.—This gelding is a high acting trotter on the roads and a very fast pacer when at speed, has been a mile in 2.24, and a quarter in 33 seconds. A race horse right now.

LADY HOUSTON—Bay mare, 15.3 hands; foaled 1896; bred by John Houston, Chatham, Ont., owned by Bedford Bros., Chatham, Ont.; by Wild Brino, 2.19 3-4.

First dam by Old Rooker.

Second dam Thoroughbred.

Note.—This is a very stylish driver, and should, if trained, make a trotter, as she will go a 3-minute clip on the road, with extra good action. Is direct from the breeder, and has not yet been handled for speed. Remarkably handsome, very kind and reliable.

WEDDING RING—Bay mare, 16 hands; foaled 1897; bred by Mr. Knight, Ridgeway, Ont.; owned by Bedford Bros., Chatham, Ont.; by Gold Ring, 2.12 1-2.

First dam by Almediun.

Second dam by Tonteen.

Note.—This stylish big mare is an extraordinary fast and true gaited trotter. Has shown a mile in 2.41 3-4, with four weeks' training a quarter in 38 seconds; can now show much faster, and is one of the best prospects for a race horse we have ever owned. Be sure to ride behind this mare before the sale, as she is well broken and will show for herself.

ANTILE—Bay mare, 16 hands; foaled 1897; bred by Peter Forham, Wallaceburg, Ont.; owned by Bedford Bros., Chatham, Ont.; by Toxtile.

First dam by Prince Edward, son of William Welsh, by Hambletonian (10), William Welsh sired dam of Connor, 2.05 1-4, etc.

Second dam by Stranger, brother of Old Rooker, dam of Black Patti, 2.22 1-4.

Third dam by Fitzsimmons' St. Lawrence.

Note.—This grand young filly possesses extreme speed right now, and the man who is fortunate enough to secure her is buying no has-been, but a strictly high-class mare, ready for the races as soon as the bell taps. Her breeding needs no comments, as will be seen, is in the nick of fashion, has been a mile in 2.24, and a quarter in 33 seconds last fall with only two months' training over a poor half-mile track. Wears only quarter boots, good gaited as lives, and very steady going, a perfect family mare or speedway prospect after her racing days are over.

ERIE MAID, 2.29 1-4—Black Mare; 15.1 1-2 hands; foaled 1894; bred by Mr. Muckle of Amherstburg, Ont.; owned by Bedford Bros., Chatham, Ont.; by Indemion.

First dam, by—.

Second dam, untraced; Indemion, by Dictator, dam by Hambletonian.

Note.—Erie Maid not only possesses extreme speed, but is a grand individual, being very cobby built; she is a most desirable family mare, and can be driven by a lady with the most absolute safety; that she is a game, reliable race mare is shown by her past races; her present record is no indication of her speed, as she has

shown miles in 2.20 over 1-2-mile track.

TOPSY MOUNT—Black mare, 15.2 hands; foaled 1897; bred by John Mount, Chatham, Ont.; owned by Bedford Bros.; by Wild Brino, 2.19 3-4.

First dam, by Old Rooker; sire of dams of Attar, 2.11 1-4; Frank Rysdike, 2.08 3-4; Roady 2.12 1-4; Little Jim, 2.15.

Second dam, by Combination.

Third dam, by Blenkiron, thoroughbred.

Fourth dam, by New York.

Dam of Bonnie Annie, 2.26 3-4.

Bonnie Doone, 2.24 1-2.

General Brock, 2.29 1-4.

General Riel, 2.31 1-2.

Black Hawk, the sire of the General Brock, 2.29 1-4.

Note.—This handsome filly, although perfectly green, can show 2.30 speed trotting, and is as good gaited as lives.

It is to be hoped she will be given a chance this year, as no surer race mare was ever offered at auction; a trial before the sale will convince anyone that Topsy Mount will be heard.

