

**PAGES  
MISSING**

# FARMER'S ADVOCATE

AND HOME MAGAZINE

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

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## EDITORIAL.

The plan of assisting in the establishment and maintenance of creameries in the Northwest Territories is being continued, advances to the extent of \$15,000 being provided in the estimates for 1898-9. Loans of various amounts are made the creameries, to be repaid to the Government.

We notice that \$5,000 has been included in the supplementary estimates at Ottawa for a Canadian exhibit at the Trans-Mississippi and International Exhibition at Omaha, Neb., from June 1st to Nov. 1st. The Dominion will be officially represented there and have a building with an exhibit representing the agricultural, manufacturing and mining resources of the country.

A couple of issues ago we discussed the outline of the plan of "Illustration Stations" as prepared by Agricultural Commissioner Robertson, at Ottawa, and approved by the Dominion Minister of Agriculture. It was proposed to include \$5,000 in the supplementary estimates for 1898-9 to give the scheme a start, but, after considerable discussion, it was decided to postpone action for the present, which will allow time for additional consideration and proper maturing of plans.

The farmers of Manitoba and the Northwest have enjoyed a very favorable seeding and have largely increased the area under wheat—probably from 15 to 20 per cent. more than last year's acreage. The favorable crop and prices of 1897 foreshadowed this, and with the latter at over \$1 per bushel the prairie wheat-grower hurried along the drill and dreamed of a golden harvest. Correspondents in our "Farm Gossip" department also report high prices for beef cattle, a natural result of the draining away of stockers to the U. S. last year.

In this issue we commence a seasonable and valuable treatise on the subject of "Fitting Dairy Stock for the Showing," by Mr. F. S. Peer, whose experience as a breeder, exhibitor, exporter, and judge of dairy cattle well qualifies him to advise with authority. For many years Mr. Peer has been a successful breeder of high-class Jerseys and Hackneys, and during recent years he has many times visited England and the Channel Islands, returning with large consignments of animals for himself and other breeders. It will be remembered, too, that for a number of autumns he has officiated as judge at the large Canadian exhibitions, including Toronto Industrial, Ottawa Central, and Montreal, and has many times attended the "Royal" and other leading shows in Great Britain, which has given him a large field for observation, so that it is safe to say that he knows whereof he affirms.

In the discussion of the vote of \$75,000 for carrying on the Dominion Experimental Farms, Hon. Mr. Fisher, Minister of Agriculture, stated that there had been no definite change in policy, as he had not been able to give as much personal attention to the Experimental Farms as he was disposed to give, excepting that he had reorganized the work at Nappan, where more attention was being given to dairying. Slight changes had been made at the western farms, but in the main the work was going on at Brandon, Indian Head, and Agassiz much on the same line as hitherto. He also gave an account of the discovery of tuberculosis at the Central Farm at Ottawa last fall, when it was found that out of 55 head 26 were affected. These latter were disposed of, and a small additional amount will be put in the supplementary estimates to purchase new stock. The further announcement was made that as soon as a suitable man is found an Agricul-

turist will be appointed who will take charge specially of the farming operations, the production of crops and the treatment of soils. This will afford the Director (Dr. Saunders) relief from a great deal of heavy detail, and if the right man is chosen it will greatly strengthen the position of the Central Farm from the all-important standpoint of the general farmer and stock-raiser.

### A Judging Arena at the Winnipeg Industrial.

One of the most important innovations at the Winnipeg Industrial Exhibition this year is the substitution of one large judging arena for the several small scattered rings formerly used. The new ring is to be an oval about 400 feet long by 175 in width, the southern end being near the cattle barns. This large space is to be enclosed with a low, neat fence, and around the outside will be a row of seats for the accommodation of spectators. Light and heavy horses, beef and dairy cattle, will be judged within this enclosure, and with each animal wearing conspicuously a number corresponding to the live stock catalogue number, the animals on parade before the judges and the placing of awards can all be studied intelligently. We feel sure this feature will result in greatly increased interest in this the most important department of the fair. Of course much will depend on the correctness of the data in the catalogue and the proper numbering of the animals. It will be greatly in the interests of individual breeders and exhibitors to facilitate matters by furnishing the information asked for in the entry forms for the compilation of the catalogue, and see to it that the numbers are displayed on their animals while in the ring. Winnipeg is the first Canadian fair to introduce the one judging ring, although since the World's Fair, where the great live stock pavilion proved such a successful feature, several of the large State fairs have adopted the plan with gratifying results. From an educational point of view it is decidedly an advance step, and its success will greatly enhance the interest and value of the showing.

### Cash Prizes for Live Stock at Omaha.

As was pointed out in May 2nd number of the FARMER'S ADVOCATE, it was the intention of the management of the Trans-Mississippi Exposition, to be held in Omaha, to offer medals only as prizes for live stock. On behalf of Canadian breeders who might, with fair treatment, be counted on as exhibitors there, we protested strongly against such a course, as did also the United States breeders and stock journals. Realizing the inevitable result, the Board of Directors of the Exposition have reconsidered their first position, and have now wisely resolved that cash premiums will be awarded. The following letter explains the situation:

OMAHA, NEB., May 13.—The protest of the stockmen of the west against the offer of medals as awards in the live stock department of the Trans-Mississippi Exposition has resulted in a unanimous decision of the Board of Directors to substitute cash for medals. Stockmen declare that this change will result in making the live stock section of the Exposition the greatest show of live stock ever held in the United States.

The matter was considered at a special meeting of the Board of Directors called to consider the matter yesterday afternoon. One of the arguments used in favor of cash premiums was that Kansas City was preparing for a livestock show, at which \$75,000 in cash prizes would be offered, and that at which \$75,000 in cash prizes would be offered, and that breeders of stock would not bring their animals to compete for medals. The stock yards and other stock interests of South Omaha and live stock associations throughout the State were fully represented at the meeting, and all expressed great satisfaction at the decision, saying that the action would result in bringing thousands of people to the Exposition who would not otherwise have come.

The resolution, which was adopted by the directors without a dissenting vote, was as follows:

Resolved, That this board hereby directs the executive committee to reconsider the subject of live stock premiums, and instructs the committee to offer cash prizes amounting to \$35,000 in place of medals.

In addition to the \$35,000 to be awarded by the directors under the terms of this resolution, the Union Stock Yards Company of South Omaha will contribute \$1,000 in cash to be awarded in prizes by the executive committee for cattle, hogs, and sheep. The announcement of this offer was made to the directors by General Manderson, representing the Stock Yards Company.

### Constitutional Vigor in Stock.

A strong and robust constitution is the most essential quality in farm animals, for without this the best possibilities physically of any individual or race cannot be developed in a high degree. The great central idea that should dominate the mind and the methods of breeders of pure-bred stock should be by breeding and selection to secure, preserve, and perpetuate a strong and vigorous constitution in their animals of whatever class or breed. This is necessary in order to secure to the highest degree of health, the power to resist the incipient attacks of disease, and to throw off the effects of diseases of an epidemic or contagious character which may have gained a hold of the system. It is necessary to the most economical production of meat and milk, for the reason that the stronger the vital forces of heart and lungs the greater the capacity to consume food and assimilate its component elements in the form of flesh and fat, of blood and milk, of bone and hair of the best quality. These propositions, while they embrace the idea of the theory of natural breeding,—which is that of selection—a selection akin to natural selection, the outcome of which is the survival of the fittest,—are not mere theory, incapable of practical application, but may be carried to a successful issue by an intelligent use of nature's lessons and a determination to eliminate all but those factors and influences which are above the average. The only road to the general improvement of the breed lies through special improvement of the individual by intelligent and judicious mating of parents of the best obtainable quality and character. To this end, it is important in breeding to avoid everything tending to impair the constitution, and it should need no argument to convince any reasonable man that the way to obtain the best results in breeding is to seek to mate the best individual animals, irrespective of family lines or of pedigree, so long as the records show that they are purely bred and descended from healthy, vigorous, and prepotent ancestry. Were this not sound, then the whole idea embraced in the acknowledged law that like produces like would be a delusion. The aim is excellence; the law of nature is that excellence can only spring from antecedent excellence, and, as a consequence, we arrive at the safe rule of practice—that no inferior animal should ever be used, no matter how desirable his pedigree from the standpoint of the herd book, or of fashion or fad, as to color of hair or lines of breeding. A slavish pander to fad in breeding such as those referred to, it is well-known, threatened to wreck one of the best of the beef breeds of cattle a decade or two ago, and did work incalculable injury to the breed as a whole as well as individually, and though, thanks to wiser counsels and reasonable methods, it has largely rallied and recruited, it is a question whether the tendency is not again to drift into the same dangerous channel by a too imperious following of certain lines and families at the expense of size and robustness, and without sufficient care as to individual excellence of form, quality, and constitution. The important question is not whether Scotch or English, Bates, Booth or Orick-shank should predominate, but to breed the best to the best and avoid close affinities.

In some of the dairy breeds the idea of inbreeding and line breeding, and of being in a position to point to an abnormal percentage of the blood of a noted ancestor, is being carried to a dangerous limit, and, unless all the accepted laws of physiology are baseless and unsound, must have a damaging effect upon the physical constitution of the stock, resulting from such a course of breeding. It is well in selecting a bull to secure one whose dam and grandam have made large and well-attested records of milk and butter production, if he has, in addition to this connection, a strong and robust constitution, and comes tolerably near to the ideal

# THE FARMER'S ADVOCATE

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conformation which well-informed judges look for in a bull of the dairy breeds; but if he is deficient in the indications of robustness, no matter how great the records of his ancestors, he should be sparingly used, if used at all, as a breeder, until his offspring has proved to be well up to the standard in constitutional vigor, and also in milk and butter production. While the axiom is true, that as a rule like begets like, or the likeness of some ancestor in regard to conformation, quality, and even prepotency, yet the well-known and recognized laws of physiology must be observed if health, thrift, vitality, and fecundity are to be retained and maintained in the family or the herd; and it does not follow with geometrical certainty that the daughter of an extraordinary milker is equal, or superior, to her dam in this regard. If it were so, there would be little skill needed on the part of the breeder. It would be simply a question of mathematical demonstration. Indeed, it is well known that in many cases the daughters of phenomenal milkers have proved quite below mediocrity, even when they were sired by sons of cows having abnormal records. This being the case, and it being also conceded that in many cases close inbreeding results in impaired constitution and a predisposition to disease, as well as unshapely forms in the offspring, we submit that it is unwise to slavishly follow a fashion which produces so large a proportion of blanks to prizes. It is safer to look first to health and vigor, which is associated with a broad chest, deep and well-sprung ribs, and a large stomach, giving capacity for working up large quantities of food into milk and butter or beef. The same general principals apply in all classes of stock.

### Soil Moisture and Fertility.

We are indebted to Prof. A. E. Shuttleworth, of the staff of the Ontario Agricultural College, now continuing his studies in Gottingen, Germany, for a translated copy of an interesting experiment conducted last winter under the supervision of the Agriculturist at the Experiment Station at Gottingen, Prof. Von Seelhorst, assisted by Mr. G. M. Tucker, of Kingston, R. I., now a student in agriculture at the Gottingen Station. Among the numerous photographs illustrating the experiments which the potash syndicate at Stassfurt, Germany, have conducted are those that present the influence of potash upon the development of the roots, stems and fruit of the coffee plant. These photographs suggested a similar comparison of the respective parts of the oat plant as they might be influenced

by the various quantities of water in connection with nitrogen, potash and phosphoric acid in varying proportions. For this experiment pots were used, which were sown to oats in view of carrying out an experiment to observe the influence of the water content of the soil upon the ash ingredients of the plants.

Although it is not claimed that absolutely correct figures can be obtained from small pot culture, yet relatively the results are of value in determining, to a considerable extent, the influence of the several factors indicated. The copy of the experiment is lengthy and somewhat complicated, and we cannot afford the space at this time requisite to its reproduction entire, but we propose to summarize the main points in the hope that it may be of interest to at least some of our readers. Each pot was filled with soil (dry substance) moistened with water and fertilized. The pots were divided into three groups, according to the amount of water given, which was in varying proportion. The several groups receiving from 14.35% water=41.6% of the absorptive power of the soil to 16.44%=48.8% of the absorptive power of the soil at the first, which was increased from time to time until the quantity used was from 18.43%=56.1% to 22.59%=70.6% of the absorptive power of the soil. The pots were watered daily and fertilized in varying proportions with potash in the form of carbonate, phosphoric acid in the form of calcium phosphate, and nitrogen in the form of nitrate of soda. When the grain was ripened the soil was washed from the roots by means of a hose and all the particles of gravel and sand removed by means of a needle, and the mass of roots with fragments, after being air-dried, were carefully weighed. Duplicate pots were taken in each case, so that the results given are the average of the two pots and the results which are given in tabular form are considered as accurate as it was possible to make them. From the tables there are three lines of consideration to be noticed in relation to the development of the plants: 1st, The water content of the soil; 2nd, The fertility of the soil, i. e., the actual plant food contained therein; 3rd, the combined influence of the water content and the fertility. From the three groups of tabulated results we select the following:—

Fertilizer.	WEIGHT OF STRAW AND GRAIN IN GRAINS.		
	GROUP NO. 1.	GROUP NO. 2.	GROUP NO. 3.
	Quantity of water.		
	Smallest.	Medium.	Largest.
O.....	41.5	47.2	68.5
K P.....	67.5	83.6	99.5
K P N.....	68.5	93.4	119.5
K P 2 N.....	68.5	94.0	135.0
K N 2 P.....	38.5	40.0	63.5
K N 2 P.....	79.5	108.0	127.5
P N.....	75.5	101.5	138.0
P N 2 K.....	74.0	99.5	117.5

\*K means 1 grain potash in the form of carbonate; 2 K, 2 grains of the same; P, 1 grain of phosphoric acid in the form of acid calcium phosphate; 2 P, 2 grains of the same; N, 1 grain of nitrogen in the form of nitrate of soda; 2 N, 1 grain of the same.

The results of the experiment briefly summarized show that not only under favorable soil conditions will the product of the oat plant be increased, but at the same time the proportion of roots to straw and grain undergoes a change. The root mass becomes relatively smaller while the weight of straw and grain becomes relatively larger than is true in cases where the soil is deficient in water or fertility or both.

### The Elevator Combine Monopoly.

The wheat-growers of Manitoba and the Northwest appreciate with a force not understood in Eastern Canada the seriousness of the grain elevator monopoly and the restrictions placed by railways upon the free handling of grain by preventing farmers loading a car from their own wagons or a flat warehouse. It enables the elevator companies to squeeze out independent dealers, and causes hardship and loss through elevator charges and holding down prices to the wheat producer so that he cannot realize what he should from his crop. Farmers have been charged sufficient for simply putting wheat through the elevator to carry it from points in Manitoba to Fort William or even Buffalo.

This may look like a threadbare subject to Northwest readers, but the abortive attempts at legislation recently made at Ottawa tend to show that the subject is very imperfectly understood even by the representatives of Western constituents, whose business it should be to know all about the subject. The original bill introduced by Dr. Douglas, Patron representative for Eastern Assiniboia, was imperfect and showed lack of knowledge of the question at issue. The compromise bill, which was evidently dictated by elevator lobbyists, with the endorsement of the

C. P. R., and which got the approval of the committee, would, had it ever become law, impose legislation upon the Western producers placing them in a worse position than they are under existing conditions. At the last moment Dr. Douglas abandoned his bill, and it was shelved for this session at least. It is difficult for the interested observer to arrive at an intelligent understanding of these futile attempts at legislation to overcome a simple regulation made by a railroad company in reference to the handling of a certain kind of freight, but it looks as though the wheat-growers of Manitoba and the Territories are indebted for the shelving of this bill to the efforts of the representatives sent to Ottawa at the last moment by the Central Farmers' Institute and the independent grain dealers.

Mr. Robertson, of Elva, represented the Central Institute, and Mr. John McVicar the independent grain men. The former is one of the largest wheat farmers in Manitoba, having over 700 acres in wheat this year. The latter has been a successful farmer near Otterburne for about twenty years, and for a number of years has also been in the grain business, operating principally on the C. P. R. and Emerson Branch of the Northern Pacific. Mr. J. K. McLennan, of Winnipeg, also representing the independent dealers, accompanied the delegation.

As the matter now stands, the Privy Council is to take up the question after the session, and if the railroads will not abandon their unjust elevator regulations, legislation is promised to remedy the evil.

We do not believe any legislation necessary if the railways are made to comply with the common law. The C. P. R. hold the key to the situation, and can, whenever they choose, bring this long fight to a close. Just why they should be at so much pains to maintain a "regulation" for the benefit of the elevator combine is a mystery beyond our comprehension, especially in view of the fact that if the desired amendment were made the railroad traffic would not be impeded, as is practically demonstrated on the Manitoba & Northwestern Road. It goes without saying that when farmers are justly dealt with they will patronize the elevator every time in preference to a flat warehouse.

Below we publish a memorial to the Government which was prepared by the farmers' and independent dealers' representatives, with the assistance of the late D'Alton McCarthy, and submitted to the Government by the Western members. It will be seen that practically nothing is asked for further than the abrogation of the troublesome protective "regulation" of the railroad companies:

1. Every railway company engaged in the carriage of grain in the Province of Manitoba and the Northwest Territories shall at every station on its line of railway from which grain is shipped, grant to any person who demands it in writing the privilege of erecting, maintaining, and using on its station grounds, not required for railway purposes, adjoining the main track, siding or spur at such station, an elevator or flat warehouse for the purpose of storing and shipping grain therefrom, but the said elevator or flat warehouse shall not be used for any other purpose.

2. The right or license so granted by the railway company shall continue so long as the warehouse or elevator is used for the purposes mentioned in this Act, but not exceeding the period of twenty-one years. Provided that if the company require the land on which the elevator or warehouse is erected for railway purposes prior to the expiration of the said period of twenty-one years, the company may, on giving to the owner thereof twelve months notice in writing, determine the license on payment of the value of the elevator or warehouse erected on the station ground, which value in case of dispute shall be ascertained by arbitration and the provisions of "The Consolidated Railway Act" as to arbitration respecting the value of lands taken thereunder shall so far as the same are applicable apply thereto.

3. In the event of the railway company notifying the person who has made the demand in the preceding section provided for, of its inability to permit the erection of an elevator or warehouse on the station grounds owing to their being required for railway purposes, it shall be the duty of the railway company on the request of the person so applying forthwith to build and thereafter to maintain a side track or spur from said station grounds to any land or premises near thereto where such person has built or acquired or is building a flat warehouse or elevator for the receiving and shipping of grain by such railway. Provided always that should the said elevator or warehouse be at a greater distance from the said station grounds than three hundred yards that the additional cost of building and maintaining the said track or spur shall be borne and paid by the person applying for the said privilege or by the owner of such elevator or warehouse.

4. The company shall on reasonable demand on that behalf supply cars for the purpose of carrying the grain received or stored in the said elevators

or warehouses; (b) and it shall be lawful for the company to add to its charges for carrying such grain any sum chargeable for demurrage under the provisions hereof.

5. Every railway company to whom this Act applies shall on reasonable notice on that behalf provide and furnish a car or cars for receiving and shipping grain at and from any station on its line of railway, and such railway company shall permit any person shipping such grain who desires to do so to load the same direct from his vehicle into the car or over a portable platform erected by him at his own expense.

6. In the event of the cars not being loaded within a reasonable time, customary demurrage charges may be exacted from the shippers by the railway company.

7. The tolls or rates to be charged by any person who, under the provisions of this Act, is possessed of a warehouse or elevator on the station grounds of the company or on the grounds to which the company have built a side track or spur, as provided for herein, shall not exceed the following sums:

(a) For receiving and shipping grain, including twenty days' storage, one cent per bushel.

(b) For cleaning the same (when equipped with proper machinery) if required by the shipper, half cent per bushel.

(c) For storing beyond twenty days, if stored at the request of the shippers, half cent per bushel for each additional thirty days thereafter or parts thereof.

8. The provisions of this Act shall apply to every elevator or warehouse now situate on the station grounds or property of the railway company mentioned in the first section hereof and to which this Act applies.

9. Nothing herein contained shall interfere with the duties and obligations of the railway company as common carriers at common law and under the provisions of "The Consolidated Railway Act."

We trust the sympathy and vigorous co-operation of Eastern M. P.'s and others will be given in the above matter until the grievance complained of is redressed. It is another example of cases that could be dealt with promptly and effectively by a Railway Commission clothed with power to compel the enforcement of their mandates to transportation companies; but it is not necessary to wait for the appointment of a Commission. The Government of the day should insist upon the remedy required being given.

STOCK.

Reciprocity of Records.

The United States customs regulations in regard to the admission of pure-bred registered stock free of duty are of such an exacting nature as to cause much inconvenience and vexation to breeders wishing to import such stock into that country, and are proving a serious hindrance to trade in these lines between that country and Canada. While our records under the management of the various breeders' associations have equally as high a standard as any of those in the United States, and higher than many of them, and while most of the American stock associations are accepting registrations in the Canadian Herd Books of the same breed as sufficient to entitle the animals to registration in their Herd Books without further investigation, yet the customs regulations require that in order to pass free of duty all animals imported into that country must be registered in American records. In order to comply with these terms, it is in many cases necessary to record also the pedigrees of several ancestors which have not previously been registered in the American records, which entails considerable expense and causes vexatious delay in shipping. Men who come here to buy stock, as a rule, want to ship the animals while they are here to take charge of them en route, which, under present regulations, cannot be done if they are not registered in American records, except by depositing the amount of the duty with the Collector of Customs and filing with him a written stipulation to produce certificates of registry in approved American records within six months of the date of entry, when the amount deposited will be refunded. This is a tedious and inconvenient arrangement, calculated to deter many from purchasing on account of the trouble and the uncertainty of the outcome, and interferes with the free intercourse of business which is desirable on all hands.

It is difficult to conceive that the existing regulations can be satisfactory to the breeders and dealers in pure-bred stock on the other side of the lines who come here to make purchases, since the question of registration in American records is one that concerns them most, and the delays and annoyances incident to the rules affect them more than they do the sellers here.

It is little wonder that Canadian breeders indignantly protest against such illiberal and un-

reasonable regulations in view of the fact that animals are freely admitted from the United States into this country, if registered in any of the recognized records of either country, on presentation of certificate of registry and identification.

Our own opinion, which we believe is shared by breeders in Canada generally, is that the inspiration of these regulations came from a limited circle of men who are financially interested in certain pedigree records, many of which are owned and operated by joint stock companies and whose directors are actuated in this matter by selfish motives rather than the welfare and convenience of stockmen generally. We are not disposed to favor the unamiable and ungenerous principle of retaliation, and do not wish to be understood as advocating that policy, but we think it fair to remind the powers that be on the other side of the line that this is a game that two can play at, and that quite a considerable number of animals for breeding purposes, of horses, dairy cattle, and pigs, have been imported from the United States to Canada in the past few months, and that under the present rational customs regulations the probability is that this trade will increase; but there is no valid reason why it should not be reciprocal, and we are quite sure it would be in the interest of stockmen on both sides of the invisible line to have it so. We understand that the Dominion Stock Breeders' Associations have a committee charged with the agitation of this question among others, and we commend to the Dominion Minister of Agriculture the vital importance of this matter now that other international differences are being adjusted. The present is an opportune time for diplomatic action in regard to this vexatious and irritating question, and we submit that "unrestricted reciprocity" is now in order.

Prizes for Bacon Hogs.

The action of the Dominion Swine Breeders' Association in granting some \$400 to be offered as prizes for bacon hogs at the next Ontario Provincial Fat Stock Show, at Brantford, as indicated in our report of their recent meeting in another column, is of interest to breeders and feeders of swine. The classification of the prize list provides for competition by each breed separately. The prizes are liberal, and it is expected that they will be supplemented by donations from several of the leading pork-packing establishments in Ontario. Provision has also been made for a block test, and liberal prizes are offered for the two best dressed hogs, to be killed on the second day of the show; and arrangements have been made whereby the animals competing in this contest can be sold in Brantford for the highest market price for dressed pork. The object of these prizes is to encourage the breeding and feeding of the type of hog required by the market for the production of the best quality of bacon. The prizes will be awarded by pork-packers or their buyers, and no animal deemed unsuitable for bacon purposes by the judges shall be awarded a premium. We have long contended that hogs of any of the breeds may, by judicious breeding and feeding, be brought nearer to the desired type for bacon purposes, and we heartily commend the action of the Breeders' Association in this movement to secure uniformity of product, which we confidently believe can be accomplished in the near future by the exercise of intelligent methods. Let the work of preparation be commenced at an early date by the selection of those which come nearest to the desired type, giving them a free run on clover pastures supplemented by moderate rations of nitrogenous foods, such as bran, shorts, ground oats and barley, with plenty of skim milk—remembering that the ideal weights range from 160 to 220 lbs.—and we shall doubtless see that progress can be made in the direction desired even in the few months intervening between the present and the date of the show, a progress which will be accentuated as the years go by.

Reduced Rates on Pedigreed Stock

FROM ONTARIO AND EASTERN POINTS TO MANITOBA VIA GRAND TRUNK AND NORTHERN PACIFIC.

The following letter was recently received by the Secretary of the Pure-bred Cattle Breeders' Association of Manitoba and the Northwest Territories from the General Agent of the Northern Pacific Railway, Winnipeg:—

Mr. George H. Greig, Secretary Pure-bred Cattle Breeders' Association, Winnipeg, Man.:

DEAR SIR,—Some time ago you were making inquiry regarding the handling of pedigreed stock in carloads from points in Ontario to Winnipeg, Portage la Prairie, and Brandon. I am advised by our Head Office that the Grand Trunk Railway are agreeable to handling the same at the same rates as settlers' effects, providing stock is released to the value of ordinary cattle. It would be necessary, however, to route this business by way of the Grand Trunk Railway to Chicago. There is no arrangement on L. C. L. other than full tariff rates. I trust the above arrangement will meet with your wishes.

Yours truly,  
H. SWINFORD, General Agent.

The Preparation of Dairy Cattle for the Showing.

BY F. S. PEER, MOUNT MORRIS, N. Y.

To tell a man how to fit a dairy cow for the showing is easy enough, but to tell him how to know when she is fit and not too fit is like trying to tell a boy how to swim. It cannot be done. You can give a boy some pointers about undressing and about hiding his clothes so the other boys won't tie knots in his shirt, and how to dry his hair so his mother will never suspect he has been swimming, but to tell him just how to swim so he can do it the first time he tries is quite another thing. I have a very vivid recollection of how I learnt to swim. I asked one of the big boys to tell me how, and he said "All right," and threw me in the swimming hole, and when I came to the surface he shouted "Now swim." However, I will try and give your readers some pointers that have come to me from much experience in fitting cattle, horses, and sheep for the showing, but the art and science of the thing can only be acquired by practice; that is to say, most anyone with feed and care can fit a cow for show, but there are comparatively few who can bring her to her "bloom" at just the right time and not go beyond it. This is the secret of fitting any animal for show, and a secret that dies with most men who possess it. It is a gift that is born of keen observation and practice. What I shall attempt, therefore, will be to give your readers a few pointers on fitting, together with a few don'ts. First let us ask ourselves what it is that a judge is going to look for when our cattle come into the ring? How can we make our animals show to the best advantage in the things the judge considers the most important?

