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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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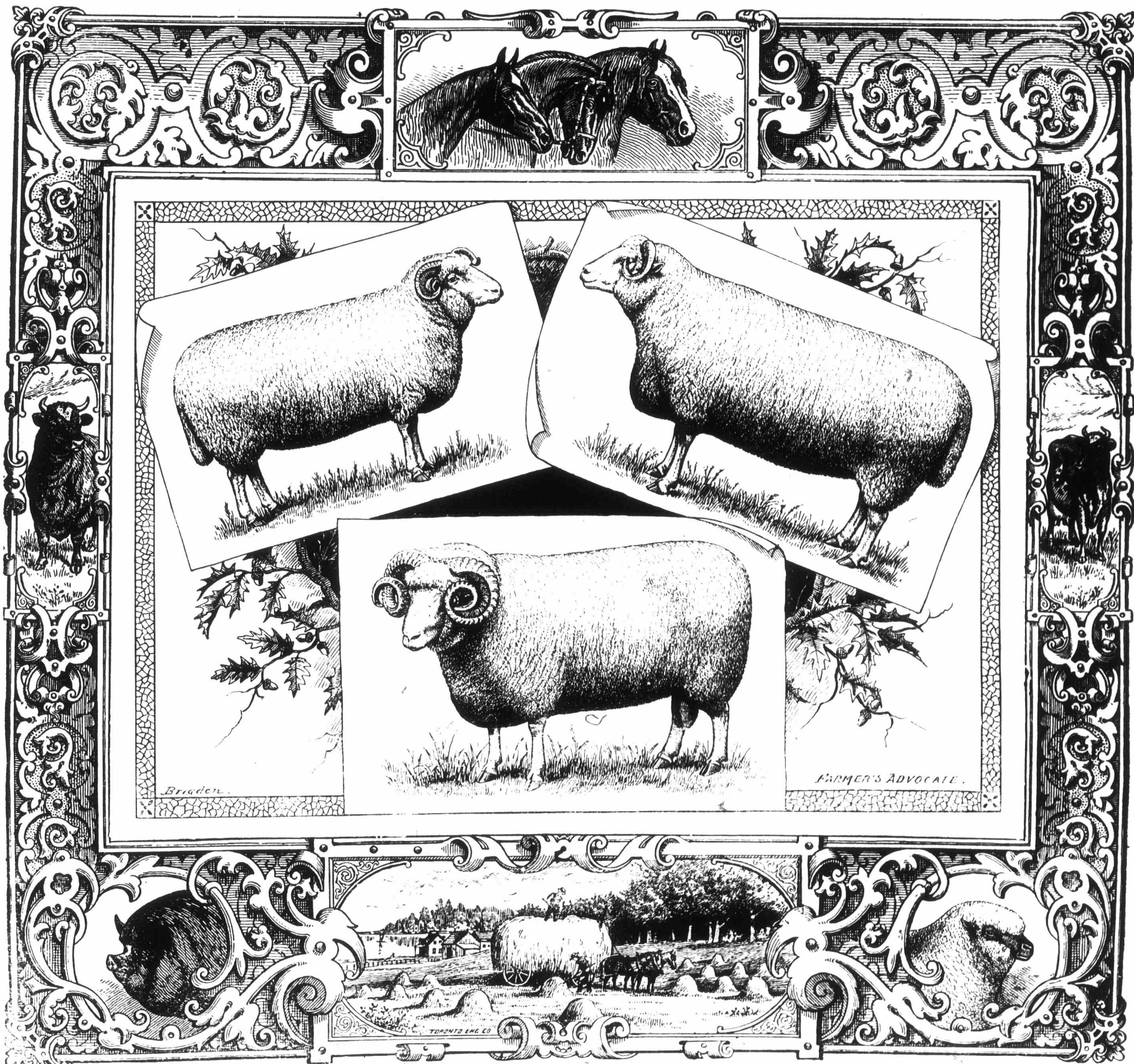
* AGRICULTURE. STOCK. DAIRY. POULTRY. HORTICULTURE. VETERINARY. HOME CIRCLE. *

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VOL. XXIX.

LONDON, ONT., AND WINNIPEG, MAN., FEBRUARY 1, 1894.

No. 351.



DORSET HORNS.

A GROUP OF COLUMBIAN PRIZE WINNERS, THE PROPERTY OF JOHN A. MCGILLIVRAY, Q. C., UXBRIDGE, ONTARIO.

EDITORIAL.

The wheat crop of India is reported to be unusually good, and the average yield six per cent. greater than last year.

Says Mr. Scott at an Ohio Institute meeting: "Feed your lambs before they are born. Weak and puny lambs are the product of illy-fed ewes. Strong, vigorous, healthy lambs are the offspring of well-fed mothers."

Chicago not only does considerable business in hogs and corn, but also has a share of the poultry trade. The secretary of the produce exchange at Chicago recently gave some figures showing the magnitude of that market for poultry products. The receipts for one year equalled 22,500,000 pounds of dressed fowls; at 11 cents a pound this foots up \$2,415,000. The total receipts of eggs were 2,153,000 cases of thirty dozen each, valued at \$11,625,000. The total business in eggs and poultry amounted to \$14,000,000.

The question has often been asked, Can sweet ensilage be obtained? According to good authorities ensilage can be cured so that it will taste and smell pleasantly sweet. The cause of ensilage being sour is due frequently to imperfect sealing. According to Mr. Van Alstyne, in the Country Gentleman, sweet ensilage has been made at Cornell. The ensilage was composed of June grass and clover, made in a metal silo, and had been treated, after placing it in the silo, with carbonic acid gas, the silo being embedded in the ground; the ensilage was perfectly sweet. This question of sweet ensilage is one worthy of investigation and study, as sour ensilage fed to milking cows certainly gives the milk an objectionable flavor.

Cover the strawberries beds while the ground is frozen, not to keep out the frost but to keep it in. It prevents the plants heaving out by alternate freezing and thawing. Straw litter from the barnyard answers well; waste hay will do, but there is a danger of seeding the ground with timothy, should it happen to have been too ripe when cut. Provide grape posts if necessary; also stakes for raspberries and blackberries. Haul and spread manure while the ground is frozen; there is little danger of losing its virtue if exposed in this way, provided the fields are level where it is spread. Plan for new tools needed and for trees and plants wanted. On mild days prune any grape vines that have been neglected. Fruit trees may also be looked after. Mature plans for spring work. Order trees and plants early, before the assortment is broken up. Patronize firms of established reputation. Buy direct to avoid being taken in by middlemen. While the evenings are long, study books and papers that pertain to your calling. Attend Farmers' Institutes, Granges, and Horticultural meetings whenever possible. Ask questions and take part in discussions, and come in contact with your fellow-laborers.

At the present time many people are changing their plans and lines of work. Dairying and poultry raising are both being taken up by men who once thought such work was only fit for women folk, but these have changed their minds on account of greater branches of agriculture being no longer remunerative. These two growing rural industries can be made to go hand in hand with good effect. While egg and chickens are being sold butter can be taken to the buyer as well. Dealers in one are nearly always dealers in the other. Both products can be packed in the same box and marketed at the same time, thus economizing time and labor.

In commencing a new branch by one to whom it is new it is well to exercise caution. An instance is given in an exchange where a man who was commencing poultry business went into the nearest market town and purchased 1000 hens, old and young, pure-bred and mongrel, whatever they happened to be. As might be expected, a weedy lot was obtained—useless under the most favorable circumstances. The pens and runs were so much over-stocked that disease soon swept a large number of them out of the way, making room for a better lot to be more judiciously handled. The object lesson was rather an expensive one, but, nevertheless, lasting. The only way to achieve success is to start quietly, gradually breed up to the requirements, and learn along the way. The most successful businesses are conducted upon these lines, and many dangers are avoided by adopting this plan.

In-Lamb Ewes.

Mr. J. S. Woodward, in the Rural New Yorker, gives some valuable advice in regard to handling ewes at this season of the year. They should be kept in a dry, warm and roomy building. Ewes which will lamb in February or March should have, every day, some sort of green food once a day; a flock of fifty should receive one bushel of cut turnips, increased to two bushels in a short time, as they become used to them. Clover hay or well-saved pea straw are both excellent for forage; nothing could be better. Oats make splendid grain food if they are not too high, but bran, as it is usually sold, answers better for pregnant ewes.

If it is intended to place the lambs on the early market the ewes should have all the clover hay and pea straw they will eat, with the daily feed of turnips, enough bran to keep them gaining a little up to the time of lambing; a few cracked peas may then be added to the bran, also a little oil cake meal to increase the milk flow. The amount of turnips may be considerably increased after lambing. As soon as the lambs will eat, a liberal supply of oil cake should be given them; to this may profitably be added cracked peas and a sprinkling of wheat bran.