CHARLIE—Bay gelding; 6 years; 15.2 hands; sound, kind and reliable in harness; a strong, servicable driver, and can pace a 2.50 clip.

BONNIE BESS—Brown mare; five years; 16 hands; sound, kind and gentle in every way; a model gentleman's roadster and family driver; very attractive looking; extra good all round action, and can go twelve miles an hour with ease; sired by "Bon Ton," dam by John E. Rysdike.

FORESTER—Brown gelding, 6 years 16 hands, sound, kind and reliable in single or double harness and in the stable. A fine, handsome, strong, well-bred family horse, absolutely fearless, and a prompt roadster up to twelve miles an hour or better. Ask to see this horse in harness before the sale.

Lots 13 to 17—Particulars not yet received.

VICTOR AND RICHMOND—Pair brown geldings, 5 and 7 years' old, sound, kind and true in single or double harness. Handsome, full-made carriage pair, in good condition and thoroughly trained to city sights and sounds. Any gentleman requiring a strictly high-class pair for Victoria or brougham will do well to see them. They are undocked, but regular hackney patterns, weighing about 2,350 pounds. Drive like one horse and have good action and a very fashionable appearance.

JUDGE—Dappled grey gelding, six years, 16 hands, sound, kind in single or double harness. Sired by Bob Hunter. One of the handsomest and best all-round show horses we have seen in years. If he gets into the hands of someone that will enter him at the coming Horse Show he is bound to be a winner. Safe for city use.

LIBERTY—Bay gelding, 4 years, 16 hands, sound, kind and true in single or double harness. A good goer of the weight-carrying hunter type, and carries a saddle well.

THURSDAY, MARCH 13th.

100 Horses—All Classes.

FRIDAY, MARCH 14th.

Immense Livery Stock Sale

50 horses, 100 carriages and buggies, 60 sets harness, new and second-hand, making altogether the most important sale held for years.

WALTER HARLAND SMITH,
Auctioneer.

Market Review and Forecast

Office of The Farming World,
Confederation Life Bldg.
Toronto, March 3rd, 1902.

Reports regarding the spring trade are to the effect that it is opening up very satisfactorily and in some lines better than a year ago. Wholesale trade is looking to the west these days where it is expected there will be a large influx of desirable emigrants this spring. Canadian stocks are active and strong in financial centres. Money is easier than a week ago and though the bulk of the business is still done at 5 per cent. on call, there have been quite a number of loans at 4½ per cent.

Wheat.

Though the wheat situation generally speaking has not changed materially, there is a slightly easier feeling. It is reported in some sections of the West, that farmers have not as much wheat in their granaries as was expected, but with the growing crop in good condition, and with increased receipts at primary points, this has not had much effect in stimulating values. The English market is reported higher. At Chicago early in the week there was a drop of 2c per bushel. We are reaching the season now when the growing crop will be a more important factor in the market. The crop is not yet safe by any means and should unfavorable conditions arise, the market might advance rapidly on very short notice.

Locally the wheat markets are quieter. At Fort William Manitoba No. 1 hard, is quoted at 73½c to 74c and No. 1 Northern at 70½c to 71c. Here red and white are quoted at 72c to 73½c middle freights, goose at 68½c and spring at 72c east. On Toronto farmers' market red and white bring 67c to 77c, goose 67c and spring fine 72c per bushel.

Oats and Barley.

The oat market is quiet and easier, and prices in England have fallen off 3d owing to larger Russian receipts. Here the market is quiet at from 40c to 42c at outside points. On the farmers' market oats bring 46c to 46½c per bushel.

Barley is also quiet and local dealers here quote 50c to 55c as to quality and point of shipment. On Toronto farmers' market, malt barley brings 50c to 63c per bushel.

Peas and Corn

The market for peas rules steady here at 79c to 82c at outside points and about 85c on the farmers' market.