What a Judge Looks For.—Most breeders have noticed that, as a rule, about the first thing a judge looks for is capacity. He wants to see a cow with a big paunch; he reasons that if a cow is to manufacture a large quantity of milk, and do it economically, she must have capacity for a great quantity of coarse fodder. She must be a good feeder, which is also indicated by the same sign. This applies to calves and young things as well as mature cows, for he likes to see in them an indication that they are gross feeders. Now the question comes, How can we fit our cows and calves to show to the best advantage in this respect? I reply, by giving them all the coarse fodder they will eat in a manner best suited to their taste. The best plan that I know of is to feed cut or chaffed hay, with a mixture of bran and crushed oats, a pinch of salt, and a handful of oil-cake meal. The principal thing in training a cow for capacity, or a calf either, is that they be made to eat a good deal to get a little. Of course, you are to avoid feeding your dairy cows much grain, that is to the extent that they begin to take on flesh. When they do this the judges say "they are general purpose cows; that nowadays we want cows that are genuine dairy machines pure and simple." So your grain ration should be light, and only up to what the animal can digest and assimilate without taking on flesh. The idea that a dairy cow or a calf must be in good flesh to show is a very mistaken notion. We have learnt better, and no one but a novice or a beef breeder will think of bringing a dairy cow (in milk) into the ring carrying a lot of fat. Two-year-old heifers with first calf may be pardoned if they are a bit meaty, for it soon "milks away." Therefore, in fitting your dairy cattle for the ring, try and show what big feeders they are without getting fat, for in the dairy the cow that eats the most and keeps the poorest is the best; while for beef, the cow that eats the least and keeps the fattest is the best. As to your calves, make them show that they are good feeders and have a powerful digestive apparatus, and therefore capacity for food, by making them also eat a good deal to get a little—skim milk, a little bran, oil-cake meal, but make them drink a pail of skim milk or slop to get it. Keep them growing, but never feed rich, concentrated foods—that makes small stomachs and fattens. There has been many and many a prize lost by feeding too much of quality and not enough in quantity. A dairy cow or calf shows best when she shows great feeding capacity and at the same time shows her ribs; therefore, if you want your cow or calf to catch the judge's eye and keep it, feed her to show capacity, never to show beef.

Udder Development.—The next thing a judge will look for will be the udder development. The most you can do for this is to feed the same as you would to produce a large flow of milk. Here, again, you must not feed rich, concentrated foods. If you undertake to do this with corn meal and oats, pea meal, etc., your cow will come into the ring all gaunted up, and the judge will say he doesn't want a cow that has to make milk and butter from corn meal; he wants to see a practical cow that can make it from hay and grass and cornstalks. Your cow will look like a poor feeder when she may be a good one, for if you satisfy her appetite on four quarts of meal, she will not eat four bushels of hay afterwards. Better make her eat six bushels of cut hay to get two quarts of bran. Your rich, concentrated grain ration may fill the udder, but you must remember it is the shape of the udder that counts more than the size, so that in attempting to fit a cow for show on a high grain ration you accomplish nothing, waste your grain, and your cow goes to the rubbish pile because she has no capacity. Many a prize has also been lost by having the udder too full, so that the teats were pointed in every direction, except hanging straight and naturally as they

should. When a two-year-old heifer begins to "spring," then is the time for you to get in some good work and help her along. The time to assist nature is when she is trying to help herself. At this time begin and push them along on bran, slops, etc., much as if you were feeding to produce a milk test. No danger of milk fever with first calf, and you may win a prize, besides doing just what you ought to do anyway. In a word, feed your cows to their fullest capacity, and don't go beyond it. Bring her gradually up to and just short of reaching her bloom of perfection. I cannot tell you how you will know this; you can only learn by practice, and some men if they live a thousand years would still die too young to ever acquire that knowledge. There are several men I could mention in Canada, especially among the Ayrshire breeders in Lower Canada, who as fitters of show cattle know their business. You have all through Canada better feeders, as a rule, than we have in the States, while in England and Scotland they are better than in either country. In England a herdsman or shepherd follows that as a trade or profession, and his son follows after him, so he has a certain amount of knowledge bred in his bones to begin with.

[TO BE CONTINUED.]

#### Raising Calves on Oil-Cake Gruel.

To the Editor FARMER'S ADVOCATE:

SIR.—In response to "J. W. B.," Middlesex Co., Ont., would say that one useful plan of preparing oil-cake meal for young calves is to moisten the quantity required (a small cupful to begin with, for each animal) in cold water, then stir in boiling water sufficient to make a gallon for each animal, and let it stand from morning till evening for the evening meal, and from night till morning for the morning meal, using only the jelly for the youngest. This, with as much milk as can be spared for the young ones, gradually decreasing the quantity of milk and increasing the quantity of oil meal, will be found to be a very useful method of feeding young calves. We raised seven as nice calves as you could wish for on this last season—altogether without milk after the first few weeks.

ROBT. HAMILTON.

Grenville Co., Ont.

#### Sheep Pasturing and Feeding.

I am awaiting with interest and considerable speculation the arrival of a booklet or primer, for which I have sent, on the subject which forms the title of this paper, by Prof. Shaw, of Minnesota. No doubt it will be a revelation to many. The chief obstacles in the way of sheep-husbandry are and have been the difficulty in pasturing them where other stock is kept, the depredations of dogs, and the want of proper fences; but, "Eureka!" these are to be things of the past, and the halcyon days of the sheep are yet to come. I have often thought that there might be improvement in this regard by using artificial pastures, such as rye, rape, white mustard; but I will not anticipate, lest I should be infringing on the Professor's patent. Suffice it to say that many of our old orchards could be pastured for sheep by sowing rye, crimson clover, etc., at times, and our steep hills and hillsides seeded with lucerne clover, and in our corn fields at the last cultivation rye and rape might be sown together and pastured fall and spring. We should avail ourselves of all the possible agencies for enriching and cleaning our lands. The sheep are an important factor in this regard, with "golden foot," so says the proverb.

In England the hurdle system of feeding sheep is possible, but we cannot do it so well here. We know what it has made of England. An animal that suckles her young to maturity, thus retaining important elements of fertility on the farm, must certainly tend to enrich. In this part of the Province very few sheep are kept, due to the causes above mentioned. A few should be kept on every farm; we would have fewer weeds, richer land, and an income derived from this source, which would prove quite an adjunct to the income of the farmer as well as the pleasure of caring for and seeing so useful and innocent an animal on the homestead.

J. S. B.

#### The Foal.

The foaling season is now general or just past in most horse-breeding sections. When the dam and offspring can be safely left out in the pasture there is seldom need of much attention, except to prevent the foal under a month old being left out in soaking rain. A foal may come through such an experience and be no worse, but young foals are frequently lost in that way.

It is not uncommon for young foals to have bowel trouble, and may be either constipation or diarrhoea. For the former, castor oil in milk is a safe and soothing remedy, followed with a little bicarbonate of soda and a few drops of tincture of iron. Where there is a too laxative condition, a small dose of laudanum may be given in boiled rice gruel. A simple preventive of navel ill is to keep the foal in clean quarters sprayed with some such antiseptic as West's fluid or other dip, and wash the navel with a weak solution of permanganate of potash. Foals at all indisposed should be kept in warm, clean quarters, which may be a grass plot in bright, temperate days.

Ask your neighbor if he reads the "Farmer's Advocate." If he does not, get him to.

#### Blucher Won the Prize.

To the Editor FARMER'S ADVOCATE:

SIR.—On perusal of your report of the Toronto Horse Show, I find you have made a mistake in the class for high-steppers sired by Hackney stallion. You make it appear that the first prize went to G. A. Case's four-year-old brown mare, whereas that prize came to me by my gelding Blucher, and I will thank you to have that mistake rectified in your next number. I like your illustration of Blucher very well. I am very well pleased with your paper, and feel certain it has done much good in the past and will continue to do so in the future.

Toronto, May 19, 1898

THOS. A. CROW.

#### Barley and Why the "Secret" of Wiltshire Bacon.

During the past year we have heard a great deal in Canada about the superlative merits or demerits of this or that food for porkmaking; but those who understand the situation best, know that the high position attained by Canadian bacon in the British market is due to a long and intelligent system of breeding the proper type of hog, judicious feeding and management, and subsequent skill on the part of our packers. It is this strong combination that has put our pork products in first place. As far as rations go, the great bulk of Canadian hogs are fattened on a variety of foods, such as barley, shorts, corn, oats, peas, wheat, roots, etc., as they may be available, usually fed in mixtures along with by-products of the dairy—whey and skim milk—where the latter are not available, pure water as the liquid portion. Speaking generally, barley is one of the commonest foods, being so generally and so successfully grown. On this point the *Witness*, of Belfast, Ireland, which devotes considerable space to agricultural matters, says:

"For making the best quality pork, it is extremely doubtful whether any diet for fattening pigs can beat whey and barley meal; and to a very great extent the wonderfully fine quality of English Wiltshire bacon is to be traced to the fact that this is the food of the hogs in that district. An excellent and economical food for pigs of all ages is rye meal, but the pigkeeper must be watchful of ergot (a fungoid growth, and is to be avoided by frequently turning the rye, and storing it in a dry place) in the rye, as it is very apt to cause abortion in sows. When potatoes are to be had cheap, a little of the best Indian meal will go very well with them, provided that a small portion of 'broad' bran be used also. At all times Indian meal is rather a costive food, and when used without bran is very apt to lead to constipation; this eventually will cause the animal to sicken, and in the end very often cause death. Indian meal, again, requires rather more cooking than most of the other foods in order to thoroughly soften and swell the otherwise hard grain. In all cases it cannot be too strongly urged upon pigkeepers the advisability of using the finer—that is to say, the more finely ground—quality, although it is a trifle dearer in cost; but it is more easily digested, consequently less food is lost by being passed through the animal undigested. Therefore, on the whole, there is a saving by purchasing the higher-priced food. Whole peas are also very good, a handful or two thrown into the straw in the sty now and again, when the pigs are about five or six weeks old, will be eagerly foraged for by them, and will cause them to cut their teeth, learn to masticate, and help their thriving generally in a considerable manner. Peas, again, are wonderfully milky in their nature, being probably the most milky of all cereals. Getting a few of these to chew is almost as good for the youngsters as if they received their equivalent value in milk."

#### Stone Walls for Piggery.

To the Editor FARMER'S ADVOCATE:

SIR.—I notice in your issue of April 1st an article against stone walls for piggeries, in which Mr. Snell very strongly opposes the stone hog pen. I am one of those so-called "unfortunate" men who built one of these pens, and I do not consider myself unfortunate in the least, but, on the contrary, I maintain that a stone hog pen is all right if properly built. Of course, I have a personal knowledge of some who have tried to keep hogs in stone basements, and they have made a complete failure of it; but the failure is not in the stone walls, but rather in the filth and dirt that exists therein. There are some who think that a pig will thrive and grow if he is fed heavily, but such is not the case. More depends on cleanliness of the hog pen, and if you want to obtain the best results you will have to keep the pen clean and dry. Previous to last summer I noticed a large number of articles in the different papers condemning the stone pens, but I had the opinion they were all right and I had one erected last summer. My pen is 30 x 40 feet, with half up the center and pens on either side. The wall is 22 inches thick, with a dry or hollow center, and with as few stones as possible being the full width of the wall, thus lessening the danger of frost penetrating through it. It is well plastered on the inside, which, I think, every stone wall should be. The main thing is to have an abundant supply of light and ventilation, which can be had by placing tile in the wall when building. I have a large spout proceeding from ceiling of hog pen through the roof of my implement house. The floor of pen is made of Portland cement, with plank sleeping places, or nests, in every pen. These nests have a light shelving round

them to hold bedding, and it makes an Al floor for any hog pen. The floor is graded so as to run all soakage in the rear end of each pen, where it is securely held, and then everything goes to the manure pile instead of the liquid all soaking away and being lost. During the winter months I cleaned my pen out three and four times a week, thus changing bedding at the same time. I will give you a description of the way I have of getting the manure out. I had a rod erected close to the ceiling of pen and projecting through a swing door to a post ten feet outside of pen. To this rod is attached a bucket, with rollers which run along the rod. This bucket is balanced so that all you have to do is to knock a hook out of steeple when you get it outside of pen and the bucket turns over. I have no hesitancy in recommending the stone walls for piggeries, if built on the above principle, as mine gives me the best of satisfaction.

Dufferin Co.

WM. HAND.

#### FARM.

##### Farm Work for June.

###### CUTTING AND CURING CLOVER.

There is probably a larger acreage of promising clover in all the eastern provinces of the Dominion than in many years past, and this fact augurs well for the future fertility of the farms as well as for the supply of one of the very best foods for farm stock of all kinds. Early-cut, well-cured clover is undoubtedly the best all-round fodder for either horses, cattle or sheep, and even hogs and hens are kept in a healthy and thriving condition by the use of clover as a part of their winter rations, in which case it is best utilized by passing it through a straw cutter and steaming it or mixing it with pulped roots or damped meal or middlings. It is wise to commence cutting clover early if the weather is at all suitable. The advantages are: (1) That where there is much of it to be cut the later cutting will be too far advanced in ripeness before all is harvested to make high-class hay; (2) That if noxious weeds are present in the meadows it is better to cut them before their seeds ripen and are liable to be carried to other fields in the manure from the stables or to be scattered on the field on which they have grown; (3) That the aftermath from early-cut clover is sure to be much better than from later cutting, thus securing a large supply of fall pasture or a good crop of seed if it is decided to use it in that way. Again, if it is intended to prepare the land for fall wheat, advantage may be taken of wet weather, should it come, to keep the teams at work plowing the clover sod down for that purpose, and there are few better or more profitable preparations for wheat than this if the surface is kept worked with harrow and cultivator after each shower to retain the moisture and solidify the land and thus secure a model seed-bed, even if the later summer months prove excessively dry, as was the case last year. Some of the most promising fields of wheat we have seen this year were prepared in this way. In order to properly cure early-cut clover it is almost an absolute necessity that it be allowed to stand in medium sized cocks for from two to four days, after being well shaken up in the swath either with a tedder or by hand, if the weather will allow it. Clover put in the mow before it is well dried, or else sweated in cocks, is liable to must and lose much of its sweetness and quality. On the other hand, if allowed to lie in the hot sunshine too long the leaves break off in handling and are wasted and the quality of the whole crop is impaired. It is well, therefore, as a rule, to cut no more each day than can be handled and got into cocks on that or the following day. It is well to cut in comparatively narrow strips to avoid crossing furrows so much, and the tedder, or the men and boys with forks, should be started to shake it up in a few hours so as to get it wilted and raked up and cocked the same day if there is enough wind and sun to make it fit for this; if not, it may be raked into windrows, thus reducing the surface exposed to dew, and, if necessary, shook up in the row next day to complete the drying process. If the weather is at all uncertain the surest way to secure the crop from damage and to make hay excellent in quality is to cock it even before it is considered dry enough, placing each successive forkful directly on top of the others, the sides being raked down by the inverted fork, leaving the outside stems pointing downwards. Avoid its getting wet, if possible, if all hands have to drop other work in order to secure it in this way or by getting it under cover if fit. The impression, we believe, prevails that clover hay is not suitable feed for horses, that it is liable to produce heaves and other ailments. We are persuaded that this is a mistaken idea, and has arisen from the use of late-cut or improperly cured hay, and feeding excessive quantities of it if properly cured. There is no more completely balanced food ration in all the list of fodders than well-cured clover, and few that are cheaper. Indeed, for farm horses, with the little work that is required of them in winter in these times, it is sufficient to carry them through in good condition without any grain; and it should be fed in moderation, since, if well saved, it is so palatable that horses will overload their stomachs with it; and it is hard driving, when in this condition, or the feeding of musty clover, the result of careless handling, that in nine cases out of ten produces heaves if it is from this cause it originates. It is well, therefore, to avoid storing damaged or ill-cured clover

for the horses; better put it where it can be cut up in winter and mixed with other food for other stock. The remarks here apply to the handling of clover apply equally to orchard grass and to lucerne, which are liable to get hard and woody if not cut early. Lucerne should be cut even before it is in bloom, and must not be allowed to lie long in the sun, else the leaves wither and drop off, leaving only dry stalks. It should be got into cock as soon as at all fit, and allowed to cure in that way before being stored. There is room for discussion upon this important subject, which will be timely in June 15th issue. Let us hear from a number of men who have learned how to make first-class hay, as there are hundreds of tons half spoiled every year by reason of improper harvesting. The lessons from experience are what we desire.

**Keep the Cultivator Going.**

We believe it will still be some time before most of even the best farmers will fully realize the value of very frequent cultivation of what are termed the "hoed crops"—corn, potatoes, and roots. "It was not till last year," writes one of our readers, "that we secured a riding corn cultivator that would stir the surface close up to the corn plants. (Before cultivating we use the harrow a couple of times.) It takes two half-rows at a time and does the work so well no hoeing is required. We gave our crop weekly cultivations until the plants were too large to drive among, and we had the best crop of corn in the neighborhood." Cultivation once a week is not too frequent to be quite profitable, no matter what the weather is like (except the soil is really muddy), and if it is very dry, oftener is still better; we mean by that, more profitable. In mellow land the modern weeder is the ideal implement for early cultivation of potatoes and corn, as it moves all the surface even in among the plants, and it takes a good breadth every time it crosses the field, so that it is not a serious matter of time to do this work very thoroughly with the proper implements. When the old-fashioned scuffer and the hand hoe were depended on only a comparatively small acreage could be properly taken care of without a big force of hands, but invention has helped the farmer, along the lines of labor-saving, as well as the manufacturer. What would the Western farmers have done all these years with their vast areas of corn without horse cultivation? And they cultivate once a week, and oftener in many cases. This frequent cultivation is not a serious matter, as it is necessary only for a few weeks, when the crop will have grown beyond workable size.

**Potatoes.**—What is true of corn applies to potatoes in the matter of frequent cultivation. It did seem an easy matter a few years ago to harrow the crop once or twice as the plants were coming up, run the scuffer through a couple of times and hand hoe once, and then hill up. We thought we were doing the work well, but now know that we might frequently have had very much larger crops had we given more frequent cultivation and postponed the hilling up a few weeks later. In fact, we have come to the conclusion that very light hilling after the potatoes get into blossom is all that is advisable, and many successful potato-growers do not hill at all. We would like to prevail on many farmers, who look on this frequent cultivation as a waste of time, to make a thorough test of the matter with two or three acres of hoed crop. People say it takes time. Well, what of it, provided it is profitable? It is profit we want.

**The Carrots and Mangels** should be nicely up by this time, and the first cultivation and side-hoeing will have to be done very soon. Just as soon as the plants can be seen along the rows is the time to commence. The crust that is formed on the drills cannot be too soon broken, as not only will it mechanically hinder the delicate plants from coming away rapidly, but it will, by reason of the numerous cracks, allow rapid evaporation of moisture, and that is quite a serious matter. True, we have had, in most sections, a moist season so far, but roots need much more than they usually get, and it is safe to calculate on a dry time later on. Weed-killing is not the only nor the main advantage of frequent cultivation. After the weeds are killed the earth mulch or mellow surface will give the crop every chance to get for us what the soil contains.

**Carrots** come on slowly at first, but mangels should soon be large enough to thin. As our readers will have observed, our correspondents differ in their opinions regarding the proper width to leave mangels in the row. We consider 10 inches about right, whereas we prefer to leave turnips two or three inches wider apart. Carrots at six to eight inches will grow a nice bulk of crop and of good sized roots. While it is unfortunate when uneven germination of the seed has taken place, it is not a pleasant matter to thin roots that have been too thickly sown. Not only are they more difficult to separate, but more plants that are left die when left alone. Where this latter circumstance is the case some of the plants can be advantageously removed during the side-hoeing, whereas when blanks occur turnip seed may be dropped in or cabbages planted, and thus get a full crop.

**Turnips.** In most sections, will not be sown at this date, although some are getting into the way of rushing them in during the last week in May. The writer has tried both early and late sowing; We finds from June 10th to 20th the best time. We have occasionally had larger crops when sown at the same time as the mangels, but not infrequently

the plants get lousy and tend to rot, and almost invariably become woody; whereas, when the soil is well cultivated up till the dates first mentioned and the seed then sown the chances for a good crop are at their best. There is a great deal in getting the ground in nice condition, and to this end plowing, harrowing and rolling should be done almost simultaneously, and occasional cultivations follow till the time of drilling up for sowing. When the ground is mellow, moist, and in a good state of fertility, to sow more than one and one-half pounds of seed per acre is a mistake, because if thickly sown the plants come up spindly and are bad to thin. Of course, we must allow for the turnip beetle taking a few plants, but if we moisten the seed with spirits of turpentine shortly before sowing it will impart a flavor to the leaves that the fly will not relish. This is undoubtedly good treatment. If a heavy rain comes on clay soon after the seed is sown, it may be necessary to run a light roller, perhaps the turnip drill, over the drills to break the crust. The fact of the matter is, we need to exercise judgment all the way along, keeping in view the necessity of conserving the moisture in the land and of giving all crops the best possible chance to assimilate the plant food in the soil.

**The Stave Silo.**

Knowing of a number of silos within a few hours' drive from London, we recently made a visit to them with a view to ascertain a few points gained from the experience of their owners. The first one seen was of the square sort generally built a few years ago. It is 20 feet deep and has a diameter of about 16 feet. It was empty, with the exception of a pile of rotten silage in each of the corners. We learned that, except in the corners, this ensilage keeps fairly well, but in them there is each year considerable waste. It is Mr. P. H. Lawson's (the owner) intention to put up a round stave silo very soon, and perhaps before next fall.

The next farm visited had a modern stave silo 18 feet high and 16 feet in diameter. It has no other roof than boards laid on flat. The owner of this silo, Mr. Nelson Sage, would, if building another, increase the height, but not the diameter. This silo stands on the ground and has just a clay bottom. Mr. Sage considers it important to have a level and firm foundation and so banked outside that water cannot get in. He is well suited with the two square hardwood scantlings extending from top to bottom, standing opposite each other. Through these the half-inch round iron bands, with five-eighths inch ends, pass and act as both stays and blocks against which to tighten up the bands by the nuts. The holes are not bored straight through the scantlings from side to side but angling from the inside corner to near the outside corner on the other side, so that the rods hug the planks tight right up to the scantling and pass through straight so that the nuts are easily drawn up, and the ends of the bands projecting through form a convenient ladder by which to climb to the top of the silo. The silo has six hoops, or bands, almost equally distributed. Mr. Sage considers it would be better to have the bands closer as they approach the bottom of the silo, as that is where the greatest pressure occurs. In constructing this silo the circle was marked out and a shallow trench dug to set the planks in, and a stake driven in the center. Four posts were put up and plumbed, two of which were set close up to the circle for the planks and the other two four inches back, and to these latter were fastened the two hardwood scantlings. The bottom and fourth hoops were put in place, passing through the scantlings and resting in notches in the two other posts. The planks were then set up one at a time against the hoops and braced from the center stake, each plank being toe-nailed to the last one set up. This continued till the circle was completed, when the remainder of the hoops were put up as the first one had been, and all were drawn up tight. Mr. Sage finds it necessary to tighten up the bands a little each season after the silo has been empty a few weeks. He also considers it an advantage to be able to remove the cover entirely when filling the silo, as then he can heap it up two or three times away above the top so that it will be almost full when it has settled.

The next farm visited was that of Mr. Stephens. His silo is of the same size as Mr. Sage's and similarly built, except that it has iron blocks for the bands instead of scantling. These he has found defective, because they seem to twist and bend the rods, and sometimes break them just where they enter the block. And when once bent they cannot be drawn up the next season after the silo has shrunken, and then the bands slacken and drop down if not fastened.

Gilmore Bros. new 26-foot stave silo, 16 feet in diameter, was the next one visited. It was built late last fall, so that it has just been filled once. It is constructed of one-piece planks, six inches wide, and planed on the inside. The plank was quite green when put up, and has, therefore, allowed the silo to go a little out of shape. It has no roof, or else that might have been prevented. It stands on a brick foundation and has a hard clay bottom. A platform was used in constructing it and each plank as set up was fastened to two of the hoops by wire nails driven from the inside and bent around the hoops, and each plank was toe-tailed to the next one. The stays through which the five-eighths inch bands pass are like Mr. Sage's—of hardwood scantling. Messrs. Gilmore preferred to use iron blocks, but could not procure

the right sort at the proper time. These scantlings, like Mr. Sage's, stand outside the planks, and we noticed they tended to press the planks opposite them too far into the silo. It had also four two by four pine scantlings standing at regular distances around the silo between the planks, and flush with the inside of planks. These were bored just outside the planks and through them the bands passed. We consider it would be of decided advantage to have the hardwood scantlings set into the wall similar to the four pine ones on this silo. It would allow the hoops to touch the planks all the way round and prevent the bulging in of the planks by the scantlings. We believe this to be in use in some silos.

There is still another style of block used for staying and drawing up the hoops, and is shown in the accompanying illustration, which we have reproduced from Hoard's Dairyman.



It consists of pieces of hardwood scantling holding a pair of hoops, as shown in the illustration. Directly opposite these short scantlings are others similarly fixed. The hoops of all round silos should be in halves to facilitate drawing them up. The question of doors is not finally settled, but in the illustration shows a sort that gives satisfaction. They are not cut out until the last thing, and then should be cut beveling at top, bottom, and sides, largest all around on the inside. If the planks are eight inches wide, two are wide enough for a door. They may be permanently fastened together with cleats, but they may be left separate if desired. We have endeavored to cover the important points in round silo construction, but will be pleased to learn from any of our readers additional ideas which will help others in building their first silo.

**The Round Silo in Ontario Co.**

To the Editor FARMER'S ADVOCATE.

SIR,—In reply to your article in FARMER'S ADVOCATE of May 16th, would say the silo in this county has had a boom during the last two or three years almost equal to the Klondyke, there being somewhere about 170 in the North Ontario Farmers' Institute district, ninety per cent. of which are cheap round silos, built of 2-inch plank. Only one man, as far as I know, has condemned his silo, simply because he did not read and understand the kind of corn to plant, or the commonest principles of cultivation, and then with rotten silage expected to make beef without grain or hay, relying on turnips. Many in this section have two—one for summer use, where cows are properly kept, when they no longer depend on soiling crops to carry over the dry weather and short pasture, and the other much larger for winter.

The silo I now use has been filled twice (in '96 and '97). When opened in '97 there was about a wagon box full of waste and no more, and the silage had been in ten months, without any roof, not even covered with straw. When opened yesterday, about half a ton in twenty-five tons was waste. We feed silage all summer to over seventeen cows. Sometimes they will not eat more than 10 lbs. a day each; other times as high as 30 lbs., depending on the condition of the pasture. We also feed bran the year round. The following description and advantages were written three years ago, and a note (in parenthesis) explains itself.

While a round silo is unquestionably the best, a stave silo is not the best kind of a round silo. Inasmuch, however, as they answer all practical purposes, I have urged the building of them, as they can be built so cheaply as to come within the reach of almost every farmer. They are particularly invaluable to tenants whose landlords will not help them, as they can be taken down in two hours and taken away when the tenant's term expires. A 60-ton silo can be built for \$30 to \$40, depending on the price of the lumber in the locality. My large silo—140 tons—cost about \$75 three years ago.

As to the advantages of the silo, it would seem almost superfluous to mention them here. So great is my faith in them that I would build a new one for each crop if it were necessary rather than be without one.