The ewes and lambs should have an abundant supply of good, fresh water, and the pen kept clean and well bedded. A judicious use of new milk from a fresh cow will hurry the poorly-fed twins along quickly to market.

Tuberculosis in New York.

About 20,000 animals were examined by the three inspectors of the State Board during 1893, and of this number 686 were found infected and killed. Many valuable animals, in fact whole herds, which took years to bring to their high standard of excellence, have been slaughtered. Dr. Balch has had the milk of infected cows tested by expert chemists. Recently Prof. Slotter analyzed a sample of milk from an infected cow, whose udder and teats were quite free from the disease, and found it crowded with tuberculosis bacilli, which, if used by a person, might develop consumption. Owners of cattle will sooner or later awaken to the necessity of having their herds examined, and if any are found diseased have them killed at once. When purchasing cattle farmers should insist upon having them tested with tuberculin, as in many cases the disease is brought into a herd by the purchase of cattle which outwardly appear to be in perfect health.

Tuberculosis.

We learn with regret from The Country Gentleman that tuberculosis has been discovered in the magnificent Guernsey herd of Mr. Morton, Ellerslie, Rhemcliff, N. Y. Seventeen animals have been condemned and will be slaughtered, only one of which is imported; all the others, except two, are young heifers of Mr. Morton's own breeding, most of them due to calve in a few weeks.

Mr. Morton writes:—"The test was made by Dr. John Faust, of Poughkeepsie. Just before the fire Dr. Gardner, of Hartford, inspected our herd by the usual methods, and pronounced them entirely free from tuberculosis. Dr. Faust made an examination since the fire. His examination was made in the usual way, by sounding the lungs, examining the glands, etc., and he pronounced the cattle perfectly healthy as far as this method would show. He then injected every animal with tuberculin, and 17 showed reactions for tuberculosis.

"Several of the condemned are due to calve soon. Dr. Faust proposes to isolate them and wait until their calves are born, when he will again apply the tuberculin test. It has been suggested that young heifers when pregnant might show reactions from the injection, even when perfectly free from disease. Dr. Faust proposes to test this.

"The rest of the cattle will be killed Jan. 10th. Secretary Edward Norton, Dr. Gardner, and others interested will be present.

"We are very anxious to determine whether the tuberculin test is accurate or not. If it is accurate, it will be used on all animals we purchase to stock our new barn."

Scotch and English cattle breeders have united their efforts against Canadian cattle, and are using their best endeavors to prevent the removal of the quarantine regulations now in force. This is as a matter of protection from a financial aspect—not because any sane Briton believes Canada has never had a case of pleuro-pneumonia.

Mr. John A. McGillivray's Dorset Horns.

Our front page is beautified by a life-like illustration of three of Mr. McGillivray's Dorset Horned sheep. The flock owned by this gentleman is a very large and a very good one. Drafts from these pens have been most successful in all leading Canadian and American show rings where exhibited. A full review of this flock will appear in an early issue.

Our Subscription Prizes.

See our list of subscription prizes on page 56. We have carefully selected the grains offered. The subscription prizes presented in last issue, though not advertised in this number, are still offered. See last paper, page 39. We have sent out a number of World's Fair Triumph Watches; all who have received them are pleased with them. Our rings are genuine, and have given perfect satisfaction wherever sent.

We have again made arrangements with some of the most reliable breeders of live stock of the various sorts, and can supply young animals of high excellence, and of either sex, as subscription prizes. See page 56. An energetic person can thus obtain pure-bred animals, and pay for them by canvassing for us. A short time ago a gentleman and his daughter sent us two hundred and eighty names, as a result of twenty days' work. We send out a number of animals each year as subscription prizes, each is selected by an expert before being shipped.

The Grange Wholesale Supply Co.

Co-operation is the order of the day. A short time ago, while a member of our staff was in Toronto, he visited the store of the Grange Supply Co., who have moved from their old stand, 35 Colborne Street, to 126 King, East.

To those who are not conversant with the system of management, we would say that it is the only Farmers' Chartered Co-operative Store in Canada—that it is a joint stock company, owned and controlled entirely by farmers. No one man can hold more than fifty shares, at \$25 per share. The Directors are elected annually by the shareholders, and the manager is appointed annually by the Directors.

The purchases are made as much as possible from the manufacturers, and every thing is paid for when bought. The profits on the goods are only enough to pay legitimate expenses. Every thing is guaranteed to be as represented.

While the Patrons of Industry and Dominion Grange were in session in the city of Toronto, they were asked to appoint committees to investigate the Grange stock and mode of doing business, and to report back to their meetings what they thought of the Company. After the matter had been fully discussed by the delegates in general, the following reports were passed, and signed by the members of the committees:—"We, your committee, appointed to visit the Grange Wholesale Supply Co.'s Store, beg leave to report. We enquired into the principles on which they conduct business, we are of opinion that the principles are just equitable, and that the prices and quality of the goods for sale are such that we consider said Company worthy of the support of all who are desirous of enjoying the benefits of co-operation."

We might say, that members of our staff have visited their store from time to time, and we know that the report of the above committee is quite in keeping with our own views.

We advise our readers to club together, and make orders as large as possible.

In looking over the prices of goods quoted in their catalogue, we are surprised to find such a reduction from the ordinary selling price of the same quality of goods in other places. Everything that a farmer has occasion to use is kept in stock. We notice that their prices in boots are simply remarkable for their cheapness. Harness is another line that is specially worthy of mention for its cheapness; a splendid double set of farm harness can be bought for a trifle over \$20.00, and a very substantial and showy single set of driving harness for about \$14.00.

Groceries, foreign fruits, agricultural implements and dry goods are kept.

Write the Manager, Mr. R. Y. Manning, for their latest catalogue.

Errata.

Under the heading "Sheep at the Ontario Agricultural College" in our last issue, near the end of the article, the writer was made to say, "Owing to a sterile ram and other avoidable causes." This clause should have read, "Owing to a sterile ram and other unavoidable causes."

THE FARMER'S ADVOCATE & HOME MAGAZINE

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

PUBLISHED BY THE WILLIAM WELD COMPANY (LIMITED), LONDON, ONT., and WINNIPEG, MAN.

JOHN WELD, Manager. F. W. HODSON, Editor.

1. The Farmer's Advocate is published on the first and fifteenth of each month.

It is impartial and independent of all cliques or parties, handsomely illustrated with original engravings, and furnishes the most profitable, practical and reliable information for farmers, dairymen, gardeners and stockmen, of any publication in Canada.

2. Terms of Subscription—\$1.00 per year in advance; \$1.25 if in arrears; sample copy free. European subscription, 6s. or \$1.50. New subscriptions can commence with any month.

3. Advertising Rates—Single insertion, 30 cents per line. Contract rates furnished on application.

4. Discontinuances—Remember that the publisher must be notified by letter or post card when a subscriber wishes his paper stopped. All arrears must be paid. Returning your paper will not enable us to discontinue it, as we cannot find your name on our books unless your Post Office address is given.

5. The Advocate is sent to subscribers until an explicit order is received for its discontinuance. All payments of arrears must be made as required by law.

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7. Remittances should be made direct to this office, either by Registered Letter or Money Order, which will be at our risk. When made otherwise we cannot be responsible.

8. Always give the Name of the Post Office to which your paper is sent. Your name cannot be found on our books unless this is done.

9. The Date on your Label shows to what time your subscription is paid.

10. Subscribers failing to receive their paper promptly and regularly will confer a favor by reporting the fact at once.

11. We invite Farmers to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve the ADVOCATE, Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation are each and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.

12. Replies to circulars and letters of enquiry sent from this office will not be paid for as provided above.

13. No anonymous communications or enquiries will receive attention.

14. Letters intended for publication should be written on one side of the paper only.

15. All communications in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

Address—
THE FARMER'S ADVOCATE, or
THE WILLIAM WELD CO.,
LONDON, ONTARIO, CANADA.

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Our Clubbing Rates for 1894.

We offer our subscribers papers at the following rates:—

THE FARMER'S ADVOCATE AND HOME MAGAZINE

Winnipeg Weekly Tribune	\$1 75
Toronto Weekly Mail	1 50
" Daily	6 00
" Weekly Globe	1 50
" Daily	6 00
" Weekly Empire	1 75
" Daily	6 00
London Weekly Free Press	1 75
" Daily	4 25
" Weekly Advertiser	1 75
The Canada Farmer's Sun	1 50
Montreal Weekly Witness	1 00
" Family Herald and Weekly Star	1 75
" Weekly Gazette	1 50
Cosmopolitan Magazine (Monthly)	2 25

Remit by Post Office order or registered letter. Post Office order is cheapest and best.

We will give a prize of \$5.00 for the best essay on the subject of "Poultry Raising from a Farmer's Standpoint." All competing articles must reach us not later than February 15th.

Canada's Columbian Victors.