Canadian yellow corn, is quoted at Montreal at 65c to 66c in car lots. No. 2 mixed is quoted here at 55½c to 56c West.

Bran and Shorts

At Montreal, Ontario bran is reported firm at \$19.00 to \$19.50, and shorts at \$21.00 to \$21.50 for car lots. City mills here sell bran

NO RESPONSIBILITY

Executors and Trustees are relieved from all responsibility in the investment of the funds committed to their charge if they purchase our

FOUR PER CENT. DEBENTURES

An order of the Lieutenant Governor-in-Council has authorized the investment of trust funds in these debentures.

The CANADA PERMANENT and WESTERN CANADA MORTGAGE CORPORATION

Head Office, Toronto Street, TORONTO.

at \$18.00 and shorts at \$20.00 in car lots i.o.b. Toronto.

Potatoes and Beans.

There is a much easier feeling in potatoes. Choice car lots being quoted at Montreal at 83c per bag. Cars on track are quoted here at 62c to 63c. On the farmers' market potatoes bring 75c to 80c per bag.

The bean market rules quiet. Car lots of primes are quoted at Montreal at \$1.30 to \$1.35 and jobbing lots at \$1.40 to \$1.45 per bushel.

Hay and Straw.

Generally speaking the hay trade is quiet and easier. There has been a blockade at St. John where some 1,200 cars were standing awaiting the steamer. Until these are unloaded there may be a scarcity of cars for shipping at eastern points. There is an easier feeling east, where at country points, No. 2 baled timothy is quoted at \$7.50 f.o.b. The scarcity of cars is interfering with shipping very much. Montreal quotations range from \$8.50 to \$10.25 per ton in car lots. The market is steady here at last week's quotations. On Toronto farmers' market, timothy brings \$13.00 to \$14.50, clover \$9.50 to \$11.00 and sheaf straw \$10.00 per ton.

Eggs and Poultry.

The egg market shows an easier tendency and more liberal receipts are looked for from this on. At Montreal prices for new laid eggs in case lots have dropped to from 24c to 25c. Prices have ruled steadier here and case lots of new laid eggs are quoted at 26c. On Toronto farmers' market new laid bring 25c to 28c per dozen.

Though the dressed poultry sea-

son is pretty well over, the demand keeps fair with a steady market for good quality. Wholesale prices at Montreal for choice unfrozen turkeys are 12½c to 13c, chickens 10c to 11c, geese 7c to 8c and ducks 9c to 10c per lb. On Toronto farmers' market live and dressed chickens bring 45c to 90c and ducks \$1.00 to \$1.25 per pair, and turkeys 12c to 14c and geese 8c to 9c per lb.

Live poultry like dressed are scarce, there being practically no receipts during the past week. Prices for spring chickens have advanced 2c., for young ducklings 3c., and for turkeys 2½c per lb. The Canadian Produce Co., Limited, 36 and 38 Esplanade street east, Toronto, will pay, until further notice for live chickens, 8c, for ducks and turkeys 10c, for geese 6c per lb. All must be young birds. For hens, 3½c per lb. Dressed poultry, dry picked (except hens), ½c lb. higher. These prices are for weight an arrival. Crates for live poultry supplied free, and express paid up to 50c per 100 lbs. of chickens. No thin birds will be taken.

Seeds.

There is considerable doing in red clover and alsike seeds. At Montreal wholesale prices are \$14.00 to \$17.00 for alsike, \$9.50 to \$10.50 for red clover and \$6.50 to \$8.00 per cwt. for timothy. On Toronto farmers' market, alsike brings \$6.50 to \$8.00, red clover \$4.50 to \$4.60 and timothy \$2.50 to \$3.25 per bushel.

Cheese

The cheese market took quite an active turn last week, and prices advanced from ¼c to ½c over the week previous. Finest Eastern



Trees! Trees!! Trees!!!

We have a full line of Fruit and Ornamental Trees for Spring, 1902, at lowest possible prices. Headquarters for packing dealers' orders.