**HOW TO BUILD A STAVE SILO.**

In building any kind of a silo it is desirable to get as much depth as the nature of the ground will permit (up to thirty-five feet) and thereby reduce

the surface exposure as much as possible. It should not be less than twenty feet. Two-inch plank, any width up to ten inches wide and twenty feet in length, will do in a silo sixteen feet in diameter. If the planks are not long enough any mechanic can put up the silo by splicing them. The planks must be jointed, but not bevelled on the edges. The foundation may be stone or cement, if convenient; if not convenient, make a rim of double inch cedar boards like the rim for the curb of a well, and of the size intended to be built. Bend the first hoop, putting the nuts on the extreme ends of the rods or hoops, and lay it two inches from the bottom by the contemporary blocks. Bend the fifth hoop and raise it twelve feet from the bottom by means of stays, and plumb over the lower hoop. Raise the first plank and set it on the foundation inside the hoops, plumb the edge; drive a four-inch wire nail through under each hoop and bend it round the rod; this will keep the plank in its place. Set up the planks all the way round until the circle is complete. Tighten the hoops already on; put on the three between them and two above, when the silo will be ready for use. The hoops are made of five-eighths round iron, the threaded ends being three-quarters. The blocks may be of hardwood (end pressure) or cast iron.

The only bottom required is the earth itself. It should be banked a little on the inside to keep the air from coming in under the planks. A roof, though an improvement, is not an absolute necessity, and adds to the cost. All the rain that will fall on the silage will not injure. In the winter put some poles on top, and cover with pea straw to keep out the snow.

(Since writing the above, experience has shown that if corn is well matured it is not necessary to plane the planks or joint them, if the planks are reasonably parallel. Go to the mill or lumber yard and if you can get them the length you require take them home and set up. If you cannot get them the length you require make two and set one on top of the other. Example: Required to build 24 feet high with 16-ft. plank.—Build 16 feet high; then cut 16-ft. plank in two and put eight feet on top. They will have to be exactly the same diameter. Use flat hoops at the joint two inches in width, covering the joint. The plank should be cut square at the top of the bottom half and also at the bottom of the top part. When up, toe-nail at the joint. This saves all need of a planer and the cost incurred, and will answer all practical purposes.)

(NOTE.—The writer in constructing a 30-foot silo, 15 feet in diameter, last summer used 16- and 14-foot planks. Instead of placing all the 16's in the bottom, they were alternated with the 14's, so that a broken splice was made. This we consider stronger than Mr. Gould's plan. The planks, however, need to be sized in such a case.—EDITOR F. A.)

The following table will give the approximate capacity of various sized silos. It is safe to estimate fifty cubic feet per ton and four and a half tons for each animal during the winter.

DIAMETER OF SILO IN FEET.	DEPTH OF SILO.			
	20 feet.	22 feet.	25 feet.	30 feet.
10	31 tons	34 tons	40 tons	47 tons
12	45 "	49 "	56 "	65 "
14	63 "	68 "	77 "	90 "
16	80 "	90 "	105 "	130 "
18	100 "	110 "	125 "	150 "
20	125 "	135 "	155 "	185 "
22	145 "	160 "	180 "	215 "

Ontario Co., Ont.

JOS. E. GOULD.

### The Octagonal Silo and Summer Feeding of Silage Growing in Favor.

To the Editor FARMER'S ADVOCATE:

SIR,—In answer to your request in May 16th issue of the FARMER'S ADVOCATE relating to the silos in this locality, I may say that I have looked the matter up a little and will answer the questions to the best of my ability. I find on enquiry at the Avonbank cheese and butter factory that they had during the winter of '97-'98 something like 92 patrons. We took the amount of milk received in one day at the factory in the second week of April. This would be the milk of two days, as it was only drawn every two days at that time. The amount of milk received was 25,900 pounds, of which the patrons, 31 in number at that time, who have silos sent 12,750 pounds. Since the cheese-making season has commenced, on May 1st, many of these patrons have gone to other factories which are more convenient, leaving somewhere about 70 patrons at the present time, 31 of whom have silos. These 31 patrons will furnish two-thirds of the milk received. All the large patrons have silos, with two exceptions. The first silo was built in 1890. Last year there were built five silos—three octagonal and two tubs. This year preparations are being made for five, four of them being octagonal, and one is being built with the barn. There are only three stave silos in the district. There are more silos than the number given in this district, but their milk is taken elsewhere, some to St. Mary's creamery and elsewhere.

Perhaps one fourth of those with silos have fed ensilage in the summer months. The others have not silo capacity to save any from winter consumption. Those who have fed it speak highly of it, some going so far as to say that in two summers' feeding they consider that the cost of the silo has been realized. The number using it in summer is

increasing, and will increase just as those who are without silos are planning to have them as soon as circumstances permit.

There are no cement silos throughout. Some of them have cement foundations, but the superstructures are all of wood. This is partly owing to the fact of two or three cement silos cracking in the adjacent localities two or three years ago through bad construction. Cement answers well for a foundation, and would, if carefully built, make the entire building, though costly at first, practically indestructible. My opinion is that the coming silo will be made of cement, and round. If wires and iron rods are built in the cement it makes a perfectly strong structure. While many will continue to build stave silos and other cheap forms, chiefly on account of time in building and cost, it is a foregone conclusion among those that have them that the best is the cheapest. JOS. MOUNTAIN.

Perth Co., Ont.

P. S.—Since writing you re the silos in the Avonbank district I have learned of four others building this season, three of these octagonal and one tub. The octagonal ones will be built of cement foundation chiefly and lumber superstructure. The tub is being built by a renter. For such they are the best, as they can be taken down and taken away. Some of those building the octagonal will make an excavation of three or four feet. The earth taken out will be banked against the cement, thus making a cool receptacle for summer feed. We are now feeding from a tub silo. The feed is poor—the warm weather has a bad effect on the silage. The tub is not best for summer feeding, as the one thickness of boards admits the heat readily. I have heard men who have built partly of cement and partly of lumber regret that they had not built all of cement. There is some complaint of rats doing damage this year in some silos. In building this should be guarded against. J. M.

### Rape for the Sheep and Young Cattle.

The value of rape for fall feed for sheep and cattle, other than milch cows, is only fully appreciated by those who have learned its worth by experience. Not only does it come in at a season of the year when other pastures are usually bare, but its food value per acre should give it a place on every farm where cattle or sheep are reared. No other pasture crop we know of seems to promote growth and put on flesh as rapidly as rape, especially when the crop is well grown before turning into and when care is exercised in accustoming stock to it. It is especially valuable for sheep, and serves an excellent purpose in toning up ewes for the breeding season, thus preparing for a full crop of vigorous lambs. For lambs, after weaning, it fills the gap well, causing the youngsters to forge ahead instead of losing their lamb flesh and standing still, as young animals are liable to do after weaning. We know, too, that rape is well suited for pasturing young cattle before going into winter quarters, either to be held over in nice growing condition or to be fattened. For many years we have grown rape for sheep fodder and have found it especially valuable for ram lambs to rush them on to be ready for breeding in their first fall, but we esteem it of great value for all ages and classes of sheep. In recent years, however, we have used it for calves, yearling and two-year-old cattle, and we are convinced that no other sort of pasture will cause young animals to thrive as rapidly. It seems to loosen up their hides and lay on flesh in a remarkable way, which seems to continue right on through the winter with ordinarily good feeding on such as ensilage, straw, hay and roots, provided other favorable conditions are supplied. For sheep pasture we usually sow rape as we do turnips, on similarly prepared land and about the same time. When sowing on land that requires cleaning, we sow in drills 24 to 28 inches apart, about two pounds of seed per acre. This, if frequently cultivated, will grow a crop that will supply an enormous quantity of fodder. We believe Mr. Rennie, of the Ontario Experimental Farm, saves the rape he feeds to fattening steers up till Christmas, by cutting it and piling it in small heaps just before freezing up. He places great value upon it as an invigorating starter for the fattening period. On land that is clean and mellow broadcast sowing does well provided the season is not too dry, when cultivation would, if it could be given, save the moisture and cause a continuous growth. We have grown good crops of rape sown on inverted sod after hay has been taken off, or where barley or early peas have grown, in moist seasons, but not infrequently germination is slow and uneven at that season. It is, therefore, well to prepare a piece of ground properly and sow it during the first three weeks of June. For sowing broadcast about four pounds per acre is sufficient, sown like clover seed alone on well-prepared soil and followed by harrowing and rolling. We usually mix in a little white (Greystone) turnip seed, about one pound to six of rape, and often get good-sized roots in spots where the rape is thin. Both sheep and cattle seem to enjoy gnawing these out, and no doubt do well upon them. We do not see why a sprinkling of cabbage seed would not be desirable, although we have never given it a trial. It would afford variety of good foods, and that is a desirable thing. We would like to hear of more people giving rape a trial, as we are convinced it will do them good service.

## APIARY.

### Preventing After-Swarming.

The swarming season is an anxious one with the beekeeper, especially with the novice or amateur. Small hives or those crowded for room for the queen to lay induce swarming unduly. Any impediment to the free access to all parts of the hive, not only for the passage of the bees, but for the free circulation of air, will tend to make them uncomfortable and induce the swarming impulse. Separators, drone-traps, queen-excluders, and other like contrivances that have been praised from time to time by enthusiasts, but which hinder or confine the bees, are sure to help in the swarming fever, says C. P. Dadant, in *American Bee Journal*. It is for this reason that it is wise to favor open sections, so as to allow the bees to pass freely from one to another. With closed sections the bees have to descend to the lower department, or rather to the space above it, in order to pass from one super to another. This can be compared only to a house in which the upstairs rooms would have no door of communication with each other, but would have each a stairway communicating with the lower department.

Mr. Dadant's treatment of swarms coming off after the first swarm has been secured in a separate hive is to return the swarm to the parent hive about forty-eight hours after swarming. This does not prevent swarming, but simply disposes of the swarm and the inconvenience and loss by having too great a number of weakened colonies, and the result is finally the same (except the labor involved) as if the colony had not swarmed. With the first swarm this has little effect, but with the second or third it usually has the full effect of subduing the excited condition of the bees. The colony is thrown back into the normal state, and honey gathering is no longer interrupted, unless a protracted honey crop of great proportions or the neglect of the apiarist to give room should cause another spell of feverish excitement later.

When hiving a second swarm to be returned to the parent hive, it may be temporarily put into any kind of a box, a nail keg, or in fact any vessel that will hold them for a short time. As a general rule, it is well to look to the comfort of the bees, otherwise to give them plenty of room and plenty of air and shade.

Another method to prevent after-swarms consists in removing the hive from its stand at the issue of the first swarm, and place the swarm in its stead. This removes all the old bees and throws the entire working-force on the first swarm, which then becomes the main colony, and may be looked to for the largest yield of honey.

Still another plan of dealing with a swarm that persists in leaving the hive is to catch them in a bag swarm-catcher, and leave them in it for twenty-four hours, when they will be so glad to get home they will not care to leave again.

## DAIRY.

### The Aeration and Cooling of Milk.

Scientists tell us that the milk coming from a healthy cow, fed pure food, is virtually free from germs, but practice teaches us that it is impossible to secure the milk in that condition.

Even if the milk comes from a perfectly clean stable, where the cows and everything else are kept clean, the immediate aeration and cooling of the milk is of incalculable value, providing always that it is done in a room where the air is clean.

Though no scientific explanation can be given us as to the reason why aeration improves the milk, yet it seems to be possible that it may be caused by the fact that many of the bacteria causing taint develop best where the air is excluded. That aeration eliminates many odors caused by gases is acknowledged by all.

That cooling the milk at once after milking is an enormous help in preserving it is easily understood when we know that the development of all spores and bacteria is retarded exactly in proportion to the reduction of temperature. This is best understood by the bacteriological experiments, which showed that milk containing originally 975 bacteria, kept at 59 degrees, multiplied in three hours 1.06 times; in six hours, 2.5 times; and in nine hours, 5 times; whereas at 95 degrees they multiplied in three hours, 4 times; in six hours, 1,290, and in nine hours, 3,794 times. On the other hand, if kept at 45 degrees, having been cooled to that temperature at once after milking, there is hardly any increase at all. It is thus evident that, combining aeration with cooling as soon as possible after milking, we gain a double effect, and that is best obtained by letting the milk flow over a surface of tin or tinned copper which is cooled by cold water or ice.

In view of some practical experiments made by me, I cannot urge the aerating and cooling of all milk too strongly, not only for direct consumption, but for creameries and cheese factories.

I do not fear being accused of exaggeration if I claim that if all milk brought to our factories were thus treated, it would improve the quality of our butter at least one-fourth cent and our cheese one-half cent per pound, and this would virtually be an increased annual value of these products aggregating over one million dollars. *Price essay by J. H. Mowad, III.*

**Preparing a Fermentation Starter.**

The object of pasteurizing the milk which is intended for the preparation of a fermentation starter for cream is to render it practically "neutral," bacteriologically speaking, and, as such, a medium for the development of certain desirable flavors by introducing into it a small quantity of a flavor-producing substance, generally known as a "culture," either in dry or liquid form. If conditions, temperature, etc., be right, we may be pretty sure of having in this starter, when properly prepared, an exact reproduction of the original flavor of the "culture."

Without using this "culture" we have no assurance of obtaining the right quality of a starter made from pasteurized milk; it having, as before said, been neutralized. We must for our "culture" depend largely on the micro-organism floating in the surrounding atmosphere. "Hence the quality of a starter made from pasteurized milk, without the use of a 'culture' of some kind, will depend largely on the condition of the atmosphere to which it may be exposed."

If we have to make a fermentation starter without a "culture" we should select a sample of pure flavored, clean milk from healthy cows not more than two or three months in milk; aerate it thoroughly and put into a pail or vessel thoroughly cleaned and scalded, cover the vessel with three or four thicknesses of cheese cloth previously scalded in boiling water. The milk should be kept at a temperature of 75° to 80° until it becomes sour and thick; then one inch of the surface should be skimmed off and thrown away; i. e., not mixed with the rest of the milk.

When the starter is thus prepared it should be cooled to about 45° Fahr., so as to check any further development of acid. O. MARKER, Supt. Government Creameries, Alberta.

**Causes of Mottled Butter.**

BY J. W. MITCHELL, DAIRY SUPT., O. A. C., GUELPH.

"What are the causes of mottled butter?" is a question that is occasionally asked and discussed in our dairy papers.

In unsalted butter there are no mottles. Salt has the effect of deepening and "bringing out" the color of butter. Hence, if from any cause there is an incomplete dissolution, and uneven distribution of the salt, by the time that the working of the butter is completed the butter will be mottled, the parts containing the least salt being lightest in color and showing as mottles or streaks when the butter is cut or bored.

If the butter be brought on to the worker in the right condition as to temperature and moisture and given a reasonable amount of working there will be little or no danger of its being mottled, even if the salting and working of the butter be done all at once.

The temperature and moisture of butter are intimately associated with each other. The amount of moisture retained in butter is regulated largely by the size of the granules and its temperature when salted and worked. The smaller the granules the greater is the amount, and the larger the granules the less the amount of moisture retained, other conditions being the same. They should be about the size of wheat grains. The working of butter at too low a temperature expels the moisture so rapidly that not a sufficient amount is retained to properly dissolve the salt. Furthermore, if butter be at too low a temperature it will be found necessary to work it excessively—thereby sacrificing its grain—to insure an even distribution of the salt.

Butter should be washed with water at such a temperature that when it is given 22 to 24 turns on the Mason worker it will be in a decidedly waxy condition—neither crumbly nor to any extent salvy or greasy. Such butter will be found to retain sufficient moisture to dissolve the salt and yet not an excess of moisture. When in the waxy condition mentioned, after working, we may rest assured that its grain is not injured.

The temperature of the butter must be regulated to suit the temperature of the room, which is accomplished by washing with water at a suitable temperature. From 52 to 54 degrees in summer, when the room is warm, and from 54 to 56 degrees in winter, when the room is cooler, will be found very suitable temperatures at which to have the butter when brought on to the worker. No one temperature can be given, but the good judgment of the buttermaker must be exercised. By the time that the butter has received a reasonable amount of working it should have the waxy consistency already described, and this is probably the best guide as to temperature. It might be stated at this point that having butter at too high a temperature when working it gives an open butter with excessive moisture and a poor grain. The butter must be uniform in temperature when worked, else the soft portions will receive much more working and incorporate more salt than will the firmer portions.

Remembering that mottled butter is due to an uneven distribution of the salt, and to its not being completely dissolved when through working, we can proceed the more intelligently to enumerate the causes of mottles, which are as follows:

1. Having the butter at too low a temperature when working. This point has been dwelt upon already.
2. Not enough moisture in the butter to dissolve the salt. The effects upon the moisture, of

temperature, and the size of the granules have already been noticed.

3. Insufficient working of the butter. Under favorable conditions, about 24 turns of the Mason worker will be found sufficient, but more will be found necessary if the butter be worked at a low temperature.

4. When the butter is gathered too much. This has the effect of making the butter drier. Also when such butter has to be reduced in temperature, when washing it, the lumps will usually be harder on the outside than within and will not work so evenly, the softer portions of the butter being worked the most and taking up more than a proportional share of the salt.

5. Lack, from any cause, of uniformity of temperature in the butter.

6. The use of too coarse salt. It takes more working and a longer time to dissolve such salt and incorporate it properly.

When butter is salted in the churn and allowed to stand two to four hours (either in the churn or in trays in a room at the right temperature) before working, or when the butter is twice worked, less working is required to insure an even color in it, and thus the grain is well preserved. When worked twice the butter should be worked the first time just enough to incorporate the salt, be allowed to stand two to four hours in a room whose temperature is between 52 and 55 degrees, and worked sufficiently the second time to make the color even. Either of these methods of salting and working butter entails more work than salting and working the butter all at once, and though both are excellent methods, yet it is quite safe, and more speedy, to adopt the method of salting on the worker and completing the working of the butter at the same time, if proper conditions as to temperature, etc., are observed. However, I would advise the adoption of either the method of salting in the churn or the twice-working method if troubled with mottled butter or if you cannot control the temperature of the room in warm weather. They are especially safe methods for beginners.

Practice daily, examining a sample of the butter of the previous day as to color, etc. Do not mistake curdy specks in the butter for mottles. They will not dissolve with the heat if placed between the fingers, and are caused by the cream being overripe and not strained into the churn.

**Canadian Butter in English Markets.**

Carter, Wilkinson & Co., Provision Merchants, Liverpool, write us:—"Speaking generally, Canadian creamery butter has been considerably improved during the past season, many factories, especially in Eastern Canada, turning out a very fine article. Some of the western creameries do not yet make sufficiently pale, silky butter. About two and a half to three per cent. of salt is generally preferred, especially in summer. Shipments coming through in refrigerator both by rail and steamer arrive in first-class condition, and those creamery proprietors who have had pluck enough to send forward weekly shipments have already succeeded in building up a good reputation and steady regular demand for their butter on this side."

**POULTRY.**

**Keep the Chickens Growing.**

Too often chickens are neglected after being weaned from the mother hen. They get irregular feeds or short rations, or are left in filthy coops. The matter of cleanliness is of grave importance. It is a great mistake to leave chickens in coops where night after night the droppings are left to accumulate. Chickens sleeping in such quarters are poisoned by the effluvia of the droppings, which enters the blood through the lungs, and the whole system is lowered in tone. Coops without floors are preferable where the land is reasonably dry. Such a coop is quickly cleaned by moving it forward or backward the width of itself on to clean sod. This should be done three times a week. If coops have floors they should be scraped and sanded every day. It is important that chickens have shade; an orchard, therefore, with patches of sunlight and patches of shade, with free circulation of air, is a very desirable place for the birds. Where one has not an orchard or other trees, shade-boards may be substituted to keep off the direct rays, or even sunflowers or corn could be used if planted in time.

Feeding is a very important item, as when chickens are either to be sold or kept as layers for next winter they cannot be matured too rapidly. True, they will eat considerable of worms, insects, and grass, which should not be forgotten in winter when summer quantities of eggs are desired. Regular feeds of grain they should have to induce steady growth. When five or six weeks old four feeds a day will suffice. The morning feed may well consist of mixed meals stirred into a mash mixed with milk or water. Corn meal, shorts, ground oats and meat meal in equal quantities by measure suits well, but bran may be quite liberally used if so desired and may be made a good bowel regulator. If the bowels are inclined to be loose, increase the middlings; but if constipated, increase the proportion of bran. Cracked corn or small wheat may be used for the evening feed, and table scraps do well for the third meal of the day.

Clear grit is an essential that is frequently overlooked when chickens are running outside, but old

sod that has been picked over and over for a dozen or more years may be quite bereft of grit. A pan of sharp grit is just as necessary as a dish of water, and should be always within reach.

Soon after chickens become feathered out the pullets and cockerels should be separated. The constant nagging and mischief of the vigorous cockerels is a great hindrance to the growth of the pullets. A writer in *Farm Poultry* is responsible for the statement that experiments have proved that the pullets will not only grow better but they will reach maturity from one to three months earlier if the cockerels are kept separate from them. Now, as pullets are to be the money-makers of next winter, and in proportion to their development, they should be allowed their liberty, with comfortable coops to sleep in. The male birds to be retained as breeders should have a roomy yard—in fact, as large as possible—and supplied with plenty of green food as well as meat and mixed grain. The cull cockerels may be shut up in a fattening pen and rushed along to four or five pounds live weight, when they will sell well, and usually at greater profit than if kept longer.

**GARDEN AND ORCHARD.**

**Effective and Economical Mode of Procuring Forest Trees for Planting in Great Numbers.**

[A LETTER FROM SIR HENRI JOLY.]

To the Editor FARMER'S ADVOCATE:

SIR,—I gladly comply with your request. It is not easy to procure young forest trees worth planting. The trees raised in the nurseries can generally be relied upon, and they are sold at moderate prices, but, owing to distance, want of easy communication, delays in forwarding and delivering (which are often the causes that the trees when received are unfit for planting), and to the cost, however moderate, it is very seldom that farmers have recourse to the nurseryman for the forest trees they intend planting (I do not allude here to fruit trees).

They generally go to the woods for them, often a distance of several miles. Those who have tried it know how hard it is to find such trees as they want, how much time and trouble it takes to dig them up, and how impossible it is, even with the greatest care, to avoid wounding and tearing off the roots. They know, too, how little satisfaction they have generally derived from all that work. Trees taken out of the forest and transplanted on the open are placed at a great disadvantage. They fail so often that people get discouraged and may give up tree planting as too difficult an undertaking, and to those who think life too short to sow forest trees let them try for themselves and they will be surprised at the rapidity of their growth.

Nothing is easier; in the proper season, with soil fit to grow the kind of tree you wish to plant, if the tree is in good order, with a little care you ought to succeed. But the trees you dig out of the woods are seldom in good order, and they cost you a high price in time if not in money. If you wish for good trees in great numbers, safe to grow, without trouble nor expense, procure them from a nursery, but let that nursery be your own.

Any farmer can start in the corner of his garden a nursery of forest trees by sowing the seeds of the trees he wishes to plant. With a little observation it is easy to find out when the seed is ripe. For instance, towards the end of June, beginning of July, the seed of the *elms* and of the *soft maple* (*acer rubrum*) is ripe. By sowing it at once it will sprout and the little trees grow nearly one foot in height this summer.

The maple, oak, ash, birch, butternut, etc., ripen their seed in autumn; better sow it at once than winter it in the house. Sow in straight rows with a garden line, leaving a picket at each end to guide you when weeding. Sow say half an inch deep for the maple seed and for other kinds in proportion to the size of the seed; two or three inches deep for butternut and walnut. Thin after the first year if needed and transplant further on the little trees removed in thinning. After three or four years, more or less (the time will depend on the rate of growth of each tree), plant your young trees where they are destined to stay. Choose a cloudy or rainy day in the spring, and without leaving home, with no trouble, without breaking any roots, you will take up and plant at once, without allowing the roots time to dry, one hundred young trees, certain to grow, in less time than it would take you to go to the woods and dig up ten trees, with a poor chance of their taking root and living.

These young trees will cost you nothing, your children will soon learn how to weed them and take care of them, especially if you set them the example. Our own children when quite young took pleasure in sowing acorns and watching the growth of the young oaks as they came up. By sowing you can procure, with no expense, any number of young trees, and re-wood, by degrees, a land which is not fit for cultivation and ought to have been kept as woodland.

But do not forget to fence carefully your nursery and your plantation so as to keep out the cattle. No use planting trees without fences, the cattle will destroy everything.

In many cases nature will spare you the trouble of sowing where the ground is favorable. In July and August, along the ditches, the roads, the fences, on the moss on barren patches, wherever there is a little dampness, in the neighborhood of the *elms* and *soft maples*, you will find hundreds of young *elms* and *maples* just sprung up from the seed fallen from those trees. Plant them in your nursery. Try it this summer. The seed of the *elm* is so minute and delicate that it is better to pick up those young seedlings than to attempt sowing the seed.

In the maple groves the ground is covered with a regular carpet of young maple seedlings. You can pull them up easily by hand in the fall or early spring when the ground



is still damp without breaking any of the small roots. Plant them at once in your nursery.

It is very difficult to collect pine and spruce seed. Early in the spring, when the ground is still soft and spongy, in the pastures near where those trees grow, you will see a number of young pines and spruces that you can pull up very easily. Plant them at once; for that kind of tree you must shelter from the sun until they are well rooted.

Whenever the ground of a garden has been dug up and worked in the fall, if there are any maple or ash growing in the neighborhood it will be noticed that the ground in the spring is more or less covered with maple and ash seedlings grown from the seeds fallen from those trees. It takes a very little time to pull up and replant hundreds of them, and scarcely any of them will fail; of course, they must not be pulled up too roughly or it may damage the delicate roots. If the ground is too hard use a trowel. As much as practicable, they ought to be pulled up when they have only got their two first leaves, which are easily known by their peculiar shape, long and narrow, from one inch and a half to two inches long and about a quarter of an inch wide.

For several years past I have been seeking the cheapest and at the same time most effective mode of restoring the woods where they have been completely destroyed. Many of our old settlements are completely denuded of trees, and I can recommend this simple mode as the best from my personal experience. Let those who suffer for the want of fuel, of timber for building, of trees for shelter and ornament, and those who would like to have a sugar maple grove at their door, let them start their own nurseries this very summer. It will entail no expenditure of money, take but very little time, and repay them bountifully. It will be a pleasure for me to give any further information and advice to all those who may apply for it.

Ottawa. H. G. JOLY DE LOTBINIERE.

ENTOMOLOGY.

The Fruit Bark-beetle (*Scolytus rugulosus*, Ratz.).

BY DR. JAMES FLETCHER, DOMINION ENTOMOLOGIST, OTTAWA.

I regret to state that I have received specimens of this very injurious enemy of fruit trees (now for the first time recorded in Canada) from Kingsville, in Essex Co., Ont. The Fruit Bark-beetle has done much harm of late years in the States of Indiana and Ohio, as has been recorded by Prof. Webster, State Entomologist of Ohio. This is a European insect which in some way was introduced into this country about twenty years ago, the first specimen being found at Elmira, New York State. Since its introduction its injuries have been considerable. It attacks severely all stone fruits, the plum, peach and cherry suffering most. It has also done much harm to apple and pear trees in some localities. Its injuries are recorded in many of the Eastern States and as far west as Illinois and Missouri. In addition to the above fruit trees, the Fruit Bark-beetle attacks also the mountain ash, the hawthorn, and the elm. As a general thing the Scolytidae, or Bark-beetles, attack only such trees as are lacking to some extent in vigor. This, however, is not always the case, and even if it were there is still ample scope for them to injure the fruit-grower considerably by destroying valuable trees which might have been saved by special treatment. It would appear, however, that the Fruit Bark-beetle never attacks perfectly healthy trees; but, as it is capable of doing much harm, it will be well for all fruit-growers in Western Ontario to examine their orchards and, if any traces of the beetle are found, to send specimens of bark at once for examination. If they do not wash their trees regularly every year to prevent the attacks of borers, they should now adopt that wise practice.