Every farmer in Canada should secure a copy of our handsome premium picture, Canada's Columbian Victors; price, \$1.00. A copy will be sent to any of our subscribers for sending us the name of one new subscriber, accompanied by \$1.00.

Dominion Grange and Patrons of Industry.

The nineteenth annual meeting of Dominion Grange will be held in Toronto, commencing on Wednesday, February 21, at 3 o'clock p. m., in the Albion Hotel. All Granges under the jurisdiction of Dominion Grange, which are not in arrears, are entitled to send a delegate to this annual meeting (except Division Granges). A comprehensive circular issued by the Executive Committee can be secured by applying to the Secretary, Mr. R. Wilkie, Blenheim, Ont. The Executive met in April last to carry out the work assigned them at the last annual meeting.

The Grand Trustees of the Patrons of Industry and representatives of the labor unions met at the same time and place. In many respects the aims and objects of the two societies are identical, and the joint meeting was held for the purpose of endeavoring to find a common platform upon which they could unite their influence. In many respects they agreed, but on some points the Executive of the Grange were unable to decide, as they had never been considered by the Order.

The introduction of a system of government known as the "Initiative and Referendum," and a system of cumulative voting, were forcibly put forward, and ably supported by the labor representatives. The Initiative is an enactment providing that when a petition has been signed by a number of persons sufficiently large to show that general interest is taken in the question by the public, the Municipal Council, Legislature or Parliament, as the case may be, must prepare a law carrying out the objects named in the petition, and submit the law to the vote of the electors. If it then receives a majority of the votes cast it becomes law.

The Referendum provides that any important measure passed by the Municipal Council, Legislature or Parliament is subject to being voted upon by the electors. If a petition signed by a number of the electors requisite to show that there is a popular demand for consideration by the people is presented to the body which enacted the law, it must be submitted to the vote of the electors, and if they disapprove the law has no effect.

It is claimed for these methods of legislation that the people take the control of law-making power out of the hands of the few who have used it to further their own personal and selfish interests, and place it in the hands of the whole people.

It is claimed by the advocates of these measures that if carried out they will diminish corruption.

They will enable measures to be decided on their merits.

They will give the electors greater interest in public matters.

They will promote public discussion upon all public questions.

They will procure the better enforcement of all law, as they will then be regarded as direct demands from the people.

They will prevent hasty legislation.

They will secure the adoption of progressive legislation as soon as public sentiment is ready for it.

They will kill extravagances in the management of public finances.

They will diminish all the evils of partyism.

By them local jealousies and favoritism will be done away with.

The system of cumulative voting has been in successful operation in school board elections in England for twenty-three years. We believe that it could be applied with equal success in all elections of representatives in this country, and that it would afford us a much better opportunity of electing men of our own choice and class to Parliament and the Legislature.

The method of its application will be as follows: Group seven or more of our present constituencies into one, retaining the same number of members, or, what is better still, giving the united constituency the exact number of members it is entitled to under the principle of representation by population.

If seven of the old constituencies were grouped into one new one, then that new or grouped constituency would return seven members.

Each elector would have seven votes, that is, he would have as many votes as there are members to be elected.

Each elector would have the power to give all his seven votes to one candidate, or to distribute them as he saw fit amongst two, three, or even the whole seven candidates.

By this method the Grangers or Patrons of Industry, or both united, or any group of voters desiring representation by a man of their own class, could get such representation if they num-

bered one-seventh of the total voting strength of the grouped constituency, with a sufficient margin over to provide for contingencies.

If the Patrons of Industry or Grangers, or both united, numbered two-sevenths of the total voters, with a sufficient margin for contingencies, then they could put two candidates in the field, and request each of their voters to divide his votes between these two candidates, and not to vote for any one else. The two candidates would be elected if this request was complied with.

It is not necessary that the number of constituencies united be seven; we used that number to illustrate the system proposed.

The committee at their meeting referred to prepared a petition to the Government and Parliament at Ottawa, asking that the duty be taken off Indian corn and binder twine, that coal oil be admitted at a duty of three cents per gallon, and agricultural implements at fifteen per cent.

They also prepared and presented a memorial to the Hon. Sir Oliver Mowat and members of his Government, asking that the number of members of County Council be reduced, that agriculture be made a branch of study in the rural schools, and other matters of equal importance. The committee on presenting their memorial were kindly received by Sir Oliver and members of his Government, who listened attentively to the reading of the same, and discussed some parts of it, promising to give it a careful consideration. We are pleased to learn that several of the demands of the memorial have since been granted. The petition of the farmers has not gone unheeded, nor has the representation of their committee been unnoticed.

Russian Thistle.

They seem to have made up their minds south of the 45th parallel to eradicate the Russian thistle, and from all accounts none to soon.

In the second issue of September last of the FARMER'S ADVOCATE, we reproduced from an U. S. Agricultural Department bulletin a descriptive article, accompanied by cuts of this fearful pest, and we urge every farmer, and more especially those in the south-eastern portion of Manitoba and in the adjacent territory, to familiarize himself with the character of this weed, and on the appearance of the first doubtful specimen, communicate at once with the district weed inspector or with the Department of Agriculture, so that it may not get a foothold on this side of the line.

It is almost certain to drift over here, either with the wind or to be carried in seed, and if noticed and destroyed when it first appears will save the country hundreds of thousands of dollars. The following from an exchange shows to what an alarming extent this weed has spread in the United States and the vast sum of money considered necessary to exterminate it:—

"The culmination of a good deal of thought and discussion, concerning the spread of the destructive Russian thistle, was reached by the presentation of a bill in the Senate on Monday last by Senator Hansbrough, of North Dakota. Briefly, the bill provides that the Secretary of Agriculture shall employ the necessary help and so direct it as to destroy and exterminate the Russian thistle in every part of the United States wherever found, and the bill carries with it an appropriation of \$1,000,000 to pay expenses. While just at present the devastation of the Russian thistle is especially marked in the Dakotas, Northern Nebraska, Western Iowa, and sections of Minnesota and Wisconsin, it is spreading very rapidly, and this bill deserves the hearty aggressive support of every one directly or indirectly interested in agriculture. It may be urged that it is a form of paternalism, but it surely is no more so than the Government's action with reference to pleuro-pneumonia and to the work of the Animal Industry Bureau as a whole. Of all pests to agriculture, the Russian thistle is not only the worst but is more dangerous than all the others put together. It not only drives out useful crops, but makes the land impassable to man or beast. In the sections in which it is spreading most rapidly, there is a great deal of vacant land, and unless concerted action is taken, little good will be accomplished. The Orange Judd Farmer is heartily in favor of this legislation, not only for those now suffering, but as a precautionary measure in the interests of the farming population of the Mississippi Valley." Let us beware of what Americans so dread.

The Illinois State Board of Agriculture opened bids at Springfield, January 3rd, for the permanent location of the State Fair. Bids were filed by the cities of Springfield, Peoria, Bloomington, and Decatur, all offering at least one hundred acres of land, \$50,000 in cash, and other requirements of proposals for bids. The Board will now visit the cities, inspect the sites offered, and make their decision at a future day. Springfield seems in the lead, its offering being one hundred and fifty-four acres of land, about fifty acres more than by the other cities, and this to include the present Sangamon County grounds, with buildings and improvements worth \$50,000. The race track, one mile, one of the best in the United States, is on these grounds.

STOCK.

Studs, Herds and Flocks.

DISPERSION SALE OF ROSEDALE STOCK FARM SHORTHORNS.

Many of our readers will have received the catalogue of Shorthorns (the property of Mr. James Gardhouse), which are to be closed out by auction on the 28th inst.

It was early in the seventies when this herd was founded, and a glance at the pedigrees will show that many superior females have been bought from time to time, from which it will be seen that the proprietor has aimed to obtain the best bred cows and heifers in building up his herd. There are very few herds that have had the advantage of such a succession of superior imported bulls. The most noted herds of Britain have been drawn upon for this purpose. When we remember the number of prize-winners this herd has furnished in past years, it must be admitted that through care in selections, together with good management, great success has been attained.

At the present time there are not many animals in show form, but there are a large number which both by their breeding and merit are of a sort that will be sure to prove profitable to purchasers.

The first cow on the catalogue is Verbena's Blossom, a daughter of imported Verbena, bred by that successful breeder of English show cattle, Mr. Outhwaite, Baines, Catterick, Eng. Mr. Gardhouse imported Verbena in 1876, and the goodly lot of descendants she has left behind her attests to her merit as a breeding cow. She was sired by Royal Windsor, which won first at the English Royal Show in 1872, together with many other winnings.

There are nine females of this family included in the catalogue, four of which are daughters of the imported cow.

Of the Kinnellar Clarets, there are two females, both from imported Clea. Then there are two Rosebuds, one of which was bred at Kinnellar. Of the Kinnellar Rosedales there are three representatives of choice breeding—one Crimson Flower and two of Col Kingscote's Wallflowers.