Farmers wishing to buy first-class stock absolutely first hand and without paying commission to agents, should write to us at once for a Catalogue and Price list.

Don't wait until the last minute, as you will be disappointed. Place orders early and secure the varieties you want. Correspondence solicited.

WINONA NURSERY CO., Winona, Ont.

sold at Montreal during the week at 9½c to 10½c and Western at from 10½c to 10½c per lb. The English market has also advanced.

Butter

Though the market keeps steady there are indications of a weaker condition in the butter trade. The English market is quieter under more liberal arrivals from Australia. At Montreal finest fall creamery brings 21½c to 22c in a jobbing way while exporters are offering good butter at 20c. The Lenten season has been somewhat disappointing. Some fine western creamery sold there last market at 23c to 23½c in small lots while a case was offered at 20c a lb.

Creamery is in good demand here and sells well at 22c to 23c for prints, and 21c to 21½c for solids. Choice dairy lb. rolls sell at 17c to 18c and large rolls at 16½ to 17½c. On Toronto farmers' market lb. rolls bring 16c to 21c and crocks 15c to 19c per lb.

Cattle

The cattle market ruled barely steady during the week. Toward the end most of the American markets including New York, Chicago and Buffalo, were slow. On Friday good to prime steers sold at \$6.50 to \$7.00 per cwt. at Chicago, receipts there ruling larger than the week previous. At Toronto cattle market on Friday receipts were moderately large comprising 1,148 cattle, 1,460 hogs, 398 sheep and 20 calves. The quality of the cattle offered was not as good as earlier in the week there being more of the medium unfinished kind than for several markets past. There were numbers offered that should have been fed a month or six weeks longer. Trade was fair in the early part of the day, but prices dropped 10c to 15c a cwt. later for medium butchers. Medium exporters also suffered a decline of from 15c to 25c per cwt. Choice well-finished butchers and exporters being scarce held their own. Good calves are scarce and wanted. There are too many skinny unfed calves being offered. Milch cows were easier. Nearly all the offerings on Friday were of poor quality.

Export Cattle.—Choice loads of these are worth from \$5.40 to \$5.50 per cwt. medium exporters \$4.75 to \$5.00, and light ones \$4.25 to \$4.60 per cwt. Heavy export bulls sold at \$4.00 to \$4.25 and light ones at \$3.40 to \$3.85 per cwt., choice export cows sold at \$3.50 to \$4.00 per cwt.

Butchers' Cattle.—Choice picked lots of these, equal in quality to the best exporters, weighing 1,000 to 1,050 lbs. each, sold at \$4.35 to \$4.50 per cwt., good cattle at \$4.00 to \$4.25 medium at \$3.50 to \$3.90, and inferior to common



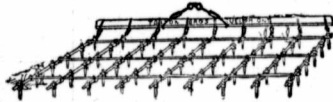
NOTE
CLOSE
MESH
AT
BOTTOM

Page Acme Poultry Netting

is close meshed at bottom and does not require rail or board support at edges, having strong straight wire (No. 12 gauge) at top, bottom and in centre, cannot sag and is easy to erect. The "Page Acme" netting is of neat appearance, very durable and cheap. We also make farm and ornamental fence, gates, nails and staples. The name of Page is your guarantee of quality.

The Page Wire Fence Co., Limited, Walkerville, Ont.

STEEL HARROWS



Tolton's Section and Flexible all Steel Harrows have an unequalled record. Made in all suitable styles and sizes, for different soils, or in widths to suit purchasers. Pre-eminently the most efficient, strongest, and longest-wearing harrows ever manufactured is our unqualified guarantee. Parties wishing a first-class harrow will do well to write us direct or apply to the local agent.

OUR MOTTO: "Not how Cheap, but how Good."

TOLTON BROS.

Guelph, Ont.