The perfect insect of the Fruit Bark-beetle is a small, black, cylindrical beetle, only about 1-10 of an inch in length (Fig. I.), having the tips of the wing-cases brownish. It is somewhat cylindrical in general form, and is well provided with true wings beneath the short, hard wing-cases. It flies readily from tree to tree, and may be found on the trees at the end of May and in August. The females bore into the bark (Fig. II.), leaving small round holes. They then work under the bark and form galleries or long chambers (Fig. III.), in which they lay small white eggs. From these, in due time, hatch out white grubs (Fig. IV.). The young grubs at once begin to eat tunnels under the bark at right angles to the egg chamber. These tunnels increase in size with the bodies of the grubs, as they get further from the starting point, and finally curve a little so as at last almost to run longitudinally along the stem. When the

grubs are full-grown, they bore down a short distance into the wood and turn to pupae, from which a little later the perfect beetles emerge and



FIG. I.—Fruit Bark-beetle (much enlarged.)



FIG. II.—Bark, showing small round holes.

eat their way out through the bark over where the pupae were formed. There are two broods in the year, the winter being passed as an almost full-grown grub, which becomes a perfectly formed beetle in the latter part of May or early in June. This brood lays eggs, from which develop the beetles that appear on the trees in August.

Remedies.—As stated, these beetles, as a rule, attack weakened or unhealthy trees. The first thing, therefore, to attend to is the invigoration of the tree. If trees are growing in sod, this should be plowed up in the spring for some distance around the trees and a good liberal dressing of manure worked into the soil. If nitrate of soda is preferred as a fertilizer and as quicker-acting in its effects, the trees may be stimulated by light applications of this material. Probably the easiest way to use this will be to water the trees during the growing season at short intervals, say once a week, with a solution of nitrate of soda, at the rate of one pound in fifty gallons of water. For ten-year-old plum or cherry trees two or three gallons will be about the right quantity. The nitrate of soda may also be scattered dry under the trees, where it will soon be dissolved



FIG. III.—Chambers or galleries beneath bark.

by rain and washed down to the roots. Two or three light dressings are better than one heavy one. Whatever method of feeding the tree is adopted, the ground should be broken and kept hoed or cultivated during the first part of the season.

The Fruit Bark-beetle, as a rule, attacks the trunk and larger branches of imported trees, but sometimes the whole tree, even to the smallest branches, is involved. In these instances there is no chance of saving the tree, and the sooner it is dug out and burnt the better. When the injury is noticed before it has gone too far, the tree should be stimu-

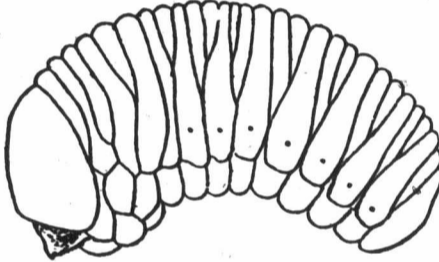


FIG. IV.—Larva of Fruit Bark-beetle (much enlarged).

lated promptly and the trunk and larger branches washed with a carbolic alkaline wash to prevent the female beetles from laying their eggs. This may be made by dissolving as much ordinary washing soda in a gallon of water as the water will take up, and then using this liquid to reduce soft soap to the consistency of whitewash or oil paint. Add to the above quantity of soda and soap wash four ounces of crude carbolic acid, and mix thoroughly. Another wash which has been used with much satisfaction by Mr. Carl E. Fisher, of Queenston, Ont., as a preventive remedy against the Peach Bark-borer, is made as follows: Washing soda, five pounds; soft soap, three quarts; water to make six gallons; air-slaked lime to thicken like paint. To this add three tablespoonfuls Paris green and one ounce carbolic acid. Apply with a whitewash brush, in May and late in July, thoroughly covering the trunk and for some distance up the branches.

Arsenate of Lead as an Insecticide.

This arsenical insecticide has been recommended by a number of experimenters as a substitute for Paris green, principally on account of its greater adhesive qualities. I tested it at Ottawa in 1895, 1896, and 1897. The results in 1895 were very striking in preventing injury from codling moth. The work of the last two years also indicate that it is an effective insecticide. The formula used was prepared by dissolving 1/2 ounce of arsenate of soda in 1 quart of water, and 1/2 ounce of acetate of lead, separately, in an equal quantity of water. The two solutions were then poured together and diluted with water to a five-gallon solution. For a barrel holding 50 gallons of water, the formula would be 5 ounces arsenate of soda to 7 1/2 ounces acetate of lead.

As an instance of the results in one case, two trees of orange crab were sprayed three times with this solution. The two trees yielded 5 bushels of crab apples with an average of 5 wormy specimens in each bushel. One of the advantages of this mixture is that it does not need much agitation to keep the liquid of equal strength throughout. It is also very adhesive, and is not easily washed off; for this reason it ought not to be applied to fruit late in the season. The Massachusetts Gipsy Moth Commission has used this insecticide with excellent results in fighting the Gipsy moth. If the price of Paris green keeps up in the U. S. as it has done for the past two years, this substance, as well as white arsenic, will replace it to some extent.

Cornell University. JOHN CRAIG.

QUESTIONS AND ANSWERS.

[In order to make this department as useful as possible, parties enclosing stamped envelopes will receive answers by mail, in cases where early replies appear to us advisable; all enquiries, when of general interest, will be published in our succeeding issue, if received at this office in sufficient time. Enquirers must in all cases attach their name and address in full, though not necessarily for publication.]

Veterinary.

Coughing and Lame Pigs.

T. W. C., Leeds Co., Ont.:—"My pigs and young brood sows have been affected with a bad cough, which seems very hard on them. Sometimes after getting up some of the older ones are very lame. One young sow had the cough and was swelled in the hind legs, but seems to have gotten over it. They all have had plenty of outdoor exercise, and have been fed on roots, mixed grains, milk and whey, but none of them have missed a meal; but when the young pigs take the cough they do not thrive very well, and one has quite an arched back. Since taking it, I have fed charcoal, salt and ashes. Is the disease contagious, and is there any cure?"

[In all probability the pigs have contracted a cold, which has developed rheumatism in the lame ones. It would be well to house them in comfortable, dry quarters at night and run to pasture during the day. Continue giving the wood ashes and charcoal, but no salt, and obtain from the druggist the following powder: Compound liquorice powder, 2 ozs.; powdered belladonna leaves, 1/2 oz.; jalap powder, 1/2 oz. Give a tablespoonful for each mature pig, mixed with the food every day. It is not likely the disease is a contagious one. It is a strange fact that pigs getting the best of treatment sometimes contract a cough from which they generally recover in a few weeks or months. The coming warm weather and succulent pasture, along with the above medicine, will likely bring about a cure. DR. WM. MOLE, M. R. C. V. S.]

Dropsy of the Womb.

J. Y., Cartwright, Man.:—"One of my cows took sick early in March when two months from calving. She bloated badly and I thought it was compaction of the insides, and gave dose of oil at five o'clock. As this did not operate in seventeen hours I gave her a dose of salts, but she died a few minutes afterwards. I opened her and found she was filled with water. Now a two-year-old heifer, also two months from calving, has taken the same thing. Gave a dose of nitre; she made water, but the bloating did not reduce. I tapped her and about seven pails of water came out, and in the water I noticed white worms about four inches long and the thickness of a darning needle. Did not notice any worms in the first cow. The heifer calved, but only lived a day afterwards. Both were fat and looked well until within a week before they died, when they fell off in flesh, their hair got dry and stood up, and instead of springing down behind seemed to sink in and get smaller. Is the disease contagious, and what can be done for it should any more take it?"

[The condition you have mentioned is peculiar to pregnancy, and is technically called *hydrops amnii*. It consists of an excessive secretion, or accumulation, of the fluid which surrounds the foetus in the womb. The only remedy is early evacuation of at least part of the fluid by tapping the membranes through the mouth of the womb (or uterus), or, perhaps, tapping the womb and membranes through the right flank. The operation should be done only by a qualified man. After the excess of fluid has been removed a generous diet and tonic medicine should be given. The disease is not contagious.]

Unthrifty Mare.

O. W., Pendennis, Man.:—"I have a mare six years old which is always in poor condition. The mare gets six quarts of oats three times a day, good hay and good water. She appears to sweat easily, but otherwise is in good health."

[Your mare's condition is due to improper assimilation of food. I would advise you to prepare the animal for a purgative by feeding exclusively a bran mash diet for twenty hours, and then give the following dose: Barbadoes aloes, seven drams; calomel, one dram; ground ginger, two drams; syrup, sufficient to form a ball. When the physic has ceased to operate, give morning and evening, for ten days, in food: nux vomica, half a dram; powdered gentian, two drams; nitrate of potash, one dram. While giving this medicine give a bran mash, instead of oats, each night, made by boiling a teacupful of flax seed in sufficient quantity of water to scald four quarts of bran. Do not feed so much oats.]

Miscellaneous.

Shipping Pigs.

P. E. ISLANDER:—" (1) What is meant by 'pigs shipped to order?' (2) As a general thing, would you advise shipping pigs in advance of payment to strangers? (3) When purchaser resides at or near an express office, do you advise shipping C. O. D., and in the event of buyer refusing to take pig on arrival, should not buyer, in all justice, pay express charges one way? Therefore, is it not reasonable that a deposit equal to charges one way be made in C. O. D. terms? (4) Please give direction about shipping pig one to two months old on say a five-day trip? Have you found the express authorities careful in feeding en route? (5) I think I shall

want to ship some young pigs to the U. S. Would you give me instructions for shipping there? Is there any trouble about tariff duty, etc.? (6) Would you call seven pigs a fair average to save in half dozen litters?"

(1) "Pigs shipped to order," as we understand it, means simply that the animals will be shipped on receipt of an order by mail or telegraph, the buyer not having selected or seen them, the selection being entrusted to the seller, unless it is a specially named and described animal, in which case the pedigree and description should correspond with the animal sent.

(2) To ship stock in advance of payment is not customary with the best breeders, and it is not reasonable to expect it. A breeder's reputation is at stake, and it is in his interest to send out stock that is likely to give satisfaction. To do otherwise would be suicidal to his business.

(3) We do not advise shipping stock C. O. D., and would not do it, as a rule, unless we knew the buyer to be a reasonable and reliable man. Animals shrink and fail in appearance in shipping and cannot reasonably be expected to look as well at the end of a journey as when they started or as they will when rested, cleaned and fed. Some buyers fail to make allowance for this and may refuse to accept an animal which is good value and might prove entirely satisfactory if given a fair chance to show itself. We think it only fair that the buyer should pay the express charges one way in case he refuses to accept an animal shipped C. O. D.; but, of course, he cannot be compelled to do so unless he has agreed to, and therefore it is reasonable to require either a deposit or an agreement.

(4) We would not ship a pig on a five days' trip before it was eight weeks old. We believe express messengers as a rule will feed and water stock en route if feed is sent along in a sack with a tin dipper enclosed. The feed should be of such light and safe kind that no harm will be done if it is fed too freely, such as oats and bran. The sack should be labelled same as the pig's crate.

(5) The U. S. duty on pigs is \$1.50 each, and may be allowed to follow and be collected by the express company with their charges, or may be paid in advance to the express company by the shipper. Registered pigs are admitted free of duty if registered in American records and accompanied by certificate of registration and a pedigree chart giving name and record number of sire and dam and of sire's sire and dam. A U. S. consul's certificate must also in this case accompany the shipment showing that it is for breeding purposes, and for this a fee of \$2.50 is charged. So it is much cheaper and less trouble to pay the duty and escape all this red tape or let the duty follow.

(6) We would consider seven pigs a fair average to save from half a dozen litters, taking old and young sows and also early and late litters together. Mature sows ought to average higher.]

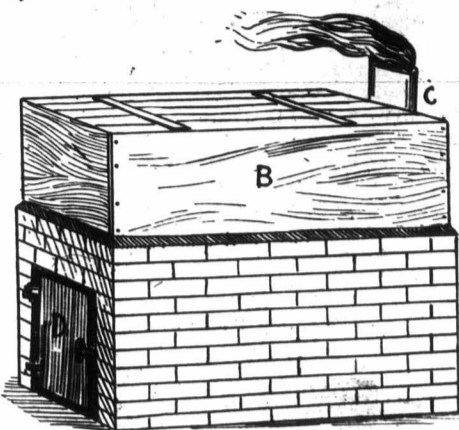
**Pen for Brood Sow—Feed Boiler.**

J. A. M., P. E. I.—"Kindly give plans for brood sow pens for early spring farrow. State size, position of bed, trough, conveniences, etc.; also your opinion of small pens for the little pigs like Mr. Tillson's new pen has. I want to build a few brood pens for February and March litters. 2. Do you consider a steamer or boiler the better for preparing pig feed, largely of roots? 3. Do you consider it necessary to pulp roots preparatory to boiling them, as Mr. Rennie recommends?"

[We do not know of a better winter farrowing pen plan than that adopted by Mr. Tillson in his new piggery, a plan and description of which were given in Feb. 15th, 1898, issue of the FARMER'S ADVOCATE, page 79. It is not essential to expend as much money as Mr. Tillson has, although every dollar in his piggery was economically placed. The same plans can, however, be followed very much more cheaply if one chooses so to do. The brood pens in Mr. Tillson's piggery are 13x13 feet. These would answer fairly well if 8x10 or 10x10 feet for single sows and litters. It is well to have the floor entirely covered with plank closely fitted on top of cement. The bed, or sleeping pen, may be 6x6 feet, raised two inches and surrounded either by a scantling to hold the bedding in place, or be covered in four or five feet high to maintain warmth and escape drafts. The walls around a brood nest should be skirted on the inside with a board set up from the floor eight inches and six inches out from the wall to allow space for the young pigs to escape being crushed against the wall. The opening into such an apartment could be protected on a cold night by an old horse blanket or something of that sort. Troughs should, for convenience, be placed next the passage and are well to be of iron or cement. The creep pens for young pigs cannot easily be spoken of too highly. Young pigs will commence to eat, if given opportunity, between three and four weeks old, and, if well fed, by the time they are eight weeks old they can be weaned without losing their milk-flesh or stopping their growth. Mr. Tillson's creep pens occupy half the width of the pens and are four feet across. They are separated from the pens by partitions held in place by the round iron post shown in illustration. The planks are concaved to fit the post. An iron strap could be bent around the post and bolted to the planks. The floor of creep pens is elevated about four inches so that the little pigs can readily reach their food.

2. Where one has not a boiler in connection with a creamery, or other similar purpose from which

steam can be obtained, we much prefer a feed cooker, and one of the most satisfactory is built of four planks formed into a square or oblong box, having a sheet-iron bottom, set over a fireplace enclosed in brick walls. The accompanying illustration represents the cooking furnace used and very highly spoken of by Mr. J. E. Brethour, of Burford, and others. The box is two feet wide, six feet



long, and eighteen inches deep. Iron bars should be placed across the top of brick masonry to take the strain off the bottom of box, and a piece of iron three inches wide should be placed across the back where the smoke enters the chimney to keep the fire from the box. To fasten the sheet-iron bottom on the wood sides, have holes punched in the sheet iron about two inches apart all around where it comes in contact with the planks, for screws or wire nails. The fire hole should be six inches or more narrower than the box, and a strip of asbestos placed around the edge of box at bottom would lessen the danger of firing the box, which is very slight, provided the bottom is well cemented on to brick walls.

3. It is wise to pulp roots for boiling, as they then cook much more quickly than if in larger pieces or whole.]

**MARKETS.**

**FARM GOSSIP.**

**Oxford Co., Ont.**

The all-absorbing topic is the great storm of the night between the 18th and 19th of May. The oldest inhabitant does not remember of such a night of thunder and lightning and rain. A good many buildings were struck and damaged, and some entirely consumed. The rain, which was a perfect downpour, was much needed, and will be of the greatest benefit to meadow and pasture and grain. For the old saying that, "it is the month of May that makes the hay," still holds true. Some corn that was newly planted on sloping fields got badly washed out, and will have to be replanted. Much of the corn was planted, but some farmers still have that work to do, and as the weather keeps dull and cloudy it will be some time before the ground is dry enough to work. There are not nearly so many turnips sown now since the trouble with the turnip flavor in the cheese. No Greystones or white turnips are sown, only a small patch of Swedes for winter use, which are generally sown during the first ten days of June, but most farmers put in a much larger acreage of mangels. Cows are now milking pretty well, but a good many farmers had difficulty in getting their cows in calf, and consequently there are quite a number of farrow cows and cows coming in late. Cheese is dull of sale, and is hard to sell, at 7½ cents while we write.

Some of the winter stall feeders of steers still have their cattle in the stables—metaphorically speaking, eating their heads off—looking for a rise in price which does not come. Most of the wealthy farmers have got all their old wheat hauled out to market at the \$ or over. Hogs are pretty well c'aned out, and generally there won't be many to sell for some time. In view of the increased demand and better prices for horses, there will be many more mares bred this season than has been for some years past; but great caution should be exercised in breeding only the best, and that to suitable sires. Don't breed a 1,200 mare to a 2,000 horse. There is too much difference. Farmers are now busy fencing, while the ground is too wet to work profitably. The most of the township councils are keeping a road grader going now while the roads are soft, and then the road work will be put in hauling the gravel on the newly graded parts. Graders when properly operated are giving good satisfaction. But statute labor as generally performed is an obsolete system, as there is too much time put in leaning on the shovel handle. D. L.

**Live Stock Imports by Great Britain, April, 1898.**

Our readers are aware of the enormous extent that England nowadays imports live stock or its products as meat, and we, therefore, in order to keep them *au fait* with the subject, append hereto the different quantities, their values, and, so far as can be ascertained, the source of origin. The figures and values used herein are those obtained from the official publications. Horses claim our attention first. The figures and values have been considerably less than in past month's imports have been considerably less than in the corresponding period of last year and show a diminution of no less than 29.26 per cent. The sources of supply are divided under three heads—United States, Canada, and other countries—and it will be seen in the table hereunder to what extent this trade has varied during the period under review, which period is the month of April in the years 1896, 1897 and 1898. Each source of supply is given a separate table, and the readers will be able at a glance to

see the true position of this business. It will be seen that our own contribution to the total number exported is very small. Each table in the horse section is divided into five columns, being as follows: 1, period; 2, number sent by the country named; 3, aggregate declared value; 4, average value; and 5, percentage of increase + or decrease — over the same period of the preceding year, the fractions not being given.

UNITED STATES.				
1	2	3	4	5
April, 1896	3038	\$423,200	\$139.34	+ 36
" 1897	4372	645,780	148.42	+ 32
" 1898	2934	405,870	138.23	- 42
CANADA.				
April, 1896	363	\$ 4,875	\$109.84	..
" 1897	368	46,120	125.32	+ 74
" 1898	85	10,125	119.11	- 1
OTHER COUNTRIES.				
April, 1896	955	\$87,595	\$91.69	+ 23
" 1897	1284	92,440	72.00	+ 34
" 1898	1216	97,130	71.66	- 5

The supply of cattle alive is derived from different sources, and as each is set out in detail in the tables given hereunder no further comment is needed, for it will be discernible at a glance how each source has varied in its supply. The different columns of the following table denote respectively as are applicable to those given in the horse section:

UNITED STATES.				
1	2	3	4	5
April, 1896	33358	\$2,879,200	\$86.31	+ 51
" 1897	38987	3,374,085	86.50	+ 16
" 1898	38609	3,049,595	78.13	- 28
ARGENTINE.				
April, 1896	11212	\$715,040	\$63.76	+ 23
" 1897	7580	638,395	84.22	+ 41
" 1898	10727	775,445	72.28	+ 41
CANADA.				
April, 1896	1730	\$150,745	\$87.13	+ 291
" 1897	1887	168,365	89.23	+ 9
" 1898	1311	114,485	87.32	- 30
CHANNEL ISLANDS.				
April, 1896	198	\$19,255	\$ 97.22	+ 20
" 1897	161	16,325	101.04	+ 18
" 1898	221	20,400	92.30	+ 37

The supply of live sheep is derived mainly from the first three sources of supply, each being given under its separate table, and the columns are used as in the preceding sections of horses and cattle.

ARGENTINE.				
1	2	3	4	5
April, 1896	50096	\$432,810	\$7.73	+ 8
" 1897	37218	314,490	8.44	- 33
" 1898	52487	367,610	7.00	+ 41
UNITED STATES.				
April, 1896	32786	\$240,520	\$7.65	- 21
" 1897	23856	163,095	6.83	- 29
" 1898	28253	212,230	7.51	+ 18
CANADA.				
April, 1896	2709	\$18,875	\$6.96	..
" 1897	169	1,250	7.04	- 1563
" 1898	879	6,690	7.62	+ 430
OTHER COUNTRIES.				
April, 1896	539	\$ 4,310	\$ 8.00	..
" 1897	1	15	15.00	..
" 1898	4918	30,500	6.20	..

Beef and mutton do not appear in the Government returns as being received from Canada, but we find in respect to bacon that Canada is credited with sending 11,041 cwts. of 112 lbs., of the value of \$108,075; and the States sent 399,728 cwts., valued at \$1,269,770, during April, 1898. Hams, too, come from Canada to the weight of 607 cwts., valued at \$5,990, whilst from the States there were received no less than 146,633 cwts., valued at \$2,437,705. An important fact in reference to these two latter items, *i. e.*, bacon and hams, is one worthy of the consideration of your authorities, namely, if the figures quoted above really are all the bacon and hams exported from Canada or no. This, of course, raises the important question recently dealt with, namely, the necessity of steps being taken to secure Canadian produce exported to England to be invoiced as such and sold also under its proper name and definition. Nothing would so greatly increase the demand for and value of Canadian produce as the carrying into effect of an arrangement such as this. STATIST.

**Brandon District.**

Seeding was about all finished by the 15th May and the work done with more care and skill than ever before. The acreage under crop is larger than in any past year, particularly in wheat, which is in excess of last year from 15 to 20 per cent. The weather for seeding was very cool and favorable. No rain up to May 20th, yet the crops are coming up very evenly, and are not suffering from drought. Planting at the present date (20th) is pretty well through with, considerable quantities of corn and field roots being put in.

Cattle have done well since the spring opened, but the bare winter fare accorded milch cows is showing its effect in the milk pail and butter yield. Beef cattle are bringing 4½c. on foot. Hogs are scarce, and worth 4½c. Butter scarce, dairy bringing 20c. to 25c. Eggs, supply moderate, 12c.

Grass.—Cultivated grasses are looking very well, and more seeding is being done this spring than ever before, farmers, as a rule, making the mistake of sowing along with grain crop, instead of accepting the advice of Mr. Bedford and Mr. McKay to sow on summer-fallow later in the season.

Improvements.—Farmers are doing considerable in the way of improving and beautifying their buildings and farms. The application of a few dollars' worth of paint and a little time spent in tree planting add very much to the appearance of the average farm.

Wheat prices—\$1.10 for No. 1 hard. Recently \$1.35 was street price, but not many farmers had much to offer. All are hopeful that it will be around the \$ mark next fall. The prize list of the Western Agriculture and Arts Association is out, and appears to be decidedly liberal in the distribution of prize money. The fair will be a big one this year. If reports from the outside are reliable, not only will entries far surpass last year but the great bulk of the population of the western part of the Province will be in attendance. Vox.

Brandon, Man.





THE BURGLAR AND THE PUBLIC HOUSE.

"A fine public house," said Blanco Watson, the humorist. "Yes," I replied, looking at the building we were approaching...

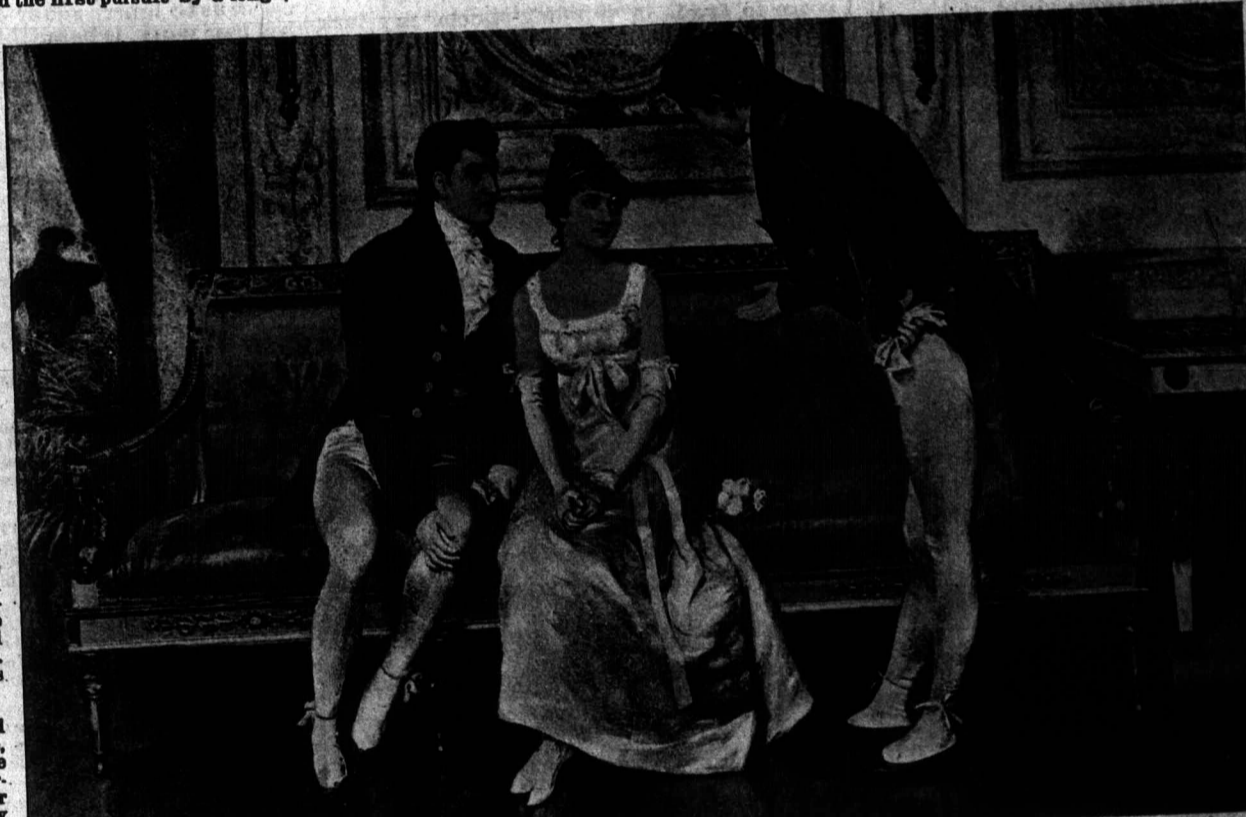
tended the chapel because while there he was near the jewels the seat he had taken being just twenty steps due north from the tree. At first he had meditated digging through the floor one night, but the chances of detection were great, and he had given up the idea.

The Last Dance.

Just one more dance! This is the last. The happy hours have fled. Which shall it be—the maiden feels A sudden thrill of dread.