In all, there are forty cows and heifers catalogued, many of the former having calves at foot to imported Guardsman and Earl of Aberdeen 3rd. Among this large number there will be some choice picking, which only can be had at a closing-out sale.

It is a length of time since there has been such a number of really good young bulls offered at auction, all bred in one herd. Of these, there are 20 great lusty fellows, which, if we mistake not, should provoke brisk bidding. These are mostly the get of the imported Kinnellar bull Warfare, with a few by Aberdeen 3rd, bred at Bow Park, of the Upper Mill Missie family.

In so large a herd, it is impossible to give anything like an individual description; all we can say is, go and judge for yourselves. Plenty of choice is assured.

MESSRS. GEO. SMITH & SON'S JERSEYS AND WELSH PONIES.

While at Grimsby your correspondent visited the stock farms of Messrs. Geo. Smith & Son, and saw the home of the fine herd of Jersey cattle they usually show at the fairs. They have between seventy and eighty head, all look thrifty, but not fat, except a number of heifers coming two years old that are looking very well. This herd is not only a show herd, but a business one as well, as they run in connection a dairy of considerable proportions, and shipped last year, from 23 cows, \$2,075 worth of cream to confectioners; besides this, every cow produced a good healthy calf. This herd has many noted butter cows, such as Kit, 22 lbs. 11 oz.; Miss Stoke Pogis, 21 lbs. 4 oz.; Nettie of St. L., 20 lbs. 5 oz.; Hattie of St. L., 20 lbs. 3 1/2 oz.; Vic. of St. L., 18 lbs. 5 1/2 oz., and a number of others with tests from 13 lbs. 8 oz. to 16 lbs. 10 oz. This herd was at one time the home of the famous cow, Ida of St. L., the largest milker of any Jersey cow in the world; also of Ida's Rioter of St. L., the sire of Ida Marigold, the famous cow in the dairy contest at Chicago; also of Mr. Cogswell's bull, Exile, the sire of the great two-year-old in dairy test at Chicago. Nell's John Bull 21921, their present service bull, is very closely bred to these great sires, and has not only proven himself a fine show bull, but, from his heifers, would say he was a splendid sire, and his stock have been in great demand this season.

The Messrs. Smith have on their farms a fine stock of very handsome little Welsh ponies, some sixty-five in all. These ponies are just the thing for ladies and children—in fact, for any light driving. They are very stylish, speedy, and high steppers, resembling the English Hackney in carriage and action. They range from 10 1/2 to 12 hands in height, and are smart as thoroughbreds. Intending purchasers of either class could spend time profitably examining this stock.

CEDAR GROVE FARM.

This farm, the property of Messrs. A. Frank & Sons, is situated about four miles from Cheltenham station on both the C. P. R. and G. T. R., and about half a mile from The Grange P. O. The farm comprises about 450 acres, 200 of which are on the north side of the road, where one of the sons has erected a large stock barn. On a beauti-

ful rise a short distance from the road are the house and buildings of the main farm. Here Mr. Frank has built a large stone residence, which is complete in every particular, even to a cupola from which a grand view of the whole farm and the surrounding country may be obtained. An important feature of every stock farm is the water supply; in this respect Mr. Frank is very fortunate in having a living spring creek running across the farm very convenient to the barn.

The stock bred on this farm consists of thoroughbred horses, Shorthorn cattle, Suffolk swine and Southdown sheep. The main industry is the breeding of improved Suffolk swine. Mr. Frank is a veteran hog breeder, having had forty years' experience in the business. He has bred Yorkshires, Berkshires, Chester Whites and the small Yorkshires, but has discarded them all for the Suffolk, for, he says, they will give more pork for the same amount of feed. He desires it to be distinctly understood that he is breeding for the pork packer's standard, which demands more size, depth and length. His aim is to make the Suffolk a pig fit for the packers and farmers generally. This herd have been prize-winners at all the principal shows, and are descended from stock with which he won the sweepstakes, four medals and six diplomas at the Centennial Exhibition in Philadelphia. We were also shown a photograph souvenir of the sweepstakes herd, as well as the medals and diplomas.

The boar now at the head of the herd is Lord Nelson, bred by Lord Ellesmere, England; he is proving himself a good sire, is producing pigs of the right sort.

The sows are large, and show the bacon points in a high degree. One sow, Pansy, was suckling a nice litter of ten pigs at the time of our visit. She had remarkably deep, long sides and good hams.

Mr. Frank is a great upholder of the value of roots as a feed for hogs. The principal feed of his pigs consists of sugar beets, turnips and mangels; his ration is two bushels pulped roots mixed with about two and one-half gallons of ground peas and oats. He prefers the sugar-beet to all other roots. He says that roots are the best feed to keep the pigs straight on their legs, and that he has never had a case of rheumatism since he has adopted this system of feeding. We might add that all his pigs were remarkably good in this particular.

The hog-pen is a large, roomy, stone building 30 feet wide by 90 in length; in one end is found a large root cellar, and above this are the meal bins, root pulper and steamer. The upper story of this building is plastered and fitted up as a poultry house. He prefers the White Leghorn and Black Spanish for egg production, and says that his fowls will lay well from January to January again.

Mr. Frank has been trying the experiment of feeding a Yorkshire pig and three Suffolks together on the same feed. He looks upon the gain which has been made as conclusive evidence that the Suffolk is a much more profitable pig to feed than the Yorkshire, and would like to show the experiment to Yorkshire breeders, though, doubtless, they would claim that the difference in the ages, the Yorkshire being an August pig while the Suffolks are May pigs, would account for the decided difference to be seen in the condition of the animals.

In the stables we noticed a young stallion, Goldfinder, sired by the Kentucky-bred horse Gold Leaf. Goldfinder won third last year at the Industrial. In thoroughbreds he has a mare which won the Agriculture and Arts diploma at Ottawa. There are also in the stables here a number of choice young things sired by Messenger.

The Shorthorns have never been shown at any of the large exhibitions, but have swept everything at all the local shows for some years.

In addition to the above stock he has a nice flock of Southdown sheep. He says that three Southdowns can be fed on what it will take to keep two of the large breeds. The Southdowns will produce six lambs, the others one and a-half. His favorites will give a larger weight of a better quality of wool, and is, with all, a hardier sheep.

Mr. Frank then kindly drove us to EVERGREEN FARM, owned by MR. JOHN FLETCHER, of Binkham. This gentleman has been breeding Shorthorns for the past eight years. His herd is headed by Primrose Duke, a Campbell bull imported by Arthur Johnston, of Greenwood.

From Binkham we drove to MR. GEORGE THOMPSON'S farm, where he is engaged in breeding Shorthorns.

The next place at which we stopped was Norwood Farm, the property of MR. A. T. PATTULLO, Alton P. O. Here we found a change in the system of farming pursued; instead of beef cattle, we found a dairy herd of Jerseys. Mr. Pattullo has been dairying for some years, and for this purpose has used the Jersey grade, but, deciding to keep nothing but the best, he purchased a pair of registered Jerseys from Mrs. E. M. Jones, of Brockville. They are both sired by the famous bull Masseno's Son, who won all the first prizes at the principal shows of 1891.

On this farm we noticed a very handy milk-stool, and will try to give an idea how one may be made. In the first place make a long stool about sixteen inches in width, three feet in length, and of a convenient height. Then cut a hole in one end

of sufficient size to hold a large pail, and nail two leather straps loosely across so that they will catch the pail and prevent its touching the ground when a small pail is used. Such a stool is easy to make, keeps the pail out of the dirt, always holds it steady, and effectually prevents a cow putting her foot in the vessel.

Mr. Pattullo then drove us to Hillsburg, where MR. A. F. MCGILL is breeding Shorthorns and Yorkshires. He has a nice herd of Cruickshank cattle, headed by the bull, Sirius, got by Leonidas, and imported from Wm. Duthie by John Miller, of Brougham.

Prizes Offered by American Shopshire Association.

At a recent meeting of the American Shopshire Association, held in the Cadalac House, Detroit, it was decided by the directorate to offer the following Special Prizes at Fairs in 1904, as given below:

\$50.00 to be offered at the London, Ontario, Fair, divided for the best flock of Registered Shropshires, consisting of one ram, one year old or over, and four ewes of any age. First premium, \$15.00; second premium, \$10.00.

Best flock of four lambs, one ram lamb and three ewe lambs, all to be American-bred and owned by exhibitor. First premium, \$15.00; second premium, \$10.00.

\$50.00 to be offered at the Indiana State Fair. Same premiums and classifications as above.

\$50.00 to be offered at the New York State Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Michigan State Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Toronto, Canada, Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Richmond, Va., Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Washington, Pa., Fair. Same premiums and classifications as above.