**BELL . . . PIANOS . . . AND
ORGANS.**



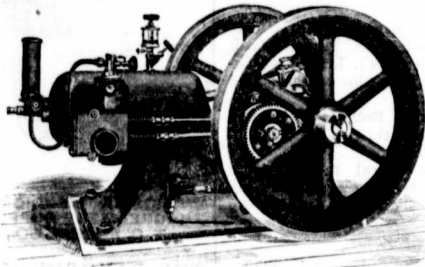
Built to last a lifetime
By the Largest Makers
in Canada



BELL is the Musician's Favorite

The BELL ORGAN AND PIANO CO. Limited, GUELPH, Ontario

Catalogue No. 41 Free



The "Model" Gas or Gasoline Engine.

This engine is especially suited for farm use. It is so simple in construction that it can be operated by anyone of ordinary intelligence.

Send for Catalogue. Dept. N.

WE ALSO MAKE

Wheelock Engines, Ideal Engines, Gas and Gasoline Engines, Boilers, Pumps, Water Wheels, Flour Mill Machinery, Wolf Grators, Emery Stone Choppers, Oatmeal Mill Machinery, Wood Working Machinery, Shingle Machinery, Heaping and Stave Machinery, Wood Rim Split Pulleys, Iron Pulleys, Shafting, Hangers, Gearing, Couplings, Friction Clutch Couplings, Friction Clutch Pulleys, Chain Tackle, Safes, Vaults and Vault Doors.

The Goldie & McCulloch Co. Limited

GALT, ONT.

"THE D. & L." EMULSION OF COD LIVER OIL, taken in cases of general debility and loss of appetite, is sure to give the best results. It restores health and renews vitality. Davis & Lawrence Co., Ltd., manufacturers.

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

WANTED—BUTTER, POULTRY, EGGS

We have a large outlet, having Twenty-one Retail Stores in Toronto and suburbs. Payments weekly. Established 1854.

The WM. DAVIES CO., Limited
Head Office—Retail Dept.

Correspondence invited. 24 Queen St. West
TORONTO

at \$2.75 to \$3.30 per cwt.
Feeders—Heavy, well-bred steers from 1,100 to 1,200 lbs. each sold at \$4.50 to \$4.75, and other quality at \$3.50 to \$4.00 per cwt. Light steers, 900 to 1,050 lbs. each sold at \$3.75 to \$4.40 per cwt. Feeding bulls are worth \$3.25 to \$3.50 per cwt.

Stockers—Yearling steers weighing 500 to 800 lbs. each sold at \$3.30 to \$3.60, and off colors and those of inferior quality at \$2.75 to \$3.15 per cwt.

Calves.—These are in steady demand at Buffalo. Good to choice veals bring \$7.50 to \$7.75 per cwt. At Toronto market good to choice calves bring \$4.50 to \$5.00 per cwt.

Milch cows and springers sold at \$25 to \$50 each.

Sheep and Lambs

Prices for sheep rule steady, with lambs firm. Sheep sold at \$3.50 to \$3.75 per cwt. for ewes and \$2.50 to \$3.00 for bucks. Lambs sold well at \$3.75 to \$1.25 each and \$4.50 to \$5.25 per cwt. To bring the latter price, however, lambs must be choice grain fed, weighing about 100 lbs. each.

Hogs

Hogs started in early in the week at \$6.12½ per cwt. for select bacon hogs, only to drop on Friday to \$6.00 per cwt., the ruling figure for the couple of weeks previous. Lights and fats sold at \$5.75 per cwt. and uncured car lots at \$5.87½ per cwt.

For the week ending March 8th, the Wm. Davies Co., Toronto, will pay \$6.00 per cwt. for select bacon hogs, \$5.75 for lights, and \$5.75 for fats.

The Trade Bulletin's London cable of Feb. 27th, re Canadian bacon reads thus:

"Owing to liberal receipts from Denmark, there is a quieter feeling with prices slightly in buyers' favor."