Why should it mean so much to her? The dance will soon be done. What can it matter which she takes? Her choice must fall on one.

Gay Harold pleads with easy grace, "Fair lady, dance with me." He talks so well and looks so bright, He must be successful be.



Yet Laura looks up in his face, And feels, with instinct keen, That words and manner are assumed To hide a nature mean.

Poor Ralph, in eager, wistful tones, Pleads tremblingly his cause. She knows his heart is sound and true, What need for her to pause?

The choice is made, a final choice, For honesty and truth Win trust and love, when falsehood falls.— Young Ralph's the favored youth.

Their report was very favorable, and at another business meeting it was decided to carry out the proposal. "The necessary funds were subscribed or guaranteed. Contracts were made with Mr. Jones. In the spring of that year the building operations were commenced, and by the autumn they were finished. The congregation removed to the new chapel. Mr. Jones purchased the old one at a high price, and entered into possession."

will. Who knows but that we may come across the other tree of curious growth? "Or," I said, "a chapel member wringing his hands at thought of the public house."

Correct Solution of the "Great Canadian Puzzle"

- 1. Canada. 2. Hudson. 3. St. Lawrence. 4. Tecumseh. 5. Hurons, Algonquins. 6. Newfoundland. 7. London. 8. Farmer's Advocate. 9. Lumber. 10. Picton. 11. Tadoussac. 12. Evangeline. 13. Natural gas. 14. Laurier. 15. Niagara Falls. 16. Lord Aberdeen. 17. Fresh water. 18. "The man who makes chaff of himself will be eaten by crows."

We regret very much that none of our subscribers have succeeded in winning the fifty dollars which was to be awarded to the contestant who sent in a full list of the correct words in our Canadian puzzle. Several sent in as many as seventeen numbers correctly solved. These lists were sent to Mr. Westervelt for him to judge their merits, the names being previously cut off. He has decided that the list sent by Albert McArthur, Astin P. O., Ontario, was the best, and that those sent by Miss Flora Swain, Morris, Manitoba, and Mr. Francis Tuckey, Ferguson, Ontario, were the next best, being equally good. We consider that each is entitled to a silver watch. The gold watch is therefore awarded to the former and silver watches to the two latter, to whom we shall forward them with much pleasure. All those who are entitled to receive pins, and to whom they have not yet been forwarded, will receive them in the course of a few days. One of our correspondents wrote that he found the proverb a "sticker." We fancy others were of the same opinion, as more failed in answering it than any other number. We were struck with the applicability of the proverb when we saw it in The Princess magazine of December 18th, 1897, published in London, England, but never had any idea that it would prove the most difficult. Most of the lists sent in were very creditable, neat, and well written, and although they may have been the source of a little trouble, we hope it was not unaccompanied with pleasure and profit. Following are extracts from some of our letters referring to the gold-plated pins:

Please accept many thanks for the pins which my sister and I have received; they are very pretty. Grand Valley, Ont. JESSIE BOURN. I am in receipt of your "pin." Accept my thanks. Bristol Mines, Que. JOHN ROSS. Gentlemen.—Many thanks for the beautiful pin received this morning. I did not expect such a beauty. Halifax, N. S. Respectfully yours, CHARLES McDONALD. We are pleased with the lovely pin you forwarded so promptly. Kingston, Ont. MAUDE BARNARD.

Why are there so many Smiths? Here is the explanation. At the time of the adoption of surnames every artisan whose work required the striking of blows on metal was known as a smiter or smith, and the community therefore had its blacksmith, whitesmith, goldsmith, silversmith, arrowsmith, and several others of the same character. The number of Smiths of the present day may therefore be readily accounted for, when we remember that each of the different kinds of smiths was as much entitled to the use of his trade name for a cognomen as any other artisan. John the blacksmith and John the coppersmith were both known as John the smith, an appellation which naturally resolved itself into the family name of John Smith.



### The Sick Fairy.

(Continued from page 242.)

Presently the joy-bells were rung in the town, and everybody for miles and miles around knew that Squire Morton's lost little boy was found; but as to the when and the where and the how of it all, there were a hundred stories afloat, all, if possible, more wonderful than the actual fact.

"Now, good people," began the Countess, "when you are all assembled (and I see the Mayor and Corporation coming up the hill) I am going to tell you something which will astonish you."

She waited until the walled enclosure was filled with an eager crowd and then waved a little gold-headed walking-stick to command attention.

"Good folks all," she said, "I am not as you suppose, a descendant of the ancient earls who once inhabited yonder castle. No; I am still more of a stranger to you than you imagined. I come from a land beyond mortal reach,—I will leave you to guess it."

The lady's appearance as she spoke had undergone a change. She became less hard featured, less wrinkled, with every word, until all were beginning to wonder what could have made them think her old or ugly. The green and gold brocade, which was the Countess' favorite costume, still draped her form, but the color was more vivid, the gold embroidery shone with greater lustre—a lustre only rivalled by the fair ringlets which fell to her feet, unbound, except with a diamond fillet which encircled her head. Another wave of the gold walking-stick, which had now become a slender wand, produced a startling effect on the animal and vegetable life in the garden. Out of every blossom came a little elfin lady, out of every vegetable an elfin peasant. The bees, wasps and butterflies were observed to grow legs and arms and become little flying fairies. The Countess' secret was now indeed revealed, and frightened whispers of "The fairies! Oh! the fairies!" were heard.

The Mayor turned quite pale, not knowing in the least what his functions were under these exceptional circumstances.

"Why should you be afraid of us?" asked Chrysanthemum. "What harm have we done you?"

"Oh, indeed, ma'am, we feel highly honored," stammered the Mayor, whilst all the little children present, far from feeling alarm, began to dance round the fairy, clapping their hands and crying—

"Show us some more! Show us some more!"

This pleased the fairy, who replied: "Yes, yes; you shall have some more if you are good children."

She turned round to Mr. Parakeet, who had arrived with the other fairy servants.

"Call me a cab," she commanded.

Mr. Parakeet whistled, and a large snail came creeping up. He vacated his shell and slunk away. Then a dragon fly flew down and was harnessed to the shell by a spider, whilst the rose elves washed the fairy coach with dew and lined it with rose leaves.

The carriage when ready increased gradually in size till the snail shell became a very handsome coach, lined with pink, and the dragon fly became a flying dragon.

The children screamed with delight as the fairy got into her carriage. Creepy and Crawley mounted behind, Parakeet and Peacock on the box, whilst Firefly, with his lantern already lit, mounted as postillon on the dragon fly, which spread its beautiful gauzy wings half across the garden and prepared to mount in the air.

"Stop! stop!" cried a little sallow-faced man dressed in a buff suit.

"Excuse me, Doctor Camomile," said the fairy, "for starting without you, but why did you not come before?"

"I was curing a sick baby," replied the doctor, "wishing to profit by your good example, and recommend myself to the mortals. Pray don't wait, I'll find my own way home. There are plenty of wasps about, whose slender waists are very convenient to sit across; but it is getting chilly and I wished to recommend prudence. You should wear a shawl before ascending to the clouds."

"True, true, dear doctor, it was very heedless of me. Spiders, bring me a nice thick cobweb."

The spider elves immediately produced a lovely soft shawl of their own weaving, embellished with crystallized dewdrops, with which they enveloped the convalescent fairy. Doctor Camomile soon caught and mounted his wasp, which, duly enlarged, appeared a handsome but vicious steed. The doctor rode him with a firm hand on a curb bit. All mounted together, and the crowd gazed long after the fairy folk as they disappeared in the clouds.

The little children kept hoping they would return some day, but they never did, and the story of the sick fairy who had settled among mortals became legendary.

There are even incredulous people who affirm that someone must have dreamt it all.

M. COLLIER.

### Cluster of Proverbs.

GERMAN.

"I have" is a better bird than "If I had."  
Neutrals think to tread on eggs and break none.  
Once in people's mouths, 'tis hard to get out of them.

"Your words are fair," said the wolf, "but I will not come into the village."

There are only two good women in the world; one is dead, the other cannot be found.

TURKISH.

Fame is not gained on a feather bed.  
Which are the most beautiful birds? "My little ones," said the crow.

The lazy man says, "I have no strength."

SPANISH.

There's no argument like that of the stick.  
Words will not do for my aunt, she has not faith even in deeds.

When God pleases, it rains even in fair weather.  
A secret between two is God's secret.

A secret between three is everybody's.  
The earth hides as it takes the physician's mistakes.

ARABIC.

A thousand cranes in the air are not worth one sparrow in the fist.

There are no fans in hell.

The man who makes chaff of himself will be eaten by crows.

If I were to trade in winding-sheets, my luck would make all men live.

"Now Look Pleasant, Please."



"Look pleasant, please Rover; don't move now, old dog, or take a good picture you'll fall;  
Your ears and your paws must be perfectly still,—  
Don't you dare, sir, to waggle your tail!"

"Uncle Jack told me not to touch his machine,  
'Cause I'd certainly break it, he said;  
But, really, I don't mean to hurt it one bit,  
So it's no use you shaking your head."

"I feel quite ashamed when you look at me so,  
And it makes me so sorry inside;  
I fink—perhaps—we'd better go right straight away,—  
Let me get on your back for a ride."

### Recipes.

TO BOIL A HAM.

Place the ham over a slow fire, that it may heat gradually, then simmer gently fifteen minutes to every pound, from the time it begins to boil. When done allow it to cool in the liquor in which it was boiled. Then remove the rind carefully without cutting the fat. Brush it over with beaten egg, and sprinkle with dried bread crumbs; place in a quick oven for about fifteen minutes to brown.

LEMON PIE.

One teacupful powdered sugar; 1 tablespoonful of butter; the yolks of two eggs; 1 grated lemon, removing seeds and white skin; 1 teacupful of boiling water poured on 1 tablespoonful of cornstarch dissolved in cold water. Cream the butter and sugar and pour on them the hot cornstarch. When quite cold add the lemon and beaten egg. For the top, take the two whites, well beaten, and two tablespoonfuls of powdered sugar; pile this roughly on the pie after it has been cooked; set it in the oven for ten or fifteen minutes, the door being open should the oven be very hot.

MAYONNAISE DRESSING.

Take the yolks of 2 eggs, put them into a soup plate, add a little salt and begin to stir; add salad oil drop by drop until there is about 1 gill on the plate, stirring all the time; then add 4 tablespoonfuls of lemon juice, or, better still, tarragon vinegar. The plain vinegar will do.

## UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES,—

The many kind comments passed upon our Memory Gems, and upon some of those letters in which I have given quotations from the poets, lead me to believe that a great love of poetry is latent in the hearts of many of our readers. This rose-crowned month should awaken all the poetry that may be slumbering within us, for in "leafy June" everything is so beautiful, and beauty and poetry are closely allied. When we gaze on the fair earth-blossoms so lavishly scattered around us we almost unconsciously associate them with those flowers of speech—the poems of the great ones of the past and present. We may preserve these fragrant blossoms indefinitely, and the more we use them the more beautiful they will become; age but mellows their hues and increases their sweetness. Goldsmith thus addresses poetry—

"Thou Guide, by which the nobler arts excel,  
Thou nurse of every Virtue."

And Coleridge says—

"It has given me the habit of wishing to discover the good and beautiful in all that meets and surrounds me."

And this is just what I believe the study of poetry does for us all; so come with me for another little ramble in the land of song, that we may add to the bouquet we are culling to brighten the autumn hours that (sooner or later) come to all. Perhaps I may have shown a partiality in quoting from Canadian poets (who can surpass Canadians?), so this time let us take Lord Lytton, popularly known as Owen Meredith. We will not strive to cull from his longer poems, as we should have more than our hands could carry, and even then lack of time would cause us to ignore many charming buds. "Lucile," his best work, is beautiful; and among his shorter poems is one entitled "The Artist," which contains much that is charming to read and profitable to remember and practice.

"O Artist, range not over-wide:  
Lest what thou seek be haply hid  
In bramble-blossoms at thy side,  
Or shut within the daisy-lid.

God's glory lies not out of reach.  
The moss we crush beneath our feet,  
The pebbles on the wet sea-beach,  
Have solemn meanings strange and sweet.

Nor cross the sea for gems. Nor seek:  
Be sought. Fear not to dwell alone.  
Possess thyself. Be proudly meek.  
See thou be worthy to be known.

Assert thyself, and by and by  
The world will come and lean on thee.  
But seek not praise of men; thereby  
Shall false shows cheat thee. Boldly be.

Remember, every man He made  
Is different: has some deed to do,  
Some work to work. Be undismayed.  
Though thine be humble: do it too.

Earth's number-scale is near us set;  
The total, God alone can see;  
But each some fraction: shall I fret  
If you see Four where I said Three!

A unit's loss the sum would mar;  
Therefore, if I have One or Two,  
I am as rich as others are,  
And help the whole as well as you.

Thou, by one thought thoroughly great,  
Shalt without heed thereto, fulfil  
All laws of art. Create! create!  
Dissection leaves the dead, dead still.

While yet about us fall God's dews,  
And whisper secrets o'er the earth  
Worth all the weary years we lose  
In learning legends of our birth,

Arise, O Artist, and restore  
Their music to the moaning wings,  
Love's broken pearls to life's bare shore,  
And freshness to our fainting minds."

So simple in language, and so replete with meaning, are these verses that comments from me would be superfluous; they speak for themselves.

One of my young friends has a very nice custom which many might adopt and thus give much pleasure to others with no expense and but little trouble to themselves. Every spring when the wild flowers are in bloom she sends a box of them to those friends in the city who are debarred from the pleasure of gathering them. How sweet and fair must the shy sylvan beauties seem to eyes that seldom rest on any but the forced product of the city conservatories! Many of you have members of the family in town, so before our wildings leave us send them a whiff of country fragrance and beauty that will carry them back to the dear old home. Although I am indebted to this young lady for this pretty idea, I must tell you that she is a dreadful torment to your poor old uncle. Small reverence does she show for grey hairs! She calls puzzles "nonsense" and makes game of our chats; in fact, she is a dreadful girl, but nevertheless she has not a warmer friend than—

UNCLE TOM.

None of the pictures sent in as headings for the Home Department are entirely satisfactory. We will therefore extend the time until the end of June. Remember, two bound books are offered to the boy or girl who sends in the best picture. Do not send clippings which are already used as headings in other papers. The pictures need not be small, as they can easily be reduced in size.

Puzzles.

[The following prizes are offered every quarter, beginning with months of April, July and October: For answers to puzzles during each quarter—1st prize, \$1.50; 2nd, \$1.00; 3rd, 75c. For original puzzles—1st, \$1.00; 2nd, 75c; 3rd, 50c. This column is open to all who comply with the following rules: Puzzles must be original—that is, must not be copied from other papers; they must be written on one side only of paper, and sender's name signed to each puzzle; answers must accompany all original puzzles (preferably on separate paper). It is not necessary to write out puzzles to which you send answers—the number of puzzle and date of issue is sufficient. Partial answers will receive credit. Work intended for first issue of any month should reach Pakenham not later than the 15th of that month; that for second issue not later than the 5th of that month. Leave envelope open, mark "Printer's Copy" in one corner, and letter will come for one cent. Address all work to Miss Ada Armand, Pakenham, Ont.]

1—RIDDLE.

As I was going to the woods one day I met a thing that was good to eat. It was neither fish nor flesh nor bone. It left it there till it walked alone.

"POLLY PLUM."

2—PERSONAL PUZZLE.

Come, puzzlers!—now don't make a face— Take a pencil and make a ring— Now four smaller ones also place— Two without, and two within. Over a parallel line, in the center invert a letter V. If you have done it correct, "Yourself" you will see.

"MARGARETA."

3—MAGIC SQUARE.

Table with 3 rows and 3 columns of numbers: 1 1 2, 3 5 6, 7 8 9

Arrange these figures so that vertical, horizontal and diagonal columns will give the same sum. "DICK."

4—CHARADE.

My first is a flower fair to behold, My second the name of a woman in history. My whole, when the story of Hamlet is told, Will help us remember and ponder the mystery.

MABEL ROSS.

5—NUMERICAL ENIGMA.

3, 7, 5, 9, 10, 2, means middle. 10, 11, 1, 2, means scarce. 12, 11, 8, 2, 14, is a class of people. 1, 7, 5, 12, is to tear asunder. 3, 13, 8, 9, 1, 11, means against. My total is a name given to the Cubans.

BLANCHE MACMURRAY.

6—CHARADES.

(a) My (1) is an interjection; my (2) is an adj.; my total is a species of monkey. (b) My (1) is a top; my (2) a verb; total—a message boy. (c) My (1) is a wayer; my (2) is a prep; total—a cement. (d) My (1) is to spoil; my (2) a male sheep; total—a sea-reed.

BLANCHE MACMURRAY.

7—CHARADE.

My first with rosy fingers Folds back a curtain gray, To let my second issue forth In sunlight's earliest ray. My whole remains scarce longer Than tints of dawning stay, So on a rainbow dip your brush, And paint it while you may.

MABEL ROSS.

8—NUMERICAL ENIGMA.

1, 8, 12, 18= name of a month. 19, 2, 9, 16, 15, 4= to make smaller. 17, 3, 7= a steed. 5, 6, 12, 10= a relation. 13, 14, 6, 11, 10= product of plants. Whole is the name of a distinguished French philosopher.

PETER HYDE.

9—SQUARE.

1. Hurry. 2. A performer. 3. A piece of rock. 4. Strengthening medicine. 5. To build. "OGMA."

10—ENIGMA.

When you've offended 'twould be better To name in the singular one certain letter, With one in the plural it is annexed, To appease the wrath of the person vexed. "OGMA."

11—CONUNDRUM.

In what way does a gate set us a good example? "KIT."

12—DOUBLE ACROSTIC.

1 is used in a schoolroom. 7 is a girl's name. 2 is a girl's name. 8 is a woman's title. 3 is used by the farmer. 9 is a stir. 4 is often found in an office. 10 is a time of day. 5 is the fruit of a tree. 11 is a small mark. 6 is curved. Initials are a name we know. Finals are a place we have heard of.

13—ANAGRAMS.

Of Jack's dog Bandy you have read, And often have you heard it said, That (1) THIS QUEEN BANDY THE children saved, Who unto the woods at night had strayed, Since their names were ne'er told you, John and HANA KEMP will do. "DICK."

Answers to May 2nd Puzzles.

- 1. (1) Ethel; Kit; (2) Bell; Pearl; (3) Chris; Goodall; (4) Ogma; (5) W. S. Banks. 2. The water vapor of the earth. 3. We live in deeds, not years; in thoughts, not breaths; In feelings, not in figures on a dial— We should count time by heart throbs. He most lives Who thinks most, feels the noblest, acts the best. 4. The letter T. 5. Oh! I see you are wise. 6. Friend—fr-den. 7. I moved and could not find my limbs; I was so light—almost I thought that I had died in sleep, And was a blessed ghost. 8. He that of greatest works is finisher Oft does them by the weakest minister. 9. Sir John Franklin. 10. Ad-vice. 11. Ecclesiastical. 12. Rat Portage. 13. V A I N Z E A L 14. I-sat-in. Isatin. A B B E E R G O G I B E X A G O G N E X T L O G S

SOLVERS TO MAY 2ND PUZZLES. "Margareta," Alice C. L. Gordon, "Polly Plum," Jessie Hyde, Peter Hyde, "Dick," Toledo, "Madge," Frank, Esther F. Bartlett, Hazel, "Brownie."

SOLVERS TO APRIL 15TH PUZZLES. (Late for last issue.) "Dick," "Pansy."

THE QUIET HOUR.

"Fruit."

The Husbandman is standing by the Vine searching for fruit, keen with the severity of love to detect all mere show which is not fruit and therefore a waste of the vitality from which fruit ought to come. What is fruit in His sight? It is most important that our judgment should be clear as well as our hearts right about this, that we may be fellow-laborers with Him.

Can we clear off the question about leaves and fruit by merely saying: "Talk, words, are no fruit! The only fruit is action. Deeds show." Scarcely. Words may be mere empty froth, though even as froth they are symptoms of the fermentation beneath. But they may be, and continually are, sure signs which way the current of the heart is flowing. They may be, and continually are, among the mightiest agents for good or for evil; "a very little helm turning about the great ships driven of fierce winds."

"By thy words," our Lord said, "thou shalt be justified, and by thy words condemned." Few of us feel as we should—none of us, perhaps, always—the tremendous power of words; the seeds of mischief sown by a few careless, unkind words long after we have forgotten them; the harvest of blessing reaped from faithful, holy words, or from the simple, loving, daily speech of those on whose tongue is the "law of kindness." And on the other hand, there are actions which in the sight of God may be as empty as the merest talk; even such acts as "crumbling up all our goods to feed the poor," or "giving the body to be burned," hollow as "a tinkling cymbal," profiting nothing. Whilst again, the simplest acts of everyday kindness, like giving "a cup of cold water," may be fruit which shall in nowise lose its reward.

Again, sometimes spiritual life is spoken of as if the only true fruit, the only thing to be called "working for God," were the things we go out of our way to do; speaking directly to others about spiritual things, what is called "mission work" in one form or another, as if "the daily round, the common task," were something that has, of course, to be got through, but "good works" were what we contrive to do beyond. Whereas we know that unless the commonest tasks are really done "for God," the extra things are very apt to be done for self, and, therefore, to be no fruit at all. Or, on the contrary, it may be said that the only fruit is doing the everyday duties; as if the majority of Christians had nothing to do with the direct spiritual help of one another, instead of the body being built up by that which every joint supplieth. Whereas, indeed, there is not the least among us who is not a soldier in the great battle field as well as a servant; and there is not one soldier who has not to bear the King's standard and to go on His special messages at times, as well as to obey the day's orders for all. In fact, everything we do or say may be mere leaves, and everything may be fruit.

And this leads us to St. Paul's description of what the "fruit" is, in the Epistle to the Galatians. "The fruit of the Spirit is love, joy, peace, long-suffering, gentleness, goodness, faith, meekness, temperance." They are spoken of as fruit, not fruits; as essentially one, all penetrated with the central force of love. Fruit is not something we bring forth in order to earn a reward. Fruit is the reward. For to have these graces reigning in our hearts is to have the likeness of God in our lives; and God Himself has nothing higher to promise, or to give, than to be like Him and to be with Him; for to be like Him is perfection of power and bliss, and to be with Him is home for ever. Not what any of us have, even of spiritual gifts, but what we are in spiritual life is what makes us blessed and strong.

Every one of the catalogue, as we look steadily at them, will lead us first to confession, as we see our failures, and then to honest battling with ourselves and the tempter. For every one of these fair fruits is grown in an adverse climate here on earth. Every one of this fair troop of graces has armor underneath the white festive robes and can only exist by continual overcoming.

The first three—love, joy, peace—are in the very citadel of the heart; love as the living fountain within the beleaguered fortress; joy as the table spread in the presence of the foes; peace "garrisoning" the walls and keeping the enemy outside.

Love, first and chief, cannot begin with the law of the Second Table. It begins not with giving, but with receiving. It is love drinking in endless strength to love from God, who is love. For before any heart can overflow it must be filled. In the deep repose of being loved by God, of resting on the heart of Christ, we can look on His love to man with the hope of growing to love by degrees as He loved.

Joy. We can only conceive of joy by looking to God, the source of joy; God blessed for ever. "That My joy might remain in you," our Lord says. We speak of Him as the Man of Sorrows. On the eve of His uttermost sorrow He speaks of "His joy," and has no greater fulness of blessing to ask for His disciples than that they might share it. We must never be satisfied with any religion that does not bring us real joy. For the whine, not the ring of brass, is the tone of falsehood; hypocrites are of a sad countenance, but joy cannot be feigned.

Peace completes the first three. "My peace," "the peace of God," a deep quiet of heart that can only come from the heart being at rest with God,

willing what He wills, and so in harmony with all He appoints.

And so after these first three we come forth, as it were, from the citadel to the battle field—to the daily life with others.

Each of the next five graces has to do with our daily intercourse with one another, expressing a different shade or a fresh exercise of love.—From "The True Vine."

Bringing Our Sheaves With Us.

The time for toll has passed, and night has come— The last and saddest of the harvest eves; Worn out with labor long and wearisome, Drooping and faint, the reapers hasten home, Each laden with his sheaves.

Last of the laborers, Thy feet I gain, Lord of the harvest! and my spirit grieves That I am burdened not so much with grain As with a heaviness of heart and brain;— Master, behold my sheaves!

Few, light, and worthless; yet their trifling weight Through all my frame a weary aching leaves; For long I struggled with my hapless fate, And stayed and toiled till it was dark and late; Yet these are all my sheaves.

Full well I know I have more tares than wheat, Brambles and flowers, dry stalks and withered leaves; Wherefore I blush and weep, as at Thy feet I kneel down reverently and repeat: Master, behold my sheaves!

I know these blossoms, clustering heavily, With evening dew upon their folded leaves, Can claim no value nor utility; Therefore shall fragrance and beauty be The glory of my sheaves.

So do I gather strength and hope anew; For well I know Thy patient love perceives Not what I did, but what I strive to do; And though the full, ripe ears be sadly few, Thou wilt accept my sheaves.

Memory Gems Contest.

CONTRIBUTED BY STELLE S. SKINNER, TYRONA, ONT.

I. Heaven is not reached by a single bound, But we build the ladder by which we rise From the lowly earth to the vaulted skies, And we mount to its summit round by round. —J. G. Holland.

II. There are as many lovely things, As many pleasant tones, For those who sit by cottage hearths As those who sit on thrones. —Longfellow.

III. Kind words are the music of the world. —F. W. Faber.

IV. One by one thy duties wait thee; Let thy whole strength go to each. Let no future dreams state thee, Learn thou first what these can teach. —Adaide Procter.

V. O power to do! O baffled will! O prayer and action! ye are one. Who may not strive may yet fulfill The harder task of standing still; And good but wished with God is done. —J. G. Whittier.

VI. 'Tis being, and doing, And having that makes All the pleasures and pains Of which beings partake. To do what God pleases, To do a man's best, And to have a good heart Is the way to be blest. —Peter Parley.

VII. Hours are golden links, God's tokens, Reaching heaven; but one by one Take them lest the chain be broken Ere the pilgrimage be done. —Adaide Procter.

VIII. Ah! if we knew it all, We should surely understand That the balance of sorrow and joy Is held with an even hand; That the scale of success or loss Shall never overflow, And that compensation is twined With the lot of high and low. —Frances Havergal.

IX. It is not the wall of stone without, That makes the building small or great, But the soul's light shining round about; And the faith that overcometh doubt; And the love that stronger is than hate. —Longfellow.

X. One by one the sands are flowing, One by one the moments fall; Some are coming, some are going, Do not strive to grasp them all. —Adaide Procter.

XI. If you would hit the mark, you must aim a little above it. Every arrow that flies feels the attraction of earth. —Longfellow.

XII. For of all sad words of tongue or pen, The saddest are these: "It might have been!" Ah, well! for us all some sweet hope lies Deeply buried from human eyes; And, in the hereafter, angels may Roll the stone from its grave away. —Whittier.

XIII. One man owns this patch of land, and another that. But he who loves its beauty is the true possessor of the landscape.

XIV. Yet these sweet sounds of the early season, And these fair sights of its early days, Are only sweet when we fondly listen, And only fair when we fondly gaze. There is no glory in star or blossom Till looked upon by a loving eye; There is no fragrance in April breezes Till breathed with joy as they wander by. —Bryant.