\$50.00 to be offered at the St. Louis, Mo., Fair. Same premiums and classifications as above.

\$50.00 to be offered at the South Dakota Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Nebraska State Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Manitoba Fair, at Winnipeg, Can. Same premiums and classifications as above.

\$50.00 to be offered at the Provincial Fair, at Montreal, Can. Same premiums and classifications as above.

\$50.00 to be offered at the Wisconsin State Fair, at Madison. Same premiums and classifications as above.

\$50.00 to be offered at the Illinois State Fair. Same premiums and classifications as above.

\$50.00 to be offered at the Minnesota State Fair. Same premiums and classifications as above.

\$50.00 to be offered at the New England Fair, at Worcester, Mass. Same premiums and classifications as above.

\$50.00 to be offered at the Ohio State Fair. Same premiums and classifications as above.

American Fat Stock Show at Chicago, 1894:—Grand sweepstakes premium, if won by a registered Shopshire sheep, \$50.00, 1894 and 1895.

Best registered Shropshire Wether, two years or over. First premium, \$15.00; second premium, \$10.00; third premium, \$5.00.

Best registered Shropshire Wether, one year old and under two. First premium, \$15.00; second premium, \$10.00; third premium, \$5.00.

Best registered Shropshire Wether, under one year. First premium, \$15.00; second premium, \$10.00; third premium, \$5.00.

Extra special premiums for best Wethers, sired by registered Shropshire rams, out of Merino ewes:—

Two years old and over—First premium, \$15.00; second premium, \$10.00. One year old and under two—First premium, \$15.00; second premium, \$10.00. Under one year old—First premium, \$15.00; second premium, \$10.00.

To be offered at the Guelph, Ontario, Fat Stock Show:—Grand sweepstakes, if won by a registered Shropshire sheep, \$50.00 in 1891 and also 1895.

And for registered Shropshire Wether, two years old or over—First premium, \$10.00; second premium, \$6.00; third premium, \$3.00. One year old and under two—First premium, \$10.00; second premium, \$6.00; third premium, \$3.00. Under one year old—First premium, \$10.00; second premium, \$6.00; third premium, \$3.00.

Extra special premiums for best Wethers, sired by registered Shropshire rams, and out of Merino ewes:—Two years old or over—First premium, \$10.00; second premium, \$6.00. One year old or under two—First premium, \$10.00; second premium, \$6.00. Under one year—First premium, \$10.00; second premium, \$6.00.

Sheep to be eligible to compete for any premiums offered by this Association must be recorded and have a number in the Record, a certificate of which must be filed with each entry certificate made. Each registered sheep must bear an ear tag, with number and initials corresponding to that given on the certificate, and must be owned by the exhibitor at least ten days before going into the ring.

Secretaries of all Fairs will observe the above requirements. The above will not apply to entries made for grade sheep.

Our Scottish Letter.

The New Year festivities are over and folks have again got settled down to work. The weather is a fruitful source of conversation with farmers, but the past year has been less vilified in this respect than most of those which have preceded it. North of the Humber the season was one of the best, and if not contributing to make farmers passing rich, it was far from being as dreary as some of those which preceded it. Summarizing the state of matters, it may be said that dairy farmers, without having any cause for complaint, fared not so badly as they sometimes have done; breeders of pure-bred stock of all kinds had no right to grumble; feeders of cattle were getting back their own with a little over, but growers of wheat and potatoes are in a sorry plight. It is not easy to predict whereunto the down grade in these crops will tend, meantime it means no trade and spells ruin; £16 per acre is considered necessary to make potatoes a paying crop. Those who are able to meet the earliest market sold their crops in 1893 at over £30 per acre, and in one case that we have heard of a second crop of cabbages was taken off the land and sold at £15 per acre. This gave a return of about £50 per acre, an abnormal price surely, and a fine illustration of intensive farming. This took place on the Ayrshire coast, where we have some very go-ahead farmers—men who do not cling to old methods, but have receptive minds, and are ever on the outlook for improvements. The wheat growers will have to take a lesson from these, and putting all the energies they possess into their business, adapt their means to the ends that are possible. When the northwest provinces can send us wheat grown at 40 cents per bushel, there is no use in persisting to grow wheat in this country, even although the land be well adapted for the purpose. The problem really is, What should our farmers grow? This question presented itself to farmers in one district some years ago, and the result was that they abandoned their time-honored rotation of green crops and went in for growing hay. They found out that land could be top-dressed with manure to good purpose, and they broke away from the traditions of their farmers, devoting their energies to other departments in which there was more money.

Some of the most interesting items going the rounds at present deal with the butchers' opinions of the fat stock champions at Smithfield and Birmingham. These reports are summarized by Mr. George T. Turner, a recognized authority on everything connected with Sussex cattle, and one of the best judges of meat as well as most judicious of writers on agriculture in England. He gives his opinions and findings to the world in the columns of the London Live Stock Journal, which, for the past three weeks, has been giving interesting notes on his findings. Generally, the results are wholly favorable to the slow-feeding cattle—the West Highlanders and the Galloways. Some of the best of these slaughtered by leading London butchers have turned out very well indeed. Lord Cawdor's first prize Highland heifer, Highland Mary, is characterized as a perfect carcass, and the Messrs. Biggar's Galloway steer as one of the best carcasses Slater and Cooke, the London fashionable butchers, ever had in their shop. Lean beef in plenty and an absence of waste are the great recommendations of these cattle. The A.-A. champion, Bridesmaid of Benton, cut up remarkably well; her butcher characterized her as the best show carcass he ever killed. Her Majesty's great Shorthorn ox, Prince Charlie, has also slaughtered well, and, indeed, may be said to have proved to demonstration that a fat ox may also be lean. It would be of lasting interest to find out how these great animals were fed. The best quality of beef is apparently got from the cattle fed more slowly, and as bearing on this a discussion which recently took place in the columns of the Scottish Farmer is of interest. There is a class of aged steers at the Smithfield Club Show, and some are of opinion that it should be given up, as it is an encouragement to breeders and feeders to keep on an expensive kind of cattle, namely, those which come slowly to maturity. That the meat so fed is excellent is not denied, but that there is any profit in such feeding is very much doubted. Perhaps, from a show point of view, the fairest proposal was that made by a gentleman not unknown to Canadians, Mr. James Biggar, the well-known Galloway breeder. It was that steers which had formerly won prizes at Smithfield should not be allowed to compete in this class. It is undeniable that it would have been better for all such which appeared in 1893 not to have been fed a year longer than the date of their triumph. Without exception they would have sold to better advantage in 1892 than in 1893, and their meat is hardly likely to have been improved by a year's keep, as they were prime fat in 1892. For the credit of these cattle, the breeds to which they belonged, and the judgment as well as the purses of their feeders during the past year, they would have been more profitably slaughtered in 1892.

Clydesdale business is in a fine, healthy state. Prices have not gone up, but the hiring of horses for service in 1894 has gone forward at a rapid rate. Anything like a detailed account of this business would not be of much interest to Canadian readers. Nearly all of the principal studs have

been drawn upon, and the highest prices have been paid for Prince of Millfield's services by Lord Polwarth. Terms are perhaps a little easier than they were, but still there is plenty of money in a good Clydesdale stallion which gets foals. There is no difficulty at all in hiring such to bring in from £250 to £400 in one season. The price of a stallion should rarely exceed one year's purchase, that is to say, the revenue which he would draw in one season. This refers to a good average commercial horse, not to horses which may take high honors in the showing, for which, of course, fancy prices will be paid. On the whole, farmers of every kind, except the unfortunate wheat and potato growers, look forward hopefully to 1894.

SCOTLAND YET.

The General Purpose Horse.

CONTRIBUTED BY CHARLES MICHIE, DEWDNEY, ALTA.

The fall exhibitions are over for another season, and the red, blue and yellow tickets have been distributed to the all-expectant exhibitors, bringing joy to the few, with wailings and gnashing of teeth from the many that would not be comforted. But who ever saw it, or how could it be otherwise? To drive a pig to the fair that for the life of him can't see the benefit to be derived from farmers' institute work, or agricultural shows, or mildly protest with a newly halter-broken colt over the same distance as to your positive assurance that he will take the red ticket (the colt isn't so sure), and then have to head for home with an empty hand, and possibly an empty stomach, why, it would have been "a credit" for even Mark Tapely "to look happy."

Judges are not incapable of erring, for like other men they are only mortal, but sometimes it is almost impossible to give satisfaction. Having attended the Winnipeg Industrial, and three or four local exhibitions in the Territories, I had occasion to observe that the greatest dissatisfaction was most apparent, as a rule, in passing judgment on the general purpose and agricultural horse class, which are generally combined. This, as a class, is usually well represented, and is most difficult to define. It constitutes a free-for-all competition, and opens its arms for the lower ten in the equine world, be they descended from high or low degree, since they cannot lay claim to a defined type. Everybody, of course, knows a "general purpose horse" when he sees it, or thinks so, but where his position in equine society begins and where it ends is what nobody knows.