Horses


A decided improvement is reported at Montreal in the demand for heavy draft horses. Workers are also active. The trade in light drivers, saddle and carriage horses. Montreal quotations are: Carriage horses, \$175 to \$350; heavy drafts, \$125 to \$250; roadsters, drivers and saddles, \$100 to \$250, and common stock \$50 to \$80 each.

About 70 horses were sold at Grand's last week, among them a car load to Mr. Warren for shipment to Manitoba. This car load was a very fine lot, mostly mares, weighing from 1,350 to 1,500 lbs. each. They sold at from \$125 to \$175 each. A lot of good drivers were sold at from \$100 to \$175 each.



\$30.00 Cut this ad. out and send to us with **\$1.00**
State whether you wish men's or Ladies' Bicycle, height of frame and gear wanted, and we will send you this High Grade 1902 Model Eaglelet Bicycle by express C.O.D. subject to examination. You can examine it thoroughly at your Express Office and if found perfectly satisfactory, exactly as represented a GENUINE EAGLELET BICYCLE, HIGH GRADE 1902 MODEL—pay to the Express Agent the balance due—\$29.00—and Express Charges. The express charges are only 50 to 75 cents for each 500 miles. No extra charge for 1adies Bicycles. **EVERYONE KNOWS THE EAGLELET BICYCLES.** They are the Highest Grade wheels made; no Bicycle has a better reputation; no Bicycle has been more widely advertised by the makers; big favourites with best Bicycle Clubs; the leading wheel with professional riders. Built on honor, flush joints, finest hanger, hubs and bearings, highest grade equipment. Fitted with Victor single Tube Tires. \$2.50 extra for Morgan & Wright Tires—\$5.00 extra for Dunlop Tires. Heights of frame—Men's 20, 22 and 24 in.—Ladies' 20 and 22 in.—enamelled Black. **WE OFFER** splendid chance to a good agent in each town. Send for catalogue and ask for Agents' Discounts. **Wheels slightly used, \$8.00 to \$25.00.** Secure Agency at once.

T. W. BOYD & SON, 1683 NOTRE DAME ST., MONTREAL.



THE NATIONAL CREAM SEPARATOR

The Most Simple in Construction.
A Perfect Skimmer.
Easy to Clean.
Light Running and Durable.

Every Machine Guaranteed to do Good Work.
Give the NATIONAL a Trial.

National No. 1, capacity 350 to 500 lbs. per hour.
National No. 1 A, capacity 450 to 500 lbs. per hour.

—GENERAL AGENCIES—
JOS. A. MERRICK, Winnipeg, for Manitoba and N.-W.T.
CREAMERY SUPPLY CO., Guelph, for South-western Ontario
T. C. ROGERS CO., Guelph, for Ontario North and East.
MANUFACTURED BY
THE RAYMOND MFG. CO. OF GUELPH, Limited
GUELPH, ONTARIO

The Publisher, **THE FARMING WORLD**,
Confederation Life Building, Toronto

Dear Sir,—Please send **THE FARMING WORLD** every week for one year from the present date, for which I enclose \$1.00.

Name.....

Post Office.....

ALWAYS MENTION THE FARMING WORLD WHEN WRITING ADVERTISERS.

DO YOU KNOW

THAT WORN-OUT LANDS MAY BE MADE PRODUCTIVE AND PROFITABLE BY THE JUDICIOUS USE OF THE RIGHT KIND OF FERTILIZER?

NOW IF YOU HAVE A PIECE OF LAND THAT WON'T GROW ANYTHING BUT WEEDS, TALK WITH US ABOUT IT AND LET US SUGGEST THE RIGHT FERTILIZER.

WE FEEL VERY SURE THAT WE CAN SHOW YOU HOW TO USE FERTILIZERS WITHOUT GREAT EXPENSE SO YOUR LAND WILL PAY.