XV. Surely God's angels kiss the brows Of toilers unawares; Surely rich blessings reach strong men Who pledge their faith where duty lies, Tolling and asking, faithful, when Silence alone replies.

# Home-Seekers' Excursions

## TO MANITOBA

On June 28th, July 13th and 19th

Excursions will be run to Manitoba from all points in Ontario.

ROUND TRIP, \$28.00

Good to return in 60 days.

See the Winnipeg Industrial Exhibition, July 11 to 16; Brandon Exhibition, July 19 to 22.

Farmers should avail themselves of this opportunity of seeing the Province of Manitoba. For information, maps, pamphlets, &c., write to

**W. D. SCOTT,**  
MANITOBA GOVERNMENT EMIGRATION AGENT,  
30 YORK ST., TORONTO, ONT.

**Prof. Jas. Fletcher, Dominion Entomologist, at Ontario Fruit Growers' Meeting at Waterloo, Dec. 15th and 16th, 1897, said:**

"In buying a cheap spraying pump you make a great deal of bad temper, and use a great deal of bad language, and not save, as you intended, a percentage of your crops. Now, there are a great many spray pumps, and there is only one shown here (the SPRAMOTOR of London), and I will say it is a good pump. You will do better to pay an extra dollar or two, that is charged for the bearings that are subject to the influence of copper mixtures, to have those of brass, because it is a small initial cost, but a very great improvement and a saving in the life of the pump, sometimes of three or four years."



FRUITLAND, April 21, '98.  
**W. H. HEARD, ESQ., MANAGER SPRAMOTOR CO., LONDON, ONT.:**

Dear Sir: Your favor of yesterday just received. Am glad to learn that the fourteen pumps ordered for Provincial Experimental Spraying have gone forward so promptly. Please ship me a No. 2 outfit, complete, for my own use.  
Yours truly,  
W. M. ORR.

Send 3-cent stamp for 76-page copyrighted edition of catalogue and treatise on the diseases afflicting fruit trees, vegetables, etc., and their remedies.

**SPRAMOTOR CO'Y,**  
357 Richmond St., LONDON, ONT.  
(Mention FARMER'S ADVOCATE.)

**SPRINGFIELD FARM**  
HERD OF  
**Shorthorns, Oxfords and Berkshires.**  
Young Bulls & Heifers on hand. Also a few choice Berkshires.  
**CHAS. RANKIN,**  
Wyebridge, Ont.,  
Simcoe Co.

**3 CAPITAL SHORTHORN BULLS**  
12 and 14 months old, by Royal Gloster, and from dams giving over fifty pounds per day of milk. Also one Mina bull calf, 5 months old, a good one, and got by same sire.

**R. R. SANGSTER,**  
Lancaster, Ont.

### GOSSIP.

The English Royal Show will be held at Birmingham, June 18th to 24th.

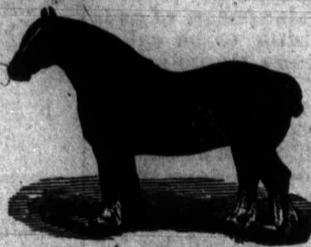
Mr. Jas. Tolton, Bruce Co., Ont., writes: "Am much pleased with the FARMER'S ADVOCATE. Think you are steadily improving it, and nearly all the articles published are first-class."

R. R. Sangster, Lancaster, Ont., when sending copy for advertisement, writes under date of May 19th: "I sold in April six fine young cows to W. O. Edwards & Co., Rockland, four to be retained in his own herd, and two for a neighbor. Three of them were Missa (by Royal Gloster, and in calf to Safeguard)—fine, thick cattle; and one from the Imp. cow, Mayflower 10th; the other two were by King of Wales, of the fine old Tyme family. And have had tempting offers for others, but cannot sell more females just now, as I still have ten females just now, headed by the fine two-year-old bull Safeguard, bred by W. O. Edwards, got by Knight of St. John (Imp.), dam Sittyton Verona (Imp.). He is a grand, low-set, thick, lengthy, red bull. I wish the ADVOCATE success."

**MONEYPUFFEL LAD AND NOMINEE CHANGE HANDS.**

Captain T. E. Robson, Ilderton, Ont., has sold and shipped to H. F. Brown, Minneapolis, Minn., the Shorthorn bull Nominee, winner of first prize and sweepstakes and head of first prize herd at Toronto and Ottawa, 1897, and has purchased and placed at the head of his own herd the roan four-year-old bull Moneypuffel Lad, winner of the championship prize as best bull of the breed, any age, at Toronto in 1895 and 1896, and at London in 1897. Moneypuffel Lad has been an outstanding figure in the Shorthorn field in Canada. He is full of constitutional vigor, has true lines of conformation, and the quality of flesh and hair which once handled is never forgotten, because it fills the bill to satisfaction.

### Glydesdales for Sale



1 three-year-old imported stallion, by Prince of Millfield, out of Connie Nairn, by Prince of Wales.

1 four-year old, by Queen's Own, out of Imp. Candour, by Macgregor.

2 imported two-year-old stallions, by Macgregor.

2 two-year-old stallions, by Prince of Quality, out of imported dams.

Have also a well-mated team of three-year-old Clyde Fillies, sired by Imp. Energy (7691), out of imp. mares.

These animals are all large size, good quality and sound. Terms reasonable.

**ROBT. DAVIES,**  
Thorncliffe Stock Farm, TORONTO.

**W. D. FLATT,**  
Hamilton P.O. and Telegraph Office,



.....OFFERS FOR SALE.....

### FASHIONABLY-BRED 5 YOUNG SHORTHORN BULLS 5

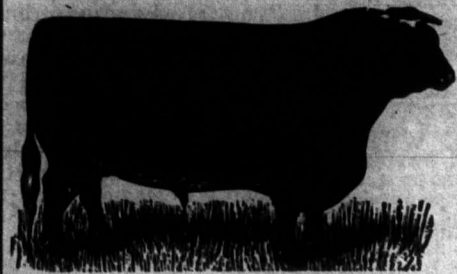
Also cows and heifers representing the leading popular families. A few good Roadster horses. Farm six miles from Hamilton. Visitors met at G.T.R. or C.P.R. If notified.

### Spring Grove Stock Farm

Shorthorn Cattle and Lincoln Sheep. The noted sires, Golden Robe = 20396 = and Nominee = 19628 =, at the head of the herd. Representatives of this herd won two silver medals and the herd prize at Industrial Fair, Toronto, 1897. Prize-winning Lincoln Sheep are also bred at Spring Grove. Stock of all ages and both sexes for sale. Apply **T. E. ROBSON,** Ilderton, Ont.

### Arthur Johnston,

Greenwood P. O. and Telegraph Office,



### 40 FORTY PURE-BRED SHORTHORN HEIFERS AND COWS,

Good as we have ever had. Also a FEW YOUNG BULLS

Berkshires OF CHOICEST BREEDING AND QUALITY FOR SALE

Send for Catalogue and prices. "No business, no harm." is our motto. Claremont Station, C.P.R.; Pickering Station, G.T.R. om

### FOR SALE! Good Young Cows

two years old, yearlings and heifer calves out of imported and home-bred cows, and the imported bulls, Royal Member and Rantin Robin. Come and see them, or write, if you want something special.  
**E. CARGILL & SON,**  
Station on the farm. Cargill Sta. & P.O., Ont.

HERD ESTABLISHED 1855.

### Willow Bank Stock Farm

Offers for sale 16 choice SHORTHORN BULLS, also a number of Heifers, sired by Isabella's Heir - 19550 - Great milking qualities being a special feature of the herd. Address  
**JAMES DOUGLAS,** Caledonia, Ont.

### OAK PARK STOCK FARM.

FOR SALE.—One three-year-old and two young

### SHORTHORN BULLS.

Excellent pedigrees. Also, SIX YOUNG HORSES, sired by Capt. Hunter, Forest Leland and Bookkeeper. Good stoppers.  
**CAPT. D. MILLOY, Prop.,**  
PARIS, BRANT CO., ONT.

### SPRINGHURST HERD

### SHORTHORNS

Am now in a position to offer a very choice yearling Roan Bull and a few Females of the leading Scotch families.

**H. SMITH, Hay, Ont.**  
Exeter, G. T. R., 1/2 mile. -om

### 8 Shorthorn Bulls 8

Sired by Indian Statesman, and from such families as Mara's Lily, by Warden, and other good ones. All in fine form.

**W. C. PETTIT & Son, Freeman P. O., Ont.**  
Burlington Station. -om

### Hawthorn Herd of Deep-Milking Shorthorns

Stock of both sexes for sale, of choicest breeding and good quality, prices right.  
**WM. GRAINGER & SON, Londesboro, Ont.**

... FOR SALE ...  
Three choice Shorthorn Bulls; also Heifers and young Cows.  
-om **R. CORLEY, Belgrave, Ont.**

### For Sale—PURE ST. LAMBERTS.

Four Cows, One two-year-old Heifer, One yearling Heifer, One Heifer Calf, and a three-year-old Bull. Dam of two-year-old is a 15 lb. 11 oz. tested cow. Dam of calf is a 14 lb. tested cow. For prices and particulars, write  
**WM. H. MACARTNEY, DUNNVILLE, ONT.**  
-om

### BRAMPTON JERSEY HERD

Offering high-class A. J. C. C. cows and heifers in calf, and heifer calves; choice young bulls. High-grade cows in calf; and Berkshires.  
**B. H. BULL & SON, Brampton**

### 3 JERSEY BULLS 3 FIT FOR SERVICE.

Will exchange Massena's Son 17608 for Jersey or Ayrshire heifer or Oxford Down ewe. A few females for sale. Eggs from B. P. Rocks, White Wyandottes, and Black Minorcas. \$1 for 13 eggs. Young stock in season. Will sell Massena's Son very cheap.  
om **W. W. EVERITT,** box 552, Chatham, Ont.

## MILLER & SIBLEY'S Jerseys

SPECIAL OFFERING OF 15 LOW-PRICED JERSEY COWS.

### They are not

our world-beaters, but there are several excellent ones in the lot. Famous families are represented, such as St. Lambert, Coomassie, St. Heller, Signal, etc. They are great bargains at the prices quoted. Several have standard butter tests. All are registered A. J. C. C. They have been served by some of the best bulls in the Jersey breed. They have all been tuberculin tested. Any defects known are fully stated. Such a chance as this does not often happen. We haven't issued a special sale list before since 1887. If desirous of purchasing Jerseys at a low price, send at once for printed list giving all necessary particulars. Mention this paper.

**MILLER & SIBLEY,**  
NO TRADES. FRANKLIN,  
CASH ONLY. Venango Co., Pa.

### ONE FIRST PRIZE BULL

**A. J. C. C.**  
Sire King of Highfield, winner of 1st prize over all Canada; dam, St. Lambert's Kathleen, made 21 lbs. 3/4 oz. of butter in 7 days; dam of King of Highfield, Signal Rosa May (32 lbs. 4 oz. of butter in 7 days, and 1st prize over all Canada 4 times), also dam of Unoma May (26 lbs. 4 oz. of butter in 7 days, and 64 lbs. of milk a day).

**J. H. SMITH & SON, Highfield, Ont.**

### BUTTONWOOD JERSEY HERD

OFFERS six richly bred young bulls from show-ring winning dams, and such sires as King of Highfield and Violet's Leg, both sweepstakes bulls. Settings from B. P. Rocks, Black Minorcas, and Grey Dorkings. Correspondence solicited.

**S. WICKS & SON,**  
1-12-om MOUNT DENNIS, ONT.  
Farm 7 miles from Toronto market.

### GLEN ROUGE JERSEYS.

**WILLIAM ROLPH, Markham, Ont.,** offers twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right.

### MEADOW BROOK JERSEYS.

Am offering a 10 mos. and a 20 mos. bull. Also a few choice females, rich in St. Lambert blood.  
**EDGAR SILCOX, Shedden P. O., Elgin Co.**

### "Gem Holstein Herd."

STOCK FOR SALE!  
We only keep and breed registered Holstein-Friesians. We have now some choice young bulls and heifers, also some older animals, all of the very best dairy quality, that we will sell, one or more at a time, on reasonable terms. Correspondence solicited.

### HILLS BROTHERS,

BEDFORD PARK P.O., ONT.  
Shipping Station, Toronto. 7-y-om

### Maple Hill Holstein-Friesians

(THE GOLD MEDAL HERD OF 1897).

### SERVICE BULLS:

DeKol 2nd's Paul DeKol Duke (Imp.),

Sir Pledge DeKol (Imp.).

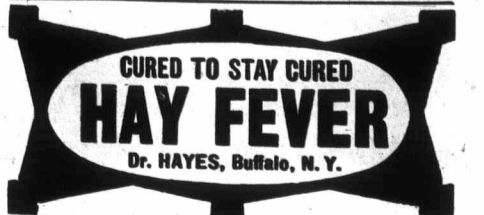
Can spare a few young things of both sexes from strictly first-class cows of DeKol, Empress Josephine Meethilde, and other famous butter families.

-om **G. W. CLEMONS, ST. GEORGE, ONT.**

### HOLSTEINS FOR SALE

From the 1ST PRIZE HERD AT TORONTO

in 1897. Fifteen richly-bred bulls for sale. Strong in the blood of De Kol 2nd. Are one month to one year old. Splendid individuals, UNBURNISHED in breeding. A fine lot of one, two and three year old heifers and young cows of the richest producing strains. Write to-day, and state just what you want. No catalogue.  
**HENRY STEVENS & SONS, LACONA, N. Y.**



MENTION FARMER'S ADVOCATE



Dispersion Sale---June 22nd, OF HIGH-CLASS SCOTCH SHORTHORNS.

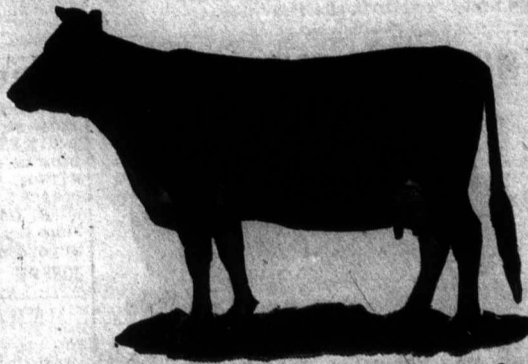
THE undersigned will offer on the above date, at their farm, without reserve, the entire Ample Shade Herd, consisting of about 40 head, of both sexes; many of them show cattle, and bred from prize-winners for many generations. We confidently claim that no better herd of Shorthorns has been offered at Public Sale in recent years. This Herd has supplied many prize-winning animals at the leading fairs of Canada of late years, including Nominos, sweepstakes bull of 1897. We have placed Herd Bulls at the head of many of the best Canadian herds. Clean, up-to-date breeding combined with animals of distinctive merit. A cordial invitation is extended to all who appreciate good cattle to attend this sale. Catalogue on application. E. GAUNT & SONS, ST. HELEN'S, ONT. Lucknow Station, G. T. R., three miles from farm.

DENTONIA PARK FARM W. E. H. MASSEY, Proprietor. HIGH-CLASS REGISTERED JERSEYS.

The following offered for sale to make room for additional imported stock soon to arrive: ST. LAMBERT OF HIGHFIELD No. 4994, a handsome bull, in fine condition; solid fawn color, black points; born March 3rd, '05; sire Earl of St. Lambert No. 3198; dam Niobe of St. Lambert and No. 6353.

A FEW GOOD COWS HEIFER AND BULL CALVES.

Prospective buyers should visit the farm. Full information given on request. Apply-- WM. PATTON, Supt., Coleman P. O., Ontario. Farm located near East Toronto.



Isaleigh Grange Stock Farm, DANVILLE, QUEBEC.

Ayrshire AND Guernsey Cattle, Imp. Yorkshire Swine AND Shropshire Sheep.



Ayrshire herd headed by the noted bull, Mahobles 189; sire Imp. Glencora, dam Belle Osborne. We are offering a choice lot of young stock, of both sexes, in both Ayrshire and Guernsey, at very low figures. Also bargains in sheep and pigs for the next month. Particulars furnished on application to--



J. N. GREENSHIELDS, Prop. 2-7-08 T. D. McCALLUM, Mgr.

CHAMPION CLYDESDALE "MCQUEEN" STALLION



We have a number of first-class mares and fillies of this breed in foal to the above stallion. We also have for sale a number of other choice stallions--Clydesdale, Standard-bred, Thoroughbred. GRAHAM BROS., Claremont, Ontario. 25 miles east of Toronto, on C. P. R. 4-11-08

WILD BRINO 10073. Record 2:19 1/2 CANADA'S GREATEST PURE BRED WILD WOOD STOCK FARM. DETROIT, MICH.



With ordinary mares in Canada, Wild Brino has demonstrated his ability to sire extreme speed. Among his get are: Little Jim 2:34, Dorothy 2:19 1/2, Sweet Violet 2:21 1/2, Attar 2:19 1/2, Collina 2:20 1/2, Sirena 2:20 1/2, as two year olds, and many others with records of 2:30 and better. At the great Toronto exhibition of 1897 five of his get raced, two winning first money and three second money. Five others were first money and three second prize and the exhibited in the show ring, three took first prize and the other two second prize. At the Breeders Meeting at Hamiltion, Ont. same year, five of Wild Brino's get raced, three taking first money and two second money. Terms \$25.00 cash with usual return privileges. Special attention given to mares while with us but at owners risk only. Write us when and how you ship and our men will meet boat or train. Write for tabulated pedigrees of Wild Brino. We also have the best bred thoroughbred stallion this side of Kentucky, "KABBAR." Terms \$10.00 cash, return privileges. Tabulated pedigree on application. WILDWOOD STOCK FARM, 85 & 87 Congress St., West, Detroit, Mich.

Holstein Yearling Bull For Sale

Just imported, tuberculin tested, and a good one; sire Prince of Maple Row No. 20893; dam Belle of Troy No. 35618. Cows, last year, 3,540 lbs. milk in 283 days, and a great butter cow. 12 bulls from 1 month to 7 mos. old. Females all ages. Largest and most select herd in Canada. A. & G. ROE, Oxford Co., Ont. -on CURRIE'S CROSSING.

FOR SALE AYRSHIRE BULLS OF CHOICEST BREEDING.

One to four years old. For particulars address: Whiteside Bros., Oxford Co. "The Glen," INNERKIP, ONT. -on

AYRSHIRES AND RED TAMWORTH SWINE.

Still a few choice young bulls for sale, and a grand lot of Tamworth boars ready for service. Write us now and secure one. CALDWELL BROS., Briery Bank Farm, Orchard, Ont.

AYRSHIRE BULLS

We offer for sale the fine bull, Baron Neidpath--2295--calved April 18th, 1896, from imported Bessie 2nd of Auchinbrain, and imported Beauty's Style of Auchinbrain (Imp.). Also two Beauty's Styles of Auchinbrain (Imp.), and one Beauty's Style of Auchinbrain (Imp.), and one Beauty's Style of Auchinbrain (Imp.), and one Beauty's Style of Auchinbrain (Imp.), and one Beauty's Style of Auchinbrain (Imp.).

GLENGARRY STOCK FARM

JOHN A. McDONALD, Jr., Williamstown, Ontario. BREEDER OF HIGH-CLASS AYRSHIRES. My aged bull, Sir Donald, is now for sale, as I am through with him. He can be had at a bargain. Lancaster Station, G. T. R. -o

CHOICE LOT AYRSHIRE SPRING CALVES

Sired by Douglas of Loudoun, bred by D. Morton & Son, Hamilton. Prices right. F. W. TAYLOR. -o WELLMAN'S CORNERS. MENTION FARMER'S ADVOCATE

NOTICES.

Harry J. Goulding, York Co., Ont., writes: "I received your binder for ADVOCATES, and I am well satisfied with it. How very valuable it is to thus form into a book such valuable news and information as the paper contains. It certainly is what I often wished for, but could not get."

The E. B. Eddy Company (Limited), of Hull, Canada, has recently issued a beautiful wall calendar which covers from April, 1908, to January, 1909. Each leaf bearing the weeks and days of the month has also four engravings of views from various cities in Canada and Newfoundland, clearly brought out on good quality paper. The leaves also bear good views of the magnificent Eddy Works at Hull, P. Q. While the calendar is printed in large, bold type, and is thus suitable for an office or library, it may be termed a comprehensive Canadian album. Early applications for these calendars will be supplied.

It is a foregone conclusion that as land becomes older it becomes very much more compact, so that drainage is impeded in a wet time and moisture is not held during drouth. Land in this condition, especially that having hard clay subsoil, needs to be loosened up to the depth of a foot to fifteen inches in order to get anything like maximum returns in crops. No more serviceable implement for this work has come to our notice than the Larimer Ditching Plow, manufactured by R. J. Scott, Martintown, Ont., and advertised in this issue. Its main purpose, however, is to dig ditches. It is pointed out in the advertisement. It quite does away with the back-breaking labor of a pick, even in the hardest soil, and loosens up the clay in readiness to be thrown out with the shovel. It can be successfully worked down to the depth of three feet--the usual depth of tile drains. It does the work thoroughly and with dispatch, and can be used to finish up the bottom of the ditch ready to receive the tile. This implement should have a place on every many farms where it has not yet become known.

To Dr. P. Harold Hayes, Buffalo, N. Y.: Sir.--Once again I write to you with good spirit. I am so delighted to tell you that I am going on well. I never get any sign of Asthma and feel as well generally as ever I did in my life. I sleep well and eat well, and people tell me how different I look. I tell them I not only look well, but I feel well. I can face all winds and weathers now without any Asthma. It is always so nice when a person feels tired out to be able to retire and take a good, refreshing sleep. I only wish more of poor sufferers could get under your Asthma and Hay Fever treatment. May God bless you all and send you a bright, joyous and prosperous New Year, and may your good works be made known through the whole world. G. L. GRIFFIN, Care of Police Station, Kempsey, Worcester, England.

BUTTERMAKING. All who are interested in buttermaking should write to Messrs. Wilson Bros., Collingwood, for their circular advertising the "Maple Leaf" churn. In addition to pointing out the advantages of this excellent new churn, the circular contains some hints on buttermaking, which are not only well worth reading, but which should be learnt by heart by every farmer or dairymen who wants to excel in producing butter. You may know all that it says, but yet it is good to have the matter brought to mind again. Wilson Bros. will be glad to send the sheet free and post-paid to any who may apply, and mention this paper.

HOMESICKERS' EXCURSIONS. On the first and third Tuesdays in June, 1908, the Chicago, Milwaukee & St. Paul Railway will sell round-trip excursion tickets (good for 21 days) to a great many points in South and North Dakota, and other western and southwestern States, at practically one fare for the round trip. Take a trip west and see what an amount of good land can be purchased for very little money. Further information as to rates, routes, prices of farm lands, etc., may be obtained on application to any coupon ticket agent or by addressing A. J. Taylor, Canadian Passenger Agent, 2 King Street, East, Toronto, Ont.

GOSSIP.

The Guelph (Ont.) Fat Stock Show is to be held in that city on Dec. 6, 7 and 8 next.

The Trans-Mississippi and International Exhibition is to be held at Omaha, Nebraska, from June 1st to Nov. 1st.

Calves, so long as they are well bred and good individuals, will grow into mature animals of worth at comparatively little expense. Mr. F. W. Taylor, Wellman's Corners, Ont., offers a few choice Ayrshires in this issue. The advertisement shows how they have come. Mr. D. Riddell, Paisley, Scotland, has exported three well-bred Clydesdales to Senor Casco Hermanos, Buenos Ayres. The horses are Sir Mark, got by Mark Him; Rebel Commodore, a four-year-old, got by Top-Knot; and Merry Captain. They are three capital, bred animals, which should give good results. J. A. Macdonald, Hermanville Farm, Hermanville, P. E. I., points out in his advertisement that if he Ontario-Agricultural College Farm-bred Tamworth sow, Parkhill Mab, is not sold by June 15th she will be too near farrowing to ship till after her pigs are weaned. Anyone getting her before that date will have a whole herd all at once, for the price of one pig.

Preparations are well under way for a magnificent horse show to be held in Kansas City, Sept. 17th to 21st inclusive, a complete list of which will soon be issued. Prizes up to \$500 will be offered, and \$200 will constitute a large number of first prizes. The usual classes for such shows will be made, including roadsters, coach horses, tandems, unicorn teams, four-in-hands, and other harness events, as well as the usual number of saddle and jumping classes, which latter are expected to be exceedingly good. Entries close Sept. 5th. A. E. Ashbrook, Lyceum Building, Kansas City, Mo., is Secretary.

HORSEMEN! THE ONLY GENUINE IS



See large advertisement on page 276 of this issue, and which is of unusual interest to the readers of the FARMER'S ADVOCATE. And any horseman interested in a reliable remedy can well afford to investigate the matter. The LAWRENCE-WILLIAMS CO., 21 Front Street West, Toronto, Ontario.

WM. WYLIE, BREEDER OF HIGH-CLASS AYRSHIRES.

Young stock always for sale; bred from the choicest strains procurable. Breeding stock selected from the most fashionable strains and prize-winning stock of the day. Farm located at Howick, Que. 5-1-0

FAIRVIEW STOCK FARM.

Ayrshire Cattle and Berkshire Pigs. Traveller of Parkhill at the head of herd, while my herd is descended from cows purchased of Mr. David Manning; are modern in type, and are of the choicest milking strains. Write for prices of young bulls and heifers. DAVID LEITCH, Grant's Corners, Ontario. Stations--Cornwall, G.T.R.; Apple Hill, C.P.R.

AYRSHIRE CATTLE, BERKSHIRE PIGS

The bull Tom Brown and the heifer White Floss, winners of sweepstakes at World's Fair, were bred from this herd. Young stock for sale. Also Leicester Sheep and Berkshire Swine. 5-1-0 D. BERNING & SON, Glenhurst Farm, WILLIAMSTOWN, ONT.

AYRSHIRES AND YORKSHIRES!

AYRSHIRES--Choice young stock of either sex, from superior milking strains, on hand. YORKSHIRES--Several litters of young pigs, equal to any we have ever had, ready to ship, and we only ship the best. Orders solicited, which we will promptly and honorably fill, as we guarantee stock as described. If in need of anything in Ayrshires or Yorkshires, write us. ALEX. HUME & CO., BURNDRAE, ONT. Importers and Breeders. -o Heard's Station, G.T.R.

Maple Hill DAIRY AND STOCK FARM

Ayrshire cattle, Berkshire & Tamworth pigs. Two bull calves dropped in February. R. REID & CO., Hintonburg, Ont. One mile from Ottawa. -o

Ingleside Herefords.

UP-TO-DATE HERD OF CANADA! -ALSO- TAMWORTH SWINE

Orders booked for spring pigs. Pairs not akin. Address-- E. D. SMITH, 17-7-08 Compton, Que.

EXCELSIOR STOCK and DAIRY FARM

Guernsey Cattle, Duroc-Jersey and Chester White Swine. Won 150 Prizes and Medals in 1897.

We have for sale a few lengthy, deep-sided, strong-boned D. J. boars which are ready for service, the type in demand by pork-packers. A few choice sows bred, due to farrow soon. WM. BUTLER & SON, DERHAM CENTER, ONT. -on

GUERNSEYS

This is the Dairy breed for ordinary farmers. Large, vigorous and hardy, giving plenty of rich milk. Several fine young bulls for sale at very reasonable prices. A few heifers can be spared. Address: SYDNEY FISHER, Alva Farm, Knowlton, P. Q. 17-7-0



BRITISH ADVERTISEMENTS.