I saw in one instance where a protest was made against a mare registered in the Clydesdale Stud Book, that had been entered and won a prize in the "general purpose class," her chances in her proper class being less on account of being slightly undersized. As a rule, also, among the two-year-olds and under in that class, preference was invariably given to the "big ones," some of which would make respectable draughts when furnished, while some neat little thing, with the foundation for a good carriage horse, was overlooked, although for a general purpose she filled the bill more decidedly than her more fortunate opponent. That such a state of affairs requires alteration is probably apparent to most directors of agricultural societies, but the question is how to remedy it.

I believe the directors of the Toronto Industrial omitted the general purpose class from their prize list this year, and it is their intention to rule out the agricultural class for horses next year. Such a course may be approved of in connection with an exhibition on the scale of the Toronto Industrial, but such drastic measures are not applicable to rural societies, especially in Manitoba and the N. W. T. In a country like Western Canada, where distances to market are in some cases great, something in the horse line that will step out at an eight-mile trot, and still have weight enough to draw a load when required, or work with freedom at the plow, is of necessity demanded. Their superiority over a heavy draught team in such an instance is obvious, apart from being less expensive, which the settler with limited means has to take into consideration. For the same reason but few are able to invest in a team of Cleveland Bay mares, half-bred thoroughbreds, Morgans, or any of the recognized breeds that would fill the place of the so-called general purpose. To the mixed agriculturist, however, the benefit to be derived financially from a span of mares of the types alluded to, were he fortunate enough to possess them, would be incomparably ahead of the ordinary general purpose, with no defined breeding. Such mares, mated to a thoroughbred horse of the carriage stamp, or any recognized type of the heavier class of roadster stallions, should raise colts that would "go out of the country," and command a price in any market. The same remarks hold good to draught horses, if of the proper quality and substance, supposing such an animal is used in preference on the farm. The general purpose mare, unless above the average, will, if mated to the general purpose stallion, produce something no better than herself—the chances are, something inferior—and here is the point I wish to draw attention to. The directors of some of the agricultural societies, probably from a sentiment of wishing to

accommodate one and all, gave a class and prizes for general purpose and agricultural stallions (no registration of any kind necessary). Brandon I noticed in particular, which has a society that should be ahead of such. Now, the efforts of every society should be to elevate and benefit the farmer; for that reason a government grant is given, and with the society, if properly managed, lies the solution of the difficulty referred to in the general purpose agricultural class for horses. Let the directors divide that class into two heads, and for the general purpose class let the judges be informed to keep in their minds' eye something approaching the Cleveland Bay or carriage class as their model, and award accordingly, while for the agricultural class let them be judged according to the draught standard. On a principle of that kind the general purpose horse would stand a chance of being improved, the heavier class becoming assimilated with the draught, while the lighter sorts would benefit in quality, and still retaining his general utility standard he would gradually merge into a more defined type, and consequently a more saleable animal. As for the general purpose and agricultural stallion, the sooner he turns tail the better. No intelligent breeder would ever think of mating a likely mare, with the expectation of getting a good foal, to one of those undersized or misshapen nondescripts that go around squealing in the spring, and whose owner insures you for a remarkably small sum to get a foal that will stand and suck, or walk once around the mare (no word about getting your own figure as a four-year-old).

There are people who will see perfection in some half-bred mongrel, because they bred and own him, and there are people who will use him because "a horse is a horse any how," but it lies in the power of directors, having the management of agricultural societies, to benefit the agricultural community at large to an appreciable extent, by leaving no room for the general purpose stallion on their prize list, for by doing so farmers will be left more to the option of breeding on draught or carriage lines, nor would it take many years to prove the practical benefit resulting from such a mode of procedure.

Annual Meeting.

The annual meeting of the American Oxford Down Sheep Record Association was held at Grand Hotel, Cincinnati, Ohio, January 9th. J. R. Cunningham, Vice-President for Indiana, took the chair. The treasurer's report showed a balance of \$1038.14 on hand. During the year 1893, \$1305.00 was paid by the Association in special prizes to Oxfords at the World's Fair, and at state and provincial fairs.

It was decided that the Association offer at each state and provincial fair in the United States and Canada in 1894, the sum of \$50 on pens of Oxford-Down lambs. The money to be divided into three prizes: 1st, \$25; 2nd, \$15; 3rd, \$10. Pen to consist of four lambs of either sex, bred and owned by exhibitor in the state or province where the prizes are competed for. All lambs competing for these prizes to be recorded in the American Oxford Down Record, with A. O. D. R. A. ear tag inserted in the ear, and certificates of registry under seal of the Association presented at the time of exhibition. The fees for registering lambs owned by members of the Association were reduced to 50 cents, but remain as before (\$1.00) for lambs owned by non-members, and for all sheep over one year old.

Encouraging letters were received from members who could not be present, and from President Goldsborough, regretting his inability to attend the meeting and adding, "While I do not want you to elect someone else as President in the sense of wishing to be relieved of the office, because I have always appreciated the honor, yet I do not think it fair that I should hold the place, with whatever prominence and honor may belong to it, when there are other breeders who are as largely interested as I am, and nearer at hand, and who can and do attend the meetings more conveniently than I have been able to do. My interest in the breed and in the Record Association has never wavered. I only wish, for my larger success as a breeder, and for the pleasure it would give me to meet you oftener, that I was nearer the centre of population in our country, which is not far distant from the home office of the Association."

Papers on "The Future of the Oxford," by Geo. McKerrrow, and on "The Prospect," by the secretary, were read. The meeting was well attended, and members expressed themselves as pleased with the condition of the Association's affairs, and all agreed that there is no safer stock to "tie to" in these times of general business depression than a flock of good Oxford Downs.

The secretary was instructed to request the different State Fair Associations who have not already done so, to give Oxfords a separate class. The election of officers resulted as follows: President, Geo. McKerrrow, Sussex, Wisconsin. Vice-Presidents, a list of one from each state and province represented in the capital stock. Board of Directors: T. W. W. Sunman, Spades, Ind.; E. J. Thuring, Chardon, O.; R. J. Stone, Stonington, Ill.; J. C. Williamson, Xenia, O. Sec-Treas., W. A. Shafor, Middletown, O. Adjourned to meet at Grand Hotel, Cincinnati, O., second Tuesday in January, 1895. W. A. SHAFOR, SEC.

Establishing a Dairy Herd.

To the Editor of the FARMER'S ADVOCATE:

On looking over your valuable issue of 20th ult. my eye fell upon an article headed "How to Acquire Herds of Good Dairy Cows." Well, sir, perhaps a few of my experiences as a dairy farmer might not come amiss to many of your readers at this time. I started a herd of fifty Ayrshire cows on my farm in 1877, but as it was the only dairy in that part of the border of Scotland at that time, cows brought from the west to the east suffered a good deal from climatic change, so much so that for four or five years I was much troubled with felon and garget. However, after I got into animals bred and reared on the place I became pretty free from disease in my dairy. In fact, I had a dairyman who had charge of said cows for six years, and he had only one case of sickness on his byre during that period. I shall just in brief give you an outline of my mode of dealing with my animals. I culled out every spring ten of my oldest and worst cows, and supplied their places with three-year-old calving heifers bred on the place, and all selected from my best milking cows; the surplus I always sell off the place. There is another point to look at, however, and that is the rearing of the said heifer. Heifer calves ought always to be well kept, but not too well; by that I mean they ought never to be allowed to get fat, lest they show a predisposition to put on flesh (which I have often seen them do when so treated), but kept always just in what we call fair store order till they are once in calf. By the above order of things you always have a nice byre of not too old cows, as such often induce a pretty heavy loss to the owner. T. M. BELL, Mitford, N. W. T.

FARM.

My Experience in Mixed Farming.

I cannot say that I am making an independent fortune out of farming, neither do I expect to, but I am able to make a good living and have a surplus left for the improvement of my farm and stock. Some farmers have become successful by devoting their attention to some special line of farming. Dairying has been a source of great profit to some, fruit-growing to others; yet I think mixed farming indispensable on some farms and in some localities. In fact, farmers who practise a good system of mixed farming are as successful as those who devote their time and attention to one particular source of profit.

A farm of one hundred acres should carry from six to ten cows, and about the same number of young stock. In order to receive the best returns from cows they should calve about the 1st of September or October, thus allowing the fall and winter months for buttermaking; they should be well fed, so as to give a good flow of milk. This plan allows the cows to rest during the hottest weather, when the flies are troublesome and pasture poor.

Sheep should also occupy a prominent place on the farm. I would recommend a pure breed of some kind most adapted to the farm on which they are kept. About twenty-five head can be well taken care of, and will bring in returns twice a year, as well as keep down the weeds and enrich the soil. Well may they be spoken of as "the golden hoof."