CONSULT US FREELY IT IS OUR BUSINESS TO KNOW ENQUIRIES FREELY ANSWERED AGENTS WANTED FOR TERRITORY NOT TAKEN UP

THE W.A. FREEMAN CO. LIMITED
HAMILTON ONTARIO

RIPPLEY'S COOKERS



Are now made in Canada, saving duty and freight for our customers. Made of boiler steel. No flues to rust or leak. Will cook 25 bushels roots or grain in two hours. Fine for heating stock water tanks, dairy rooms, pigpens. Can be used outside or attached to a chimney same as a stove. Used and endorsed by the following Canadian breeders and many others: Brethour & Saunders, Burford; W. D. Platt, Hamilton; D. C. Platt & Son, Millgrove; H. J. Davis, Woodstock; Ontario Agricultural College, Guelph; also James Boden, Graham Bros., Newton and Gosh, J. A. McDonald, J. P. Connelly, Prices \$10 to \$45. Took first premium at Toronto and London fairs. Catalogue and prices mailed free. Address: **RIPPLEY HARDWARE COMPANY, Box 215, London, Ont. U.S. Factory, Grafton, Ill**

CABINET SEWING MACHINES

Our new Cabinet Sewing Machine advertisement has, owing to lack of space, been left out of this issue. This is a thoroughly reliable and up-to-date machine. It is strongly built and easy running. Any Farming World subscriber may secure one at half price. We guarantee satisfaction or your money back. If you think you can secure two or three new subscribers for The Farming World, write us for our special cut price. Address The Farming World, Confederation Life Building, Toronto.

See advertisement in issue Feb. 25th.

The Standard of the World

IN the manufacture of School Furniture we are many laps ahead of our competitors. For durability, beauty of construction and superior points of merit, our **FOODS**

EXCEL ANYTHING IN THE SCHOOL FURNITURE LINE.

Our New Patent "Ball Bearing" School Desks lead all others. They are made of the finest materials and have never made having a Permanently Noiseless Ball Bearing Seat Hinge.

It is NOT an experiment, but has been thoroughly tested, and its practicality proved.

Our Adjustable School Desk is the greatest success ever achieved in Desk construction.

Write for CATALOGUE.

See the fine photo when students must adjust themselves to fit the desk. It is the only desk that permits the student to fit the desk themselves to fit the students.

That is why our Adjustable Desk should be in every school room in the land.

Canadian Office and School Furniture Co., Ltd.
PRESTON, ONTARIO, CANADA.

"EAGLE" in 100's and 200's. "VICTORIA"

EDDY'S PARLOR MATCHES

Are put up in neat sliding boxes convenient to handle. No sulphur. No disagreeable fumes. Every stick a match. Every match a lighter.

--- For sale by all first-class dealers. ---

FIVE PER CENT. IN GOLD.

By means of a 5% GOLD BOND POLICY you can secure a guaranteed investment and protect your family in case of your death.

WRITE FOR PAMPHLETS.
POLICIES ISSUED ON ALL APPROVED PLANS.

Confederation Life

ASSOCIATION—HEAD OFFICE, TORONTO.

W. H. BEATTY, Esq.,
PRESIDENT.

W. D. MATTHEWS, Esq. FREDERICK WYLD, Esq.,
VICE-PRESIDENTS.

W. C. MACDONALD J. K. MACDONALD,
ACTUARY. MANAGING DIRECTOR.

Reading Room
Ontario Agri College
GUELPH Ont

NEW WAVERLEY OATS

\$100.00 CASH

HOW MANY GRAINS IN THE WAVERLEY OAT HEAD?



FAMOUS WAVERLEY WHITE OATS

FROM EUROPE. GIVES ASTONISHING RETURNS GROWN IN CANADA.