SHROPSHIRE SHEEP

KNOWN THE WORLD OVER AS

THE FARMER'S SHEEP

LEAN, JUICY FLESH, best and heaviest fleeces of all DOWN SHEEP, very prolific, good nurses, robust constitutions, and noted for early maturity.

N. B.—The best GENERAL PURPOSE SHEEP in existence, and splendidly adapted for crossing on Merino, long-wool or cross-bred ewes when an IDEAL FREEZER is wanted.

FAT LAMBS.—For breeding fat lambs the Shropshire ram is unrivalled, and for that purpose it is extensively used in all parts of the world.

THE SHROPSHIRE will thrive and do well where any other sheep can exist, and no breed has such a record for readily adapting itself to any country and all classes of pasture.

A list of Shropshire sheep breeders entered in the last volume of the flock book may be obtained from

ALFRED MANSELL & CO., Secretaries of the Shropshire Breeders' Assn., SHREWSBURY, ENGLAND.

KENT OR ROMNEY MARSH SHEEP

ANNUAL RAM SALE.

The annual sale of Kent or Romney Marsh Rams, consisting of selected specimens from leading flocks of the breed, will be held at

Ashford, Kent, England,

ON

FRIDAY, OCTOBER 7th, 1898.

Catalogues and full information from

W. W. Chapman,

Secretary Kent or Romney Marsh Sheep Breeders' Association,

FITZALAN HOUSE, ARUNDEL STREET, STRAND, LONDON, W. C., ENGLAND.

W. W. Chapman

Secretary of the National Sheep Breeders' Association, Secretary of the Kent or Romney Marsh Sheep Breeders' Association, and late Secretary of the Southdown Sheep Society.

Pedigree Live Stock Agent, Exporter and Shipper. All kinds of registered Stock personally selected and exported on commission; quotations given, and all enquiries answered.

Address—FITZALAN HOUSE, ARUNDEL ST., STRAND, LONDON W. W. Cables—Sheepcote, London.

Geo. Hindmarsh, ONT....

Breeder of high-class

SHROPSHIRE SHEEP

the blood of which was obtained from the noted flocks of both England and Canada. Ram lambs of the choicest breeding for sale.

HENRY ARKELL, ARKELL, ONTARIO,

Registered Oxford Down Sheep.

Animals of all ages and both sexes for sale at all times. Price reasonable.

IF YOU WANT OXFORD DOWNS,

of any age or either sex, write us for prices. All our stock are from the best English-bred animals.

PETER ARKELL, TEESWATER, ONT.

SHEEP BREEDERS' ASSOCIATIONS.

American Shropshire Registry Association, the largest live stock organization in the world. Hon. John Dryden, President Toronto, Canada. Address correspondence to MORTIMER LEVY, 47 RING, SAN. LAFAYETTE, INDIANA U.S.A.



ENGLISH BERKSHIRE OFFERING

Young boars fit for service, and some young sows ready to breed, and some bred; also young stock of both sexes ready to ship, descended from Crossman importation.

W. H. SPENCER, MORPETH, ONTARIO.

English Berkshires.

Herd headed by three first-prize boars. Large size, strong bone, fine quality, and a choice lot of breeding sows. Orders booked for spring pigs.

GEORGE GREEN, Fairview P.O., Ontario. Stratford Station and Telegraph Office.

An Attractive Sale of Shorthorns.

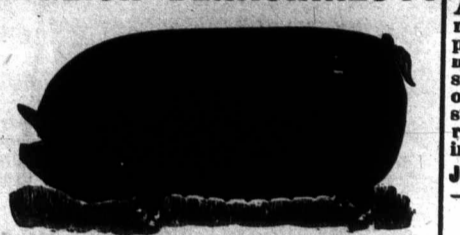
The dispersion sale of the entire "Ample Shade" herd of Shorthorn cattle of Messrs. E. Gaunt & Sons, St. Helen's, Ontario, three miles from Lucknow Station, G. T. R., advertised in this issue to take place at their farm, June 22nd, is an event of special interest to breeders and farmers not only throughout the Dominion, but of the entire American continent. It is not often that such an opportunity to secure high-class cattle is offered, and we anticipate a large gathering of stockmen at "Ample Shade" on the occasion. The firm are too well and favorably known to the cattle-men of this country to need an introduction, as their showy career has associated them in the first rank of Shorthorn breeders, a position which has been attained by the exercise of sound judgment and up-to-date methods in the breeding, selection and management of their stock, and of correct and straightforward principles in their dealings with the public. The herd has supplied many prize-winners at the leading shows in the Dominion, notable among which was Nominee, the championship winning bull at the Toronto and Ottawa exhibitions last year, and Revenue 21063, a winner at Toronto, now in use at the head of the herd of Hon. John Dryden, both of which were bred from the Fashion family, the former being a son of the fine cow Starlight, and the latter of her own sister, Lady Lovell, a large and level cow by Lord Lovell 2030. Lystra, by Earl of Moray 16188, is a rich roan three-year-old daughter of Lady Lovell, combining the size, length and quality which characterizes the family, and she is suckling a promising bull calf, which will be sold with her, by Admiral 24566, an excellent two-year-old cow, by Earl of Moray 16188, and of Melody, by imp. President 6412, which was reserved last year for use in the herd to mate with the younger females. Another excellent member of the family is Starlight Snowdrop a seven-year-old daughter of Grey Mariner 18012, and of Starlight, by Lord Lovell. She has produced six-months calves, which will be sold separately.

The Cruickshank-bred animals largely predominate in the herd, and are mainly descended from the imported cow Airy Buckingham, bred at Sittytton, and sired by Master of Arts (28867). Prominent among these is the young bull Admiral, above referred to, an animal of rich breeding and high-class quality and conformation, fit to head any first-class herd, and to compete in any showing on the continent, with a good chance of winning premium honors. His sire, Earl of Moray, was winner at Toronto and London in 1895, and the sire of the sweepstakes winner of '97. The sire of his dam, imp. President, bred by S. Campbell, has in his pedigree many of the most noted sires in the Shropshire and Kinellar herds, and his granddam, Lady Lovell, was a provincial prize-winner in his day, and was so much thought of by his owners that to-day a handsome oil painting, said to be an exact likeness of him, decorates the walls of Mr. Gaunt's house. One of Earl of Moray may also be seen, which is highly prized. Another interesting number in the catalogue is the yearling bull Lord Gloster, by the well-known show bull Abbottford, of the same family as Young, the roan yearling champion winner at the World's Fair at Chicago, and out of Gaiety, by Prince Albert, by the famous Bampton Hero, of the Duchess of Gloster family. This bull has three top crosses of sires which were silver medal sweepstakes winners at Toronto and London. He is a rich roan, with good length, fine quality, and much style, while a glance at his pedigree will convince a judge of his value. The roan yearling bull, Lord Lovell's Heir 2nd, by Lord Lovell and out of Queen Esther 2nd, by imp. Lord Lancaster, and tracing through Scotch breeding to imported Daisy 104, was purchased for use in the herd before the sale was decided on, and will be included in the offering.

Among the matrons of the herd may be mentioned Ethel Buckingham and Fanny Buckingham, daughters of Miss Booth, by Lord Lovell, a pair of grand red cows, six and ten years old, tracing to the imported cow Airy Buckingham. To the credit of Ethel is her daughter Melody, the dam of Admiral. She has been one of the most valuable and profitable cows ever owned on the farm, having been a regular producer, her last calf being a grandly-made heifer, by General, which has made good use of her time, and while she is full of quality, promises to give in more size than many of the Cruickshank family. Melody, herself an excellent individual as well as an extra good breeder, has now a capital bull calf at foot and is in calf to Lord Gloster. Mina Buckingham (another daughter), two past, by Earl of Moray, has a bull calf at her foot by Admiral, and like the rest of the family, she is a mellow-fleshed, good handler and a big milk producer. Although but six years old, Fanny Buckingham is carrying her fifth calf. Her four-year-old daughter, Gwendolyn, by Earl of Moray, is a low-set, evenly-made cow of the early-maturing type. Her six-months-old red heifer calf, by General, is a smooth, evenly-made, promising animal, full of quality. Of the Buckingham family also are a pair of cows, four and five years old, Caprice 1st and Caprice 2nd, by Earl of Moray, that are well worthy the attention of breeders requiring really good things, full of quality and from a family whose history has been so clean and creditable. Closely related is the large roan cow, Leona, by imported President, in her 7th year. As she has raised nothing but bulls, none are in the herd, but she is again due in December to Lord Gloster. A yearling daughter of Caprice 2nd, and a yearling daughter of Gwendolyn, by General, are especially worthy of a passing notice—a pair of such animals are not plentiful at the present, having made good use of their time and being in a strong, healthy, vigorous condition. Missie of Neidpath 16th is a low-set, smooth, handsome four-year-old cow, by Indian Prince, a son of Indian Chief and out of Missie of Neidpath. She now suckles a red heifer calf by General. This cow springs from a family which is well and favorably known in Scotland as producing prize winners, many of them bringing the highest prices at the sales of Mr. Marr, of Upper Mill, the originator of the family. A boy of calves, 13 in number, six of which are bulls, constitute a very promising lot, measuring well up to the high standard of their seniors; and a number of useful young cows and heifers not mentioned make up one of the best all-round herds we have seen in many months.

While there are several numbers in the list which are good enough to go into show herds, and which will no doubt bring good prices, there are many strong, fleshy, useful ones which will probably sell at such figures as the farmer and the ranchman can afford to pay, and which may be depended upon to produce thrifty, early-maturing stock and prove a good investment. Parties feeling an interest in this class of stock, and desiring to improve their herds for beef and milk production, should send for a catalogue and attend the sale. It is a favorable time to buy when stock can be turned off to pasture and need no special care, and we bespeak a good attendance at the sale and fair prices for the stock offered. Capt. T. E. Robson and J. E. Gaunt will officiate as auctioneers, both of whom have had considerable experience at public sales of Shorthorns, while they have the advantage of an intimate knowledge of pedigrees and breeding, and enjoy the confidence and acquaintance of all the best breeders in the Province.

ENGLISH BERKSHIRES !!



Come to headquarters for pigs of either sex if you want Berkshires that will make you money. Orders taken for spring pigs.

Write for J. G. SNELL, Prices. SNELGROVE, ONT.

LARGE ENGLISH BERKSHIRES.

Imported Knight of Riverside, Bright Star, and Canada's Glory at head of herd. Choice pigs, two to five mos. B. P. Rock eggs. Orders booked for young pigs. Write for prices. H. BENNETT & SON, St. Williams, Ont.

MONTROSE HERD OF BERKSHIRES

Carry such blood as Baron Lee 4th and Enterprise. Young stock three months old for sale, and orders for fall litters booked now.

J. W. HARTMAN & SONS, ELM HEDGE P.O., GREY CO.

OAK LODGE HERD OF YORKSHIRES



Highest quality of bacon hogs, profitable to the feeder, and correct type for the packer. Orders now being taken for young pigs suitable for exhibition purposes. Largest herd in Canada to select from. Write for prices.

J. E. BRETHOUR, BURFORD, BRANT CO.

..FOR SALE..

A number of extra good Large White YORKSHIRE BOARS AND SOWS

THREE TO FIVE MONTHS OLD.

Sows in pig to show boars, and young pigs 6 to 8 weeks old, of early farrow. Also lengthy Berkshire sows in pig to show boars, and boars and sows from 3 weeks to 5 months. Orders now booked for spring pigs of both breeds. Inspection invited. Write H. J. DAVIS, Box 290, Woodstock, Ont.

POLAND-CHINA BOARS

Fit for service, and a few six months sows. Also booking orders for spring pigs, by the imported sire, Corwin Ranger, and Orme.

ROBT. L. SMYTH & SON, FARGO P. O., ONT.

Oxford Herd of Winning Poland-Chinas.

Having won the herd prizes at Toronto, London, Ottawa, and Brantford Fat Stock Show, we feel justified in stating that we are in a position to offer you what you may ask for from gilt-edge prize-winning stock.

W. & H. JONES, OXFORD CO. MT. ELGIN.

J. F. MCKAY, Parkhill, Ont.,

Poland-China Swine.

Aged Boar, young Boar, Brood Sow, young stock of both sexes. Bronze Turkey Eggs, 20c. each. L. Brahma, B. P. Rock, and Rouen Duck Eggs, \$1 per setting.

MENTION FARMER'S ADVOCATE.

Springridge Poland-Chinas

Now offering the 2-year-old sire, Blacksmoore, and a few of his young females, and booking orders for young stock from the royally-bred GOLDBUG, lately added to the herd.

WM. J. DUCK, MORPETH, ONT.

The CANADIAN CORWIN HERD of POLAND-CHINAS

Are in shape to dispose of breeding stock of all ages and both sexes. Also offering a Jersey heifer calf from Snell stock. Poultry a specialty. B. P. Rocks, Brown Leghorns, S. Hamburgs, and Silver and G. Dorkings. Eggs, \$1.00 per setting. Also 50 acres cleared land, with an abundance of natural gas. Kent Co.

CAPT. A. W. YOUNG, Tupperville, Ont.

POLAND-CHINA BOARS

Also a pair of six mos. sows, with pedigrees running to imported sires. Booking orders for spring stock from showing dams and imported sires.

JOSEPH M. SMYTH, Box 619, Chatham, Ont.

HERMANVILLE TAMWORTHS.

FOR SALE:

"Parkhill Mab" -772-

The greatest Tamworth sow in Canada.

Farrowed May 26th, 1897. Height at shoulder, 30 inches; extreme length (from snout to set of tail), 64 inches; heart girth, 65 inches; weight, 350 to 400 pounds—not fat, but fleshy; perfect conformation—an ideal of the breed. In pig to the St. Dunstan College boar, KING GEORGE -818-, the greatest boar in the Lower Provinces; and due to farrow June 30th. Will receive offers for the sale of this sow till June 15th.

No offer for less than \$100 will be considered. Address: -om

Hermanville Farm, Hermanville, P. E. I.

TAMWORTHS

From imported stock. One yearling boar; one boar and half a dozen sows, four months old, by Algernon 573.

WILLIAM MAJOR, WHITEVALE, ONTARIO. 1-12-0

TAMWORTHS OF HIGHEST QUALITY!

I have the largest herd in Canada, of different strains. Choice Boars and Sows from six weeks to three and four months old. Orders booked for pigs from 14 sows and 4 boars. Prices reasonable.

om J. H. SIMONTON, Box 304, CHATHAM, ONT.

P. R. Hoover & Sons,

GREEN RIVER, ONT.

BREEDERS OF CHOICE TAMWORTHS.

Young boars and sows ready for breeding purposes at prices which should sell them. St., Locust Hill, C. P. R.; Markham, G. T. R. Correspondence solicited. 8-1-7-0m

SPRINGBROOK HOLSTEINS, TAMWORTHS and BARRED ROCKS

Three choice Boars, ready for service, sired by prize-winning imported Nimrod, and a few sows. A lot of nice pigs ready to wean.

One bull, 10 months old, and calves. B. Rock settings from choice mature birds.

A. C. HALLMAN, NEW DUNDEE, ONT.

Woodland HERD OF Tamworts

are in good form this season, and offering young stock of superior quality and breeding of both sexes.

H. REVELL, INGERSOLL, ONT.

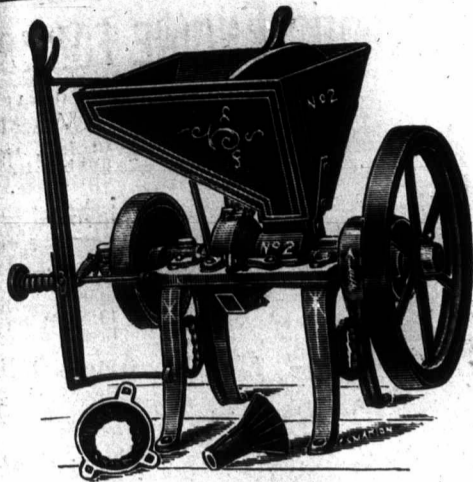
HEADQUARTERS FOR DUROC-JERSEY SWINE

Our herd secured nine of the first prizes out of the eleven offered at Toronto Exhibition, and a similar portion at London and Ottawa. We are justified in saying we have the best herd in Canada. First-class stock of all kinds for sale at all times. Address—TAPE BROS., RIDGETOWN, ONT.

VICTORIAS.

I have now two Imp. Victoria sows in pig; they are in pig by Chief, the boar that won 3rd premium at Wisconsin State Show and 2nd at St. Louis State Show. Write for prices at once.

CHRIS. FAHNER, CREDITON, ONT.



Grinding Mill

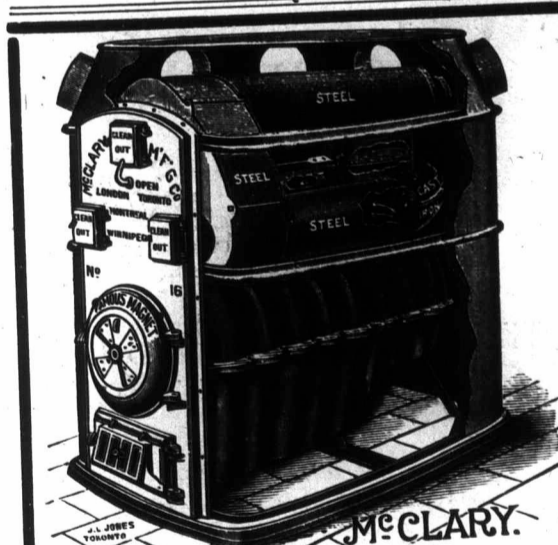
This is our Grinder to run with a Tread Power or other light motive power. Notice the two balance wheels to hold the speed steady. It will crush and grind shucked corn as well as all sorts of small grain. Notice the conical grinding plates. We make two sizes larger also. Send for catalogue. We manufacture also Tread Powers, Thrashers, Feed Cutters, Hay Presses, Circular Saw Machines, etc., etc.

MATTHEW MOODY & SONS, TERREBONNE, ON QUEBEC.

Farmers' Binder Twine and Agricultural Implement Manufacturing Co., Limited, BRANTFORD, - ONTARIO.

WE think it necessary to immediately advise you to refute the treacherous and scurrilous reports that are being put out and circulated against this co-operative movement of farmers by our enemies. Some are stating that this mill is closed down; others that we are pleading with the Government to reinstate the duty on binder twine; others that raw material has so tremendously advanced, that the present moment is the correct time to buy twine requirements for the harvest of 1898; while still others are claiming that the great American combine must absorb this enterprise, as it will be impossible for us to manufacture twine on a free-trade basis. We have simply to say, in answer to all these diabolical statements, that there is not a single word of truth in them; the mill is being run 300 days in the year, to its utmost capacity; we have requested the Government not to reinstate the duty on twine; and we are just now manufacturing a quality of pure Manila, 650 feet long, known as our Samson brand. It and our splendid Red Star (the farmers' pride) are superior to anything that has ever yet been placed on the Canadian market. As in the past, we will again shortly set the prices for the coming harvest at a fraction above actual cost of production, that all other manufacturers and dealers will have to follow. All we now ask, after five years of honest and determined endeavor and solid fighting in the interests of the agriculturists of Canada to hold this Company as an independent concern, is that they, the farmers, give us their continued loyal support. Order out twine early from our appointed agents, port, to be sure to get the best. Our twine, remain truly loyal in not purchasing one single pound of American or other twine in opposition to us until they inform themselves positively that every ball of this Company's twine is exhausted. Small samples and Company's twine is in the near future, or can be had on application. We specially request you, as an intelligent man, to plead with your people to realize the importance of this Company getting their undivided individual support instantly, and to understand what our being driven from existence through indifference or scepticism on their part would mean to them in the future. The Salt Aot would simply be repeated a hundredfold.

Yours faithfully, JOSEPH STRATFORD, General Manager.



A Perfect Wood Furnace

OUR "FAMOUS MAGNET"

Made in 3 sizes, using 3, 4 and 5 feet wood. Will heat from 10,000 to 100,000 cubic feet. Very strong fire box. Large feed door. Extra heavy steel flues with cast heads which are very easily cleaned. Instant direct or indirect draft. ALL OPERATIONS FROM FRONT OF FURNACE.

You can keep your house warm from cellar to garret, and do it cheaply.

HIGHEST TESTIMONIALS FROM ALL DEALERS AND USERS.

The McClary Mfg. Co., (London, Toronto, Montreal, Winnipeg, and Vancouver.)

JAMES CHRISTIE, WINCHESTER, ONT.

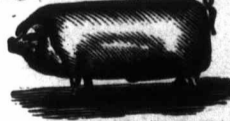
Breeder of Chester White pigs, the foundation of which was selected with the greatest care and from only the most noted breeders in Canada.

Chester White Hogs AND White Holland Turkeys W. E. WRIGHT, - GLANWORTH, ONTARIO.

BY THE 12TH OF JUNE Registered CHESTER WHITE PIGS, Six weeks old, at \$5 each; 14 in the litter. F. BIRDSALL & SON, - BIRDSALL, ONT.

MERTON LODGE

Herd of Chesters and Tamworths are in full bloom, and are offering choice stock of



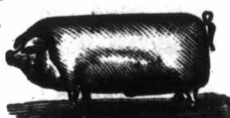
both breeds and sexes. Also looking orders for coming spring stock.

H. GEORGE & SON CRAMPTON P. O., ONT.

THE AVON HERD of Chesters

Are in fine form. Orders are now being booked for April litters from notable strains.

Henry Heron, Avon P. O., Ont.



Stock Breeders' Meetings.

Pursuant to notice, the directors of the Cattle, Sheep and Swine Breeders' Associations and of the Provincial Winter Show met at the Belmont House, Brantford, May 23rd, 24th and 25th. The business transacted was the reception and adoption of the reports and the financial statement of the Secretary-Treasurer, the election of the standing committee for 1898, the revision of the rules and prize list, and the appointment of judges for the Fat Stock and Dairy Show, which is to be held at Brantford, Nov. 30th and Dec. 1st and 2nd, the date being changed from Dec. 6th to 8th to avoid clashing with the Fat Stock Show at Guelph, which has been fixed for the latter dates. The Secretary's report referred to the gratifying success of the various stock breeders' associations during the past year, to the very satisfactory freight rates conceded by the railway managers for the transportation of pure-bred registered stock both east and west in response to the request of the associations, to the improved prices prevailing for pure-bred stock, and the increased demand and volume of trade, largely owing to the reduced freight rates obtained. The announcement at this meeting for the first time of a 50 per cent. reduction in freight points in Ontario and the West will meet with hearty appreciation by the breeders. Efforts will yet be made to secure a reduction of 50 per cent. on carload rates on registered stock when shipped from point to point in Ontario and from points in Ontario to points in Quebec or the Eastern Provinces—that is, the same privileges when shipping carloads—and also to secure the privilege of shipping sheep and pigs in lots of four and upwards without being crated.

Officers Elected.—The following officers were elected for the management of the Provincial Winter Fair for 1898: President—John I. Hobson; Vice-President—J. C. Snell; Secretary-Treasurer—F. W. Hodson; Executive Committee—The President, Vice-President, Secretary, G. W. Clemons, J. Tolton, E. Brothour, H. Wade, H. A. Foulds, and C. W. Yapp; Superintendent—D. G. Hamner. The following committees were appointed: Executive and Programme Committee—The President, Vice-President, Secretary, J. E. Brothour, James Tolton, H. Wade, G. W. Clemons, H. A. Foulds, C. W. Yapp. Committee on Cattle—John I. Hobson, J. C. Snell, G. W. Clemons, C. W. Yapp and S. Suddaby. Committee on Sheep—James Tolton, John Jackson, D. G. Hamner, E. B. Eddy and H. A. Foulds. Committee on Swine—J. E. Brothour, T. Teasdale, G. B. Hood, S. Suddaby and F. A. Metcalfe. Poultry Committee—E. B. Eddy, Geo. Wright and J. C. Montgomery.

Reception Committee—John I. Hobson, Mayor Raymond, Harry Cockshutt, T. H. Preston, Douglas Reville, Arthur Johnston, Frank Cockshutt, Jos. Stratford, F. W. Hodson, H. Wade. Official Reporter—Richard Gibson, Delaware.

The age of animals in the classes for beef breeds and grades will be computed from Sept. 1st, and those in the dairy classes from August 1st.

The Prize List.—Few changes were made in the prize list for cattle and sheep. An addition of five dollars to each of the prizes for grade heifers two years old and for heifers under two years old was made. In all the under two years old was made. In all the under two years old was made. In all the under two years old was made.

Bacon Hogs.—A new class, with prizes of \$20, \$15, and \$10, was opened for the best four bacon hogs of each of the following breeds: Berkshire, Yorkshire, Tamworth, Chester White, Poland-Chinas, also for Suffolk and Essex grouped together, and for grades and crosses. There will also be liberal prizes for the two best dressed bacon hogs, to be killed on the second day of the exhibition. Pigs in these bacon classes will be eligible to show in other classes, and should weigh from 160 to 220 pounds.

Judges.—The following judges were appointed for the winter show: Cattle—Thos. Crawford, M. P. P. Toronto; Jas. Smith, Brantford. Referee—J. T. Gibson, Smith. Reserve—T. G. Colwell, Whitby. Dairy Cattle (for conformation)—G. E. Day, Guelph; J. C. Snell, London. Sheep—Cosmo, Leicesters and Lincoln—T. Hardy, Guelph; J. C. Snell, London. Swine—Chester Whites, Poland-Chinas, Duro-Jerseys and grades—J. G. Snell, Snelgrove; G. B. Hood, Guelph. Referee—C. W. Yapp. Berkshire, Yorkshire, Tamworth, Suffolks and Essex—T. Teasdale, Concord; W. H. Jones, Mt. Elgin. Referee—G. B. Hood. Bacon Pigs—Mr. Leach, of W. Davies Packing Co., Toronto.

Rebate of Freight.—It was resolved that a rebate of the freight charges on all shipments of stock coming over 100 miles to the show shall be made for the distance travelled over 100 miles from the Ontario boundary to Brantford. The Directors of the Dominion Swine Breeders' Association voted a grant of \$100 to the Sheep and Swine Breeders' Association of Manitoba, to be offered in prizes at Manitoba exhibitions on the conditions named in last year's report.

Jed Tuttle, Jr., Iroquois, Ont., writes that he has had his fine young Jersey cow, Elma of Snelgrove, three years old, on a butter test. In seven days she milked 234 pounds, over 33 pounds a day, from which was churned 15 pounds of butter, taking only 153-5 pounds of milk for one pound of butter—over two pounds of butter a day on winter feed. Mr. Tuttle purchased Elma of Snelgrove at the Toronto Exhibition (1896) from J. H. Smith & Son, of Highfield. Mr. Smith had her on exhibition at Toronto, Montreal, and Ottawa, and she took first at the two latter exhibitions, and second at the former. Mr. Tuttle is to be congratulated on his enterprise in securing such high-class stock.

BELLEVILLE BUSINESS COLLEGE

The system of training is Normal, Specific, Thorough, comprising full instruction and practice in

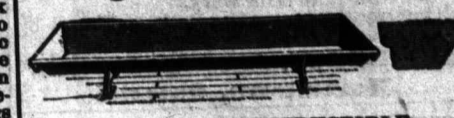
- I. BOOKKEEPING—Double and Single Entry, Business Papers, Law and Practice. II. SHORTHAND and TYPEWRITING—Office and Court Work. III. CIVIL SERVICE QUALIFICATIONS—Indexing, Precis, Writing, Statistics, English and French Options.