One or two good sows would also be a means of profit. Pork weighing 125 pounds, which can easily be obtained at five months, will bring a good price at any season of the year. This will afford a means of consuming all coarse grains raised on the farm.

I would not forget the poultry. Sixty hens (say the Plymouth Rock), well cared for, will realize in one year for eggs and chickens a sum almost incredible to those who have neglected this part of farm work, which, if properly managed, will afford a means of pleasure as well as profit. Fresh eggs are always in demand, and if the chickens are hatched early, they will supply eggs during the winter months when prices are high. A nice sum can be realized at the end of the year by raising turkeys (say forty or fifty). They do not take much care except for the first few weeks, and are always saleable. Next comes the marketing. This should be done in a business-like way. In preparing produce for the market care should be taken to offer it in the most attractive form possible. If the quality of the butter, eggs and poultry offered is good and arranged in good shape, there will be no difficulty in disposing of a large quantity. I think if a farmer was the owner of a reasonable number of cows, sheep, pigs and poultry, and exercised care in feeding and other details, there would be fewer discouragements, and they could also find time to read some of the best papers on agriculture, and otherwise improve their minds, and make farming a pleasure and a profitable calling instead of a drudgery.

T. M.
[Perhaps T. M. will tell us how much land he works, and what his average profits are. Many of our readers are firm believers in mixed farming. Send us data of what you are doing and what your net profits are per year per acre or per hundred acres. Or, if you cannot do that, tell us the size of your farm. Will those who believe in and practice specialty farming give us the benefit of their experience? Let us compare notes.]

OUR PATRONS' EXPERIENCE.

What our Readers Say.

The "Carberry News," one of the *finest* of our local newspapers, kindly refers to the *ADVOCATE* as "exceptionally bright and interesting, and brim full of interesting matter for the farmer and the home. Every home should have it."

"The Mirror" says:—"We receive regularly the *FARMER'S ADVOCATE* and are pleased with its appearance. It is clean, bright and original. Much of the matter is written with the view of aiding the farmer, in his everyday work. The illustrations, which are original, are first-class. The price of this excellent magazine is only \$1 per annum, in advance."

"The Regina Leader" says:—"The *FARMER'S ADVOCATE* grows better year by year, and is always full of the most reliable articles, and from a scientific view is to the farmer most valuable."

The "Hamiota Hustler," in a late issue, refers in complimentary terms to the *ADVOCATE*.

Mr. Mortimer Levering, La Fayette, Ind., Secretary of American Shropshire Breeders' Association, writes:—"I assure you I appreciate the *ADVOCATE*. I am very highly pleased with it, and consider it one of the most practical and valuable stock journals published in America."

What our Advertisers Say.

SIRS.—The result of my ad. brought me more letters of enquiry than I care to answer. For anything farmers want, it is the best medium I have used.
H. D. BINKLEY,
Dundas, Ont.

SIRS.—Judging from the numerous letters of enquiry which I have received relating to the Ripper Feed Cutter, which I invented, I think that the brief ad. published in the *FARMER'S ADVOCATE* must have attracted a good deal of attention.
L. M. BATTY,
St. Thomas, Ont.

SIRS.—I have been well pleased, and feel amply repaid for the money expended in advertising in the *ADVOCATE*. I believe it is a first-class medium to advertise in.
GEO. E. DECKER,
Pump and Wind-mill Manufacturer, Forest, Ont.

GENTLEMEN.—I am quite satisfied with the advertisement in September No. of the *ADVOCATE*, although it looked like a risk at the time. I intend to continue it.
W. H. VANTASSEL,
Belleville, Ont.

SIRS.—I have used the *ADVOCATE* for advertising my Stumpers and Safes for the last six years, and have found it one of the best papers to reach the most intelligent people in the Dominion.
S. S. KIMBALL,
Manufacturer of Safes, Stump and Stone Extractors, Cash Railways, etc., Montreal, P. Q.

GENTLEMEN.—Our opinion of the *ADVOCATE* as an advertising medium to reach the farming community, is that it stands second to none. Our experience with it has been very satisfactory.
CLARE BROS.,
Manufacturers of Hot Air Furnaces, Registers, Stoves, Hollow-ware, etc., Preston, Ont.

SIRS.—The results of my advertisements have been quite satisfactory, exceeding my most sanguine expectations. I am pleased also to inform you my machines are continuing to give perfect satisfaction, and justify your esteemed commendation.
JAS. W. PROVAN,
Manufacturer of that excellent implement, the Provan Carrier, Fork and Sling, Oshawa, Ont.

GENTLEMEN.—We are pleased to acknowledge the benefit to our business as a result of our frequent advertisement in the *ADVOCATE*. It has been a profitable investment to us, and at the same time a benefit to the trade and public, by lessening the expense of selling, and enabling us to place the best goods on the market at lowest prices. THE GOWDY MFG. CO.,
Agricultural Implement Manufacturers, Guelph, Ont.

DEAR SIRS.—We have very great pleasure in stating that the results of our advertising in your valuable paper have been most satisfactory. The correspondence, together with the business resulting from our advertisements placed in your hands from time to time, fully justify us in saying that the money so invested has brought us good returns. Judging from the class of correspondence that we have had from these advertisements, we should say that you have a very intelligent and superior class of readers, and have much pleasure in recommending parties to a liberal patronage of your columns.
JOHN S. PEARCE & Co.,
Seed Merchants, London.

SIRS.—Of the many papers in which our firm advertised the last few seasons, none gave us as good returns as yours. We attribute our immense business, which extends from the Atlantic to the Pacific, to our high grade seeds, business energy, and care and a judicious use of printer's ink. We have always found our advertisements in the *FARMER'S ADVOCATE* pay us well.
THE STEELE BROS. Co.,
Seedsmen, Toronto.

SIRS.—The results of our advertising in your paper have proved thus far very satisfactory, having surpassed our expectations. Commencing, as you are aware, with a three inch space in your columns, we have found the money we have expended in advertising in the *ADVOCATE* a paying investment, as it reaches the majority of the men with whom we deal, viz., the prosperous and progressive farmer.
TOLTON BROS.,
Manufacturers and dealers in all kinds of Agricultural Implements, Guelph.

GENTLEMEN.—We desire to express to you the great satisfaction we have had in advertising in the *FARMER'S ADVOCATE*. We have now been advertising for upwards of a quarter of a century in the different newspapers in this province and Ontario, and have never had, from the whole of them combined, in all that time, the number of enquiries we have had from the readers of your magazine for the past three years. We believe there is no better medium in the Dominion than the *FARMER'S ADVOCATE* for reaching the class of customers we look for in our special line of business. Wishing you increased prosperity, we remain,
JOHN LARMONTH & Co.,
Manufacturers of Horse Tread Powers, Threshers, Sawing Machines, Ensilage Cutters and Carriers, Montreal.

SIRS.—Our firm has had an extensive experience in advertising, and without any hesitation whatever we cheerfully pronounce the *FARMER'S ADVOCATE*, of London, the most effective and the most far-reaching journal we ever made use of as an advertising medium to reach the farmers. Our style of advertising is not merely a send-for-catalogue system. We invariably quote the plain figure prices of our goods right in the advertisement, our terms being strictly cash with the order in all cases, and yet with this most rigid manner of doing business we have had hundreds and hundreds of answers to our advertisements in your well known farm paper, nineteenth-twentieths of which contained P. O. orders for money, or were registered letters. This speaks volumes. Of course it goes without saying that our prices were right, and yet the *FARMER'S ADVOCATE* was the medium. Our \$1.50 single harness, our \$16 road carts, or one of our low priced scales may now be found doing duty on farms in the Maritime Provinces, Quebec, Ontario, Manitoba, N. W. Territories, clear through to British Columbia. The *FARMER'S ADVOCATE* seems to go everywhere.
STANLEY MILLS & Co., Hamilton, Ont.

A Mixed Farmer's Ideas on Mixed Farming.

Editor of the FARMER'S ADVOCATE:

I have noticed lately in the Winnipeg Tribune several letters urging farmers to grow less wheat and turn their attention more to mixed farming, and from the addresses attached to said letters I should judge that they were written by some of the many theoretical farmers who reside in Winnipeg, and who consider it their duty every now and again to enlighten the actual tillers of the soil on the way to farm. Now, as an actual farmer in Manitoba of some fifteen years' experience, I contend that the advice is bad, and before giving some of the many reasons why I believe it to be so, I might first point out that the growing of wheat at a profit is the old struggle of the survival of the fittest, and I maintain that there is not on the face of the globe a country where there are conditions so favorable to wheat growing as in Manitoba.