WE believe more new varieties of Oats have been placed before the public than any other kind of seed grain. Many heavy croppers have been introduced of late, but on first trial they are rejected on account of thick, coarse hulls or poor, weak straw, if for nothing else. When, therefore, we state that in addition to the Waverley yielding immense crops, it is also thin in the hull and has a clear, bright amber colored straw, which stands upright in almost all kinds of weather, we are sure we have said enough to enlist the attention of farmers everywhere. Our crops have satisfied us that it is wonderfully adapted to both the soil and climate of this country. Waverley is ready to harvest about the same time as other sorts, and is the heaviest weight oat we have ever seen. It is an early ripening, medium sized grain, the most distinctive feature of the NEW WAVERLEY is its producing three grains in a spikelet, whereas most all other varieties produce but two. Of immense feeding qualities, WAVERLEY gives great promise of becoming the leading oat for Canada, and we predict an enormous sale as soon as its merits become known.

PRICES FOR 1902: Pound 30c.; 3 pounds 75c., by mail post-paid; peck 60c.; half-bushel \$1; bushel \$1.60; 5 bushels \$7.50. PRICES by peck, halfbushel and bush, do not include express or freight charges nor bags. BAGS—Cotton, each 10c.; Linen, each 10c.

\$100.00 In Cash Prizes.

A Unique Competition.

How Many Grains IN THE Waverley Oat Head?

The accompanying illustration is an exact engraving from photograph of a head of the new Waverley Oats grown by us the past season, and we offer below special inducements to purchasers.

SPECIAL TO CUSTOMERS OR PURCHASERS OF ONE POUND OR MORE WAVERLEY OATS

who estimate (count or calculate) as per conditions below, the nearest number of grains in the head as illustrated, we offer the following Cash Prizes, which are given as an inducement to aid and assist in the production and cultivation of a better and more superior variety of oats than has heretofore been known in this country.

1st Prize, \$15.00; 2nd Prize, 10.00; 3rd Prize, \$5.00.
Next Ten—Each, \$2.00; Next Fifty—Each, \$1.00.

The Cash Prizes are given subject to the following conditions:

- A. Every purchaser or customer who purchases one pound or more can send in an estimate count or calculation.
- B. No customer is compelled to estimate.
- C. The nearest estimate to the exact number of grains in the head to receive First Prize.
- D. Should two or more persons estimate the same number the two or more prizes will be equally divided.
- E. No estimates will be received after May 31st, 1902.
- F. All estimates to accompany orders for Oats and to be sent by mail.
- G. No employee nor person who has any connection with our establishment can estimate.
- H. Only one estimate will be received from each customer or purchaser.
- I. Finally no questions will be answered.
- J. No estimate will be recognized unless on separate sheet from order.
- K. A full list of the PRIZE WINNERS will be published June 1st, 1902.

CUT THIS OUT

Name

Post Office

Province

Estimate

Grains.

ADDRESS ALL ORDERS:

WM. RENNIE, Adelaide and Jarvis Streets, TORONTO

REMIT CASH WITH ORDER.

BLIZZARD SPRAYER . . .

A complete, handy, and easy-working sprayer. It sells at sight. After filling three fourths full and pumping in about ten strokes of air, a continuous mist like spray is thrown which will last many minutes. It holds one gallon; is simple in construction, easy to work, easy to fill, and handy to carry. It is light, strong, and neat. A lady can use it. Can spray as fast as you can walk. Will throw the spray 20 feet high. It is the best hand-sprayer for spraying potatoes, fruit trees, bushes, poultry houses and cattle; spraying trees for San Jose scale louse; for disinfecting purposes; for greenhouse and nursery stock. It does away with the hard labor attending constant pumping of small sprayers now on the market. And it is sold at a price that places it within reach of all. Galvanized iron, price \$2.00 each. **FRUIT GROWERS' AND FARMERS' SUPPLIES.** We are headquarters in Canada for these goods. Send for catalogue.

FRED HAMILTON, 60 King Street, Hamilton, Ontario.