This College is OPEN THROUGHOUT THE YEAR. Students may enter at any time. Now is the Time.

ROBERT BOGLE, J. FRITH JEFFERS, M. A., PRINCIPALS.

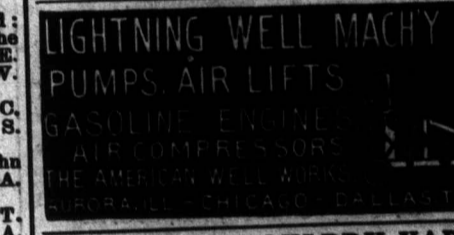
WRITE FOR CALENDAR.

Harding's Sanitary Hog Trough, No. 27



IS INDESTRUCTIBLE, PORTABLE, SANITARY, CHEAP.

and answers all requirements of a desirable Hog Trough. One price only, 60 cents per foot. VOKES HARDWARE CO., Limited, 111 Yonge St., Toronto.



LIGHTNING WELL MACHINERY

PUMPS AIR LIFTS

GLENHURST POULTRY YARD. EGGS FOR SALE. White Wyandotte, White Plymouth Rock, Cornish Indian Game, Black Minorca, Houdan, Black Langshan, White Langshan, Barred Plymouth Rock, Silver Laced Wyandotte, \$1.50 for 15, or \$2.50 for 30. Packed in patent boxes. Will replace at half price any not fertile. Also poultry supplies. Will exchange any of above for first-class Tamworth pigs, any strain. Dorset and Shropshire sheep, Tamworth pigs, Shetland ponies, Jersey cattle, all ages (registered). Prices right. STRATFORD BROS., Brantford, Ont.

EGGS FOR HATCHING Barred Plymouth Rocks.

Pen of 22, bred direct from imp. stock, and headed by a choice imported cock; all well barred, and large, robust, healthy birds. Price, \$1 for 12; or \$2 for 2 settings.

W. C. SHEARER, Bright, Ont.

Barred Plymouth Rocks & Pekin Ducks

(EXCLUSIVELY). Stock and eggs for sale from imported and best Canadian strains. Farm-bred and very vigorous. Eggs, \$1 per 12. MISS P. J. GOLDWELL, Constance, Huron Co., Ont.

BRONZE TURKEY EGGS

Farmer's Daughter strain, \$3 per thirteen. JAS. TOLTON, - WALKERTON.

Poultry.

L. and D. Brahmas, B. and W. Rocks, S. and W. Wyandottes, Black Minorca, Indian Game and Red Caps. Young stock and eggs from above breeds. Eggs, \$1.25 for 12; \$2 for 24. Satisfaction guaranteed. JACOB S. SNIDER, German Mills.

ANNUAL SPRING SALE OF POULTRY.

Fifty Barred Rock Hens, bred to produce brown eggs. Price to suit the farmer. Also a few S. C. Leghorn Cockerels. Eggs from B. P. Rocks, Silver Wyandottes and S. C. Leghorns, \$1.00 per 12. Pekin Ducks, \$1.00 per 12. W. R. GRAHAM, Bayville, Ont.

Toronto Incubators

Best hatching machines built. Awarded silver and bronze medals. For circular, address—T. A. WILKINS, 614 Dundas St., Toronto, Ont.

Send 15c. for Poultry Annual and Almanac for 1898 to C. C. Shoemaker, Freeport, Ill., U.S.A.

TORONTO ENGRAVING CO.

92 BAY ST CUTS BY ALL PROCESSES LIVE STOCK A SPECIALTY

**THE LARIMER DITCHING PLOUGH**

Covered by patent in Ottawa for Canada, and in Washington for the U. S. of America.

FARMERS who do work on a large scale, and those who operate less extensively, are warm in their praises of this plough.

SENATORS who own farms, and members of the House of Commons, have bought it, and join with their workmen in speaking the merits of this gem among farm implements.

PROFESSIONAL FARMERS know nothing so good in its line, and any farmer in Canada may have it for less than \$20. The sub-soil attachments are only \$1.50 additional.

It is working in all the Provinces of the Dominion. The more it is known the greater is the demand for it. Thousands are rejoiced that they own this labor-saving tool.

THE TRACT does the heavy work. With two men, 300 feet of ditch, 3 feet deep, has been dug in a day scores of times.

NO NEED NOW FOR IDLE AGERS, or sickly grain because of wet feet, nor for farmers bent with rheumatism brought about by ditching by hand, nor for farmers' sons wanting to leave home because they can't get the soil to yield. Drain the soil, then look after it rightly, and no work on earth is better than farm work.

All information about the Larimer Plough by writing to

**R. G. SCOTT, "MOUNT JOY FARM,"**  
Martintown, Ontario.

**EDUCATION BY MAIL**

Thousands have been helped to better pay & positions through our system of instruction.

Buildings erected expressly for this purpose at a cost of \$225,000.

Courses of Study: Electrical, Mechanical or Civil Engineering; Chemistry; Mining; Mechanical and Architectural Drawing; Surveying; Plumbing; Architecture; Metal Fabrication; Drafting; Prospecting; Bookkeeping; shorthand; English branches.

\$2 A MONTH pays for a College Education at Home. 4,000 Students and Graduates.

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Dr. HAYES, Buffalo, N. Y.

**GOSSIP.**

*By writing to advertisers, mention the "Farmer's Advocate."*

The students of the Toronto Normal School, to the number of about 150, paid a visit to the Ontario Agricultural College, at Guelph, on May 21st.

We are indebted to Mr. Ernest Prontice, Ipswich, England, Secretary of the Suffolk Sheep Society, for Vol. XIII. of the flock Book, containing the pedigrees of rams Nos. 443 to 498, as well as particulars of the establishing and replanting of upwards of 250 flocks, with list of sires used in 1897. Scale of points for Suffolk sheep are also given, as well as rules and by-laws governing the Society. The volume is neat, strong and well compiled.

F. Birdsall & Sons, Birdsall, Ont., write:— "All our stock has wintered well, and as we have had a good supply of ensilage and turnips on hand they should go on grass in June in fine condition. Thanks to our ad. in the ADVOCATE, we have made a great many sales of Chester White pigs in Ontario and some in Quebec. Our lambs have come strong, a great number of them being bucks. Have had enquiries for the fall trade already, one coming from Jamaica, W. I. Our Shorthorn calves are mostly bulls and are of the right stamp, being sired by Warden - 18724 - bred by J. & W. Russell, Richmond Hill. Our Jersey calves, sired by that noted bull, Royal St. Lambert, bred by Mrs. E. M. Jones, Brookville, are beauties. Our latest sales of Shorthorn bulls were: one to Elias Bedal, Brighton; one to Messrs. Armour & Collins, Campbellford."

**CAPTAIN A. W. YOUNG'S JERSEYS, POLANDS, AND POULTRY.**

Captain A. W. Young, near Tuppersville, Ont., has been an admirer of the Poland-Chinas since 1892, as many of the breeders of Ontario are aware. He laid his foundation upon stock obtained from the large breeders of Michigan, Indiana, Illinois, and Iowa, and from their stock has been selected from time to time. The present sire, Canada Wilkes 277, by George Wilkes 14457, and out of Crocus 57782 A, was bred by Mr. J. H. Bedout, Rushville, Iowa, and has been in the present herd four years doing service. His sire was sold for \$750, while a brother brought \$950, and \$1,500 was refused for Happy Medium, a brother to George Wilkes; therefore, in face of the facts, it may fairly be said that Canada Wilkes' blood ranks among the best of the day. He has been a very profitable animal in the herd, and from what we can see he retains his activity to a remarkable degree. As much of the young stock on the farm—in fact, in the neighborhood—are closely related to him, he is for sale, and such breeding should not fail to attract attention at a time when the swine industry is among the first in Canada. Among the brood sows we saw Bellinda 1150, by James Blain 811 (bred by William Lundy & Son, West Liberty, Iowa), dam Rebecca 1st 611 (sired by Levi Arnold, Plainville, Mich.), now two years old, and suckling her second litter to Canada Wilkes. She possesses good length, with plenty of bone, and promises to make a valuable matron. Jumbo 1114, by Canada Wilkes, and out of Tiptop 615, was farrowed in June, '95, on the farm, and is suckling her fourth litter to James Blain, all of her litters running from nine to twelve pigs. She possesses sufficient size, quality, and bone to command recognition. She will be bred to farrow again in the fall. Half a dozen eight-months Canada Wilkes sows in pig to a young Blain boar are held for sale. They are a strong bunch, not pampered, but kept in strong growing condition. Among the sires employed in the herd was James Blain 811, by Best on Earth 16421 O, and out of Black U. S. Blain 1st 64926 O (bred by W. M. Lambing, West Liberty, Iowa). A registered Chester White sow has lately been added to the stock, and is in pig to a registered boar. She is of the low-set, thick type; her pedigree was not at hand at the time of our visit.

The nucleus of a rising young Jersey herd is here started. Beulah Pogs 15101, by Yankee Pogs 22448, and out of Bridal Wreath 13964, was purchased from J. C. Snell two years ago. She has dropped three females on the farm. On grass only her milk tested 4.30 per cent. butter-fat. A grand daughter, by Kitty's Son 6797 (the stock bull), now held for sale, is a broken fawn colored calf, possessing many promising indications. The whole herd have proven themselves producers of females, this season rearing four heifer calves from three sows.

The poultry receives much of the Captain's personal attention, and a new feature has been added in this department in the form of an underground cellar for early hatching, and incubators of several hundred egg capacity have been added. Experiments are being conducted along this line, and some very forward chicks may be seen. The particular breeds receiving attention are B. P. Rocks, Silver-spangled Hamburgs, Grey Dorkings, and Brown Leghorns, from which birds and eggs are for disposal.

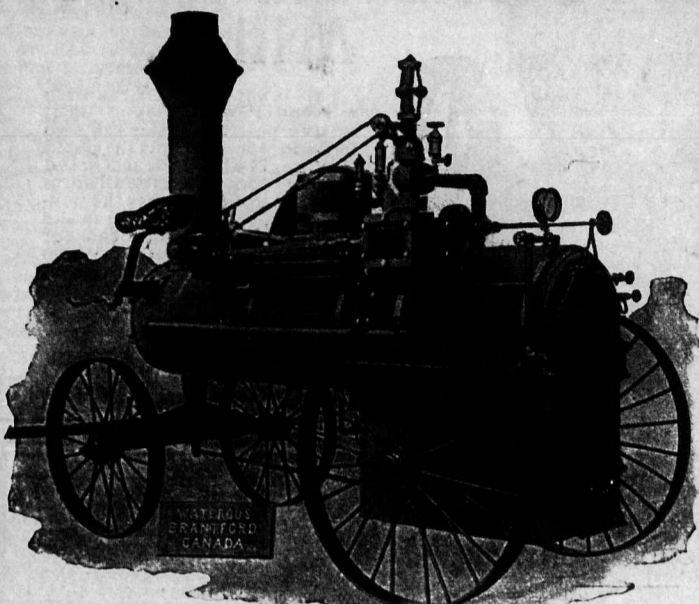
The Captain also offers for sale a very choice and valuable fifty-acre farm, which on account of its location (1 1/2 miles distant from homestead) makes it very inconvenient to handle. As we were over the farm we can speak with confidence when we state it is a desirable and fertile piece of ground without a foot of broken or waste land, stump or stone, and on which is a good gas well which has produced constantly for several years, insuring fuel. A good school is within sight of farm. The price which we heard him say he would accept was very modest considering its advantages.

**RECORDS OF SWINE.**

The following list gives the number of animals of each breed registered in the Dominion Swine Breeders' Record in the past two years:

	1896.	1897.
Berkshires.....	1,287	1,471
Yorkshires.....	460	716
Chester Whites.....	184	405
Poland-Chinas.....	237	329
Pamworths.....	193	312
Duroc-Jerseys.....	69	202
Suffolks.....	32	25
Essex.....	43	
	2,495	3,480

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**Strongest** for its weight—handles 18 H. P. on the brake.

**Ample Boiler** Blows off under easy firing at heaviest work.

**Economical** on fuel and water. Said by all to be the

**Handsomest** Engine on the market.

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REBUILT ENGINES, NEARLY EVERY MAKE, FOR SALE.

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Extract from a letter by Digby Caley, Esq.:

"I was much interested at the result of your experiments in trying to arrive at the proper amount of nitrogenous manure necessary to reproduce correct proportion of grasses amongst

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"I congratulate and compliment you most heartily on what you have already accomplished and demolished, and I consider you have conferred a great public benefit to agriculture generally by having afforded such convincing proofs of what can be done by the liberal use of

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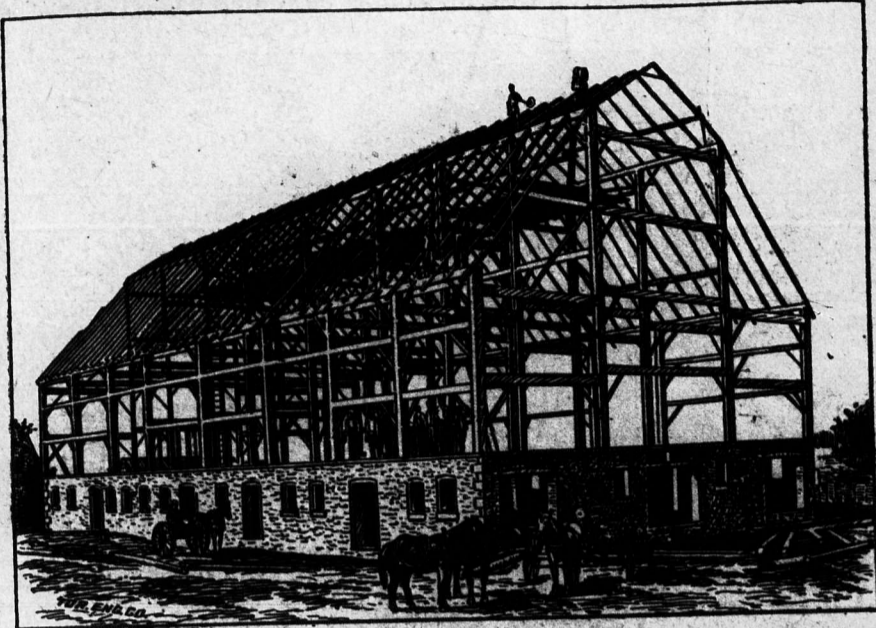
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ESTATE OF JOHN BATTLE,  
Thorold, Ontario.

### GOSSIP.

Volume VII of the American Oxford Down Record will be closed July 1st, 1898. Lambs dropped in 1897, owned by members of the A. O. D. R. Association, will be recorded at 50c. each until the book is closed; owned by non-members of the Association, animals any age, \$1 each. W. A. Shafer, Secretary, Middletown, Ohio.

A short visit to Whiteside Bros., Inneskip, and a run through the stock, revealed the fact to us that they have a few really good things in their possession. We saw a bunch of young Ayrshire bulls of a serviceable age that should be doing service in some pure-bred herds in this Province. The three sons of Goldfinder (two 18 months and one 11) are out of such dams as Merry Maid, by Royal Prince 649; Maid of Athol 4th, and Merry Maid 2nd; while the fourth is out of Merry Lass 2nd, and by H. Syria 173d. In this herd, not only gilt-edge breeding is well set forward, but they are animals of individual merit. Either of the older ones are qualified for the showing. The firm also have a four-year-old bull which was purchased from Mr. Joseph Yull, Carleton Place, which has proven himself a producer of good animals, and is for sale. In going among the Clydesdales we visited Salfesteen, and found him in good healthy form, though by no means fat; yet he keeps his form to a remarkable degree. He has sired some really good things, and a pair of his daughters (on the farm) would do credit to any sire. In a paddock adjoining the barn we found a fine yearling horse colt by King of the Castle, and out of Mayberry, which will be heard from again, as he possesses the size and quality, with plenty of bone of the right sort, and well supplied with hair. His dam was hourly expected to foal. Some choice Sable Collie dogs may also be seen on the farm, which bear evidence of good breeding.

### GEO. THOMPSON'S BERRKHIRE AND POULTRY.

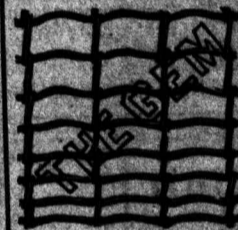
While in the neighborhood we paid a flying visit to Mr. George Thompson's comfortable home, near the village of Bright, and were shown a bunch of really good Berrkhires, in which Mr. Thompson and his ambitious son exhibit a great deal of pride. They were founded on some of the most fashionable strains of the day, and many of them were purchased at a big cost. In the herd are some extremely useful, well-formed females, some of which possess rather more of length than is ordinarily found. The stock is always allowed excellent exercise to keep them in vigorous condition, yet kept in sufficient flesh for breeding purposes. We saw some choice young stock. In poultry we were shown a pen each of Black Minorcas, Silver-Gray Dorkings, Silver Wyandottes, and Silver-Spangled Hamburgs, and in their selection we were informed that some but the best and from the best and most noted breeders were purchased, including some showing winners. The firm are prepared to ship eggs for hatching, carefully packed, at a very reasonable cost.



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**DAVID TORRANCE & CO.,**  
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FOR HORSES AND CATTLE.

In car lots or less; 500 pounds, \$3 here. Cash with order.

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TORONTO.

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THE BEST

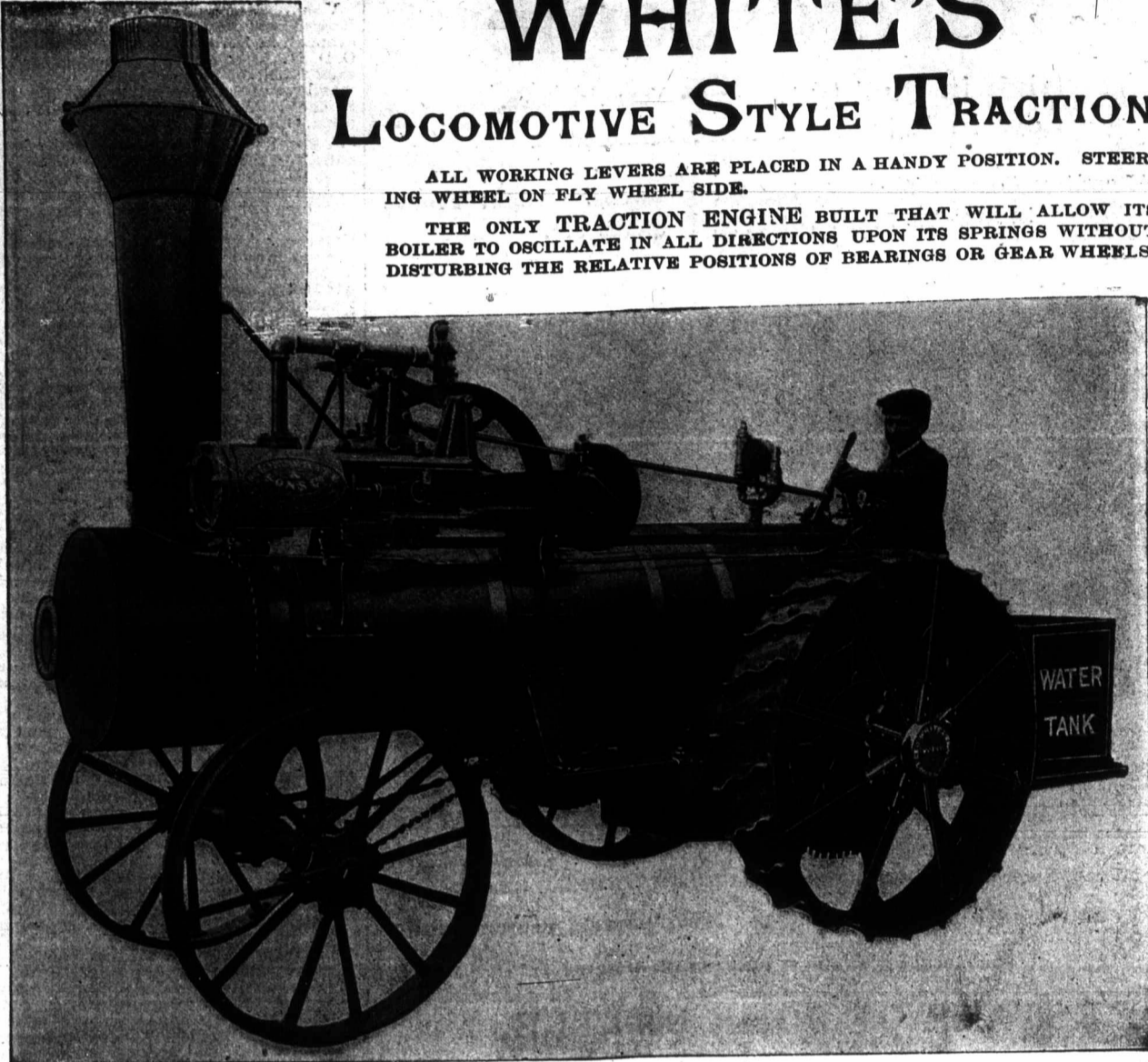
FOR DAIRY OR TABLE USE IT IS UNEQUALLED.

**Salt on the Farm**

FOR WIREWORM, JOINTWORM, ARMY WORM, AND ALL INSECTS THAT DESTROY CROPS, SALT IS THE BEST INSECTICIDE. IT IS ALSO A FERTILIZER. TRY IT.

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ALL WORKING LEVERS ARE PLACED IN A HANDY POSITION. STEERING WHEEL ON FLY WHEEL SIDE.

THE ONLY TRACTION ENGINE BUILT THAT WILL ALLOW ITS BOILER TO OSCILLATE IN ALL DIRECTIONS UPON ITS SPRINGS WITHOUT DISTURBING THE RELATIVE POSITIONS OF BEARINGS OR GEAR WHEELS.

**THE GEORGE WHITE & SONS CO. (LIMITED), LONDON, ONT.**

GOSSIP.

Hon. F. D. Coburn, the widely-known and successful Secretary of the Kansas State Board of Agriculture, has been nominated by the Republican Convention as Governor of the State.

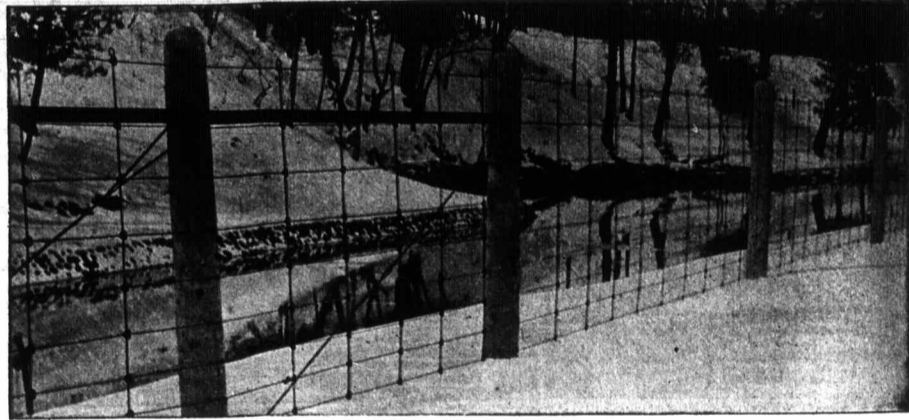
Exporters of cattle or sheep from the U. S. are now required by Government regulation to give these animals twelve hours' rest in the yards at the port of embarkation before the vessel sails, and must not be put on before the rest of the cargo is loaded.

According to newspaper report, Mr. A. M. Caldwell, of Illinois, has entered an action at law against George G. Council, of Williams-ville, for \$1,000 damages growing out of the sale of the Poland-China boar Klever's Model last year to a syndicate of which Mr. Caldwell was a member for \$5,100. It is alleged that the "pool" did not get the real Klever's Model at all; that the said hog really died on Council's farm in March, 1897; that a hog called Columbia Chief, resembling Klever's Model, was substituted and sold as the noted boar which the syndicate supposed they were buying. The case is creating a great sensation in U. S. live stock circles.

William Wilson, Brampton, informs us that his young imported Shorthorn bull, Scotland's Fame, purchased at Mr. John Isaac's sale in March last, has done exceedingly well, having grown and developed rapidly since reaching his new home, as well as keeping smooth and even. From his breeding he ought to make a good individual and an impressive sire, being sired by the Collynie-bred Golden Ray, by Scottish Archer, bred by Mr. Cruickshank, Sittyton, and purchased when a yearling by Mr. Deane Willis, of Bapton Manor, for 300 guineas, and now one of the chief stock bulls in the herd of Mr. Duthie, who considers him one of the best sires ever used in the Collynie herd.

J. F. MCKAY'S POLANDS AND POULTRY.

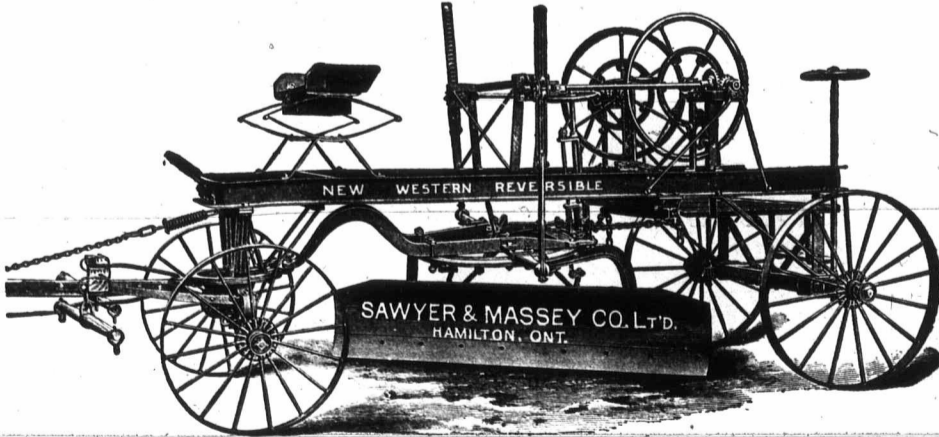
In the pouring rain we reached the comfortable and happy home of Mr. J. F. McKay, four miles east of Parkhill, and were made welcome to dinner, after which we took a hurried run over the stock. We found four brood sows due to farrow in May, in good form, running in a grass plot, and were informed that a pair of young boars of gilt-edge breeding were daily expected from Messrs. W. & H. Jones, Mount Elgin, from which much will no doubt be expected. In the poultry department we found that some advances had been made since our visit a year ago. A new poultry house has been erected, the architect of which was none other than Mrs. McKay herself, and everything to meet her ideas were compiled with, and she not only had it constructed with a view to convenience, but is an ideal in point of comfort and light, which will add much to that branch of the industry. They are carrying a large pen (some thirty) pure Plymouth Rock hens this season; also a breeding pen of Light Brahmas. In Bronze turkeys five hens are producing eggs. The tom was purchased from Mr. W. H. Beattie, Wilton Grove, last fall, and is regarded as a good one. A nice pen of Rouen ducks were also shown us, and plenty of eggs from any of the above may be had at a very reasonable outlay.



CITY WATERWORKS RESERVOIR, LONDON, ONT.

W. E. H. Massey, the head of the Massey-Harris Company, of Toronto, selected our fence over all competitors last year, putting up over five miles of the famous Jones Locked Wire Fence on his model farm, near Toronto. Prices from 22c. per rod. This Company also manufactures Metallic Shingles and Siding.

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**The WESTERN REVERSIBLE ROAD GRADER**

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