The fact of the price being low and the crop not paying one this year should not lead us to conclude that we can never make it pay, or that other branches of farming will pay better. If the wheat grower here on land next to nothing in price, and a crop every year as the Red River Valley produces, finds it hard to make ends meet, what must be the position of the farmer of Ontario, with land from \$50 to \$100 per acre, and a crop only every second year? The price during the season of navigation has not ruled more than from five to eight cents per bushel in favor of the Ontario farmer, and the indications are that in a year or two wheat in Winnipeg will be worth as much as in the outlying districts of Ontario, so that the question of price should not be made an excuse to quit growing it.

Are the climatic conditions favorable for wheat growing?

Wheat is said to succeed best near its northern limit of production. If we are near the northern limit we are not beyond it.

I am confident that I am correct in saying that the country south and west from Winnipeg (in the Red River Valley) has not, in a period of fifteen years, lost as much as one whole crop by frost. There may have been partial losses, but taking it all in all the aggregate loss has not been as much as above stated. And I venture to say that in the same district any kind of stock raising will show a much larger percentage of loss in the same period. We will refer to the price of stock later on.

Now for a few figures. By the census of 1885—the last one not showing the figures, as far as I know, in the same way—we find that in the municipality of Portage la Prairie the average quantity of wheat raised per family was 1,061 bushels; in Oakland the average per family was 1,050, and in North Cypress 1,055. The three municipalities showing the largest number of cattle per family are Springfield with 21, Ste. Francois Xavier 19, and Macdonald 17. In the three first or wheat-growing municipalities the price of farm lands rules the very highest in the province, and in the three latter or stock raising ones the very lowest, notwithstanding their proximity to Winnipeg. This does not look as if wheat raising should be dropped. To urge a farmer to take to mixed farming to keep up the fertility of his land is not sound logic, when he can buy new and untouched prairie at from \$2.50 to \$5 per acre. With a hill of manure in every field, it would cost him more than that to spread it on the land. Pork raising, which at present yields a very fair return, I would advise every farmer to be wary of for some time at least, as there is a boom on in that particular branch, which, like all other booms, must burst, and if you are not out from under the collapse will be felt more than the rise. At the same time I would say, one year with another, if a farmer is bound to diversify his business, or to have an adjunct to grain raising, that pork raising will chime in better with it than any other branch he can take up, not excepting horse raising, cattle raising, dairying in all its branches, sheep or poultry raising. These may all be done in a limited way, not to make money from the sale of their products, but to prevent a farmer from being under the necessity of buying any of them, for, in my experience, there is a wide, wide gap between the buying and selling price of any article in this country, when you deal through a middleman; this should indicate the true course for the farmer to pursue. What, with excessive freight rates, unjust tariff laws, combine policies and the profits of the retailer, he comes far short of getting value for the dollar he may have to expend in the purchase of such of the necessities of life he does not raise on the farm. If he has pork to sell he may get six cents per pound for it, but if he is short and has to buy, his grocer will charge him fifteen cents for it cured. If he has beef to sell, the price will be from three to four cents per pound by the side, when the retail dealer's price is from ten to fifteen cents when he buys. The dealer buys on an export basis, but sells according to the import value. With such a state of affairs to contend with, the farmer's only salvation is not to have any of the necessities to buy he can possibly raise on the farm. At the same time let him draw the line right there, and make his staple products the small grains—wheat, oats and barley, with wheat the sheet anchor of his business. Let him bend all his energies in that direction, and in the struggle for the "survival of the fittest" I am positive he will come out on top of the wheat raiser in any

other country on the globe. It is scarcely more than a dozen years since wheat began to be exported from Manitoba, and the millions of bushels that yearly go out now is the best answer to what the country is capable of producing, and if he does diversify his farming let him do it with a view to prevent him buying what he needs for the support of himself and family. The low price of wheat has a tendency to be not permanent for two reasons—its cheapness causes an increased consumption of breadstuffs among classes of people who may not usually make use of it as an article of diet; at the same time it deters farmers from growing as much, or causes them to quit growing it altogether, and the inevitable ebb and flow in the price of that, in common with all other commodities, will result sooner or later in a higher price prevailing. Let us be ready for it when it comes.

A. D.
[The writer of the above takes a stand directly opposed to that now so generally accepted as the only reasonable and safe plan of farming successfully, viz., mixed farming. Of course there is mixed farming and mixed farming. The writer says in effect that the wise farmer takes all he can get out of his land, and as soon as it is "played out" move into a new place and repeat the operation; when the dung pile gets higher than the stable, move the stable; export nothing but grain, and do not on any account concentrate the grain into less bulk of greater value as beef, pork, butter, cheese, poultry, etc., and thus save the difference in freight. But as there will doubtless be considerable discussion on this article, we will not deal further with it here. Suffice it to say that the farmers who are in best condition financially today are those who have been engaged in mixed farming, no matter what district you look too.—Ed.]

Farmers' Institutes in Wisconsin.

BY PROF. JOHN A. CRAIG, UNIVERSITY OF WISCONSIN, MADISON, WIS.

In presenting, as suggested, an analysis of the forces that have made the farmers' institutes of this state so successful, it is necessary, at the outset, to assert that not one of them is comparable to the personality of the man whose life was rounded in their service. The late Mr. W. H. Morrison, who was superintendent of the institutes from their inception, was exceptionally adapted by nature and by education for the work he directed so effectively. As a part of his nature, he had the kindly interest and the open-hearted manner which are so necessary to bring and bind together diverse elements in close organization. His perception of the good in men was keen, and through this he associated with the institute earnest workers, whose enthusiasm sprung from hard-earned success in their vocations. By education he was equipped as an organizer, and made an authority on the industries of the several communities of the state. Having served in several public capacities, he had an extensive acquaintance over the state, and that was of great benefit in securing the interest of localities. An attempt to do justice to the personality of one who has been a friend can never be satisfying, so that I shall confine further consideration to an outline of the other elements that have been successful parts of the superintendent's policy.

THE SUPERINTENDENT A SPECIALIST.

The most marked development of the agricultural resources of Wisconsin has come through the specialism of the lines of industry and their incentives. The institutes, coming under the latter, have been specially helped by this, and the specialism exists in the fact that they have been the subject of the uninterrupted thought and continued effort of one man strengthened by the co-operation of many others. As to the effect of this specialism, it is most clearly observable in the system of advertising meetings, in securing the services of the best men, and also in adapting the institutes to the needs of the different localities.

ADVERTISING THE INSTITUTES.

The attendance at an institute depends chiefly on the degree to which the date of the meeting has been made known in the neighborhood. The sending out of posters is made very effective in advertising the time of the institute, and in making known the subjects and the speakers. The centre of the poster is given over to the programme, and the outer parts to local advertising. The service of the school is enlisted, and the interest of its officers is further secured by allowing them to utilize a large part of the evening meeting with exercises prepared by the school children. Direct correspondence with the enterprising men of the neighborhood is another agency that is freely employed.

ENLISTING SUCCESSFUL MEN.

As soon as the time of holding an institute was fixed, the superintendent would write to the most successful and the most influential farmers of the community enlisting their co-operation. This was always effective in giving the institute a standing, and it localized the institute in a very desirable manner. This year the superintendent had four conductors under his direction. These men have direct charge of the conducting of the institute, and they usually have from two to four other workers with them, in addition to a number of other local helpers. It was a distinctive trait of the late superintendent to be constantly bringing forward

new men. In this he excelled. Every worker coming in contact with him felt the inspiration of an intimate friend who had large views of life, and those who were diffident and ineffective in talking of their work at first would, through him, catch something of the noble fire there was in it, and develop into earnest and direct speakers.

ADAPTING INSTITUTES TO LOCALITIES.

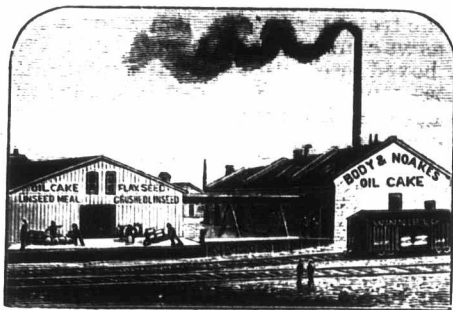
It means the success of the institute if the superintendent is so versed in the leading industries of the farming community as to give the audience just that which is interesting and useful to them. A superintendent of wide observation who is a man of affairs can see the situation clearly, and he will make no mistakes in this direction. To make the meeting successful, both in point of attendance and effectiveness, this must come to the front for consideration.

EXTENSION OF THE WORK.

In the system here in vogue there is the possibility of further extension without disturbing the present structure, but simply adding to it. The system has advanced so that to add to its development the season for holding the institutes has to be widened. Most of our institutes are held in December, January, February and March, and as a consequence it is not possible to leave the main lines of railway to any extent. It is unquestionably true, that the greatest good is done by the institutes when they are held in communities that have not the benefit of close and ready communication with the rest of the world. Such communities are the most backward in their progress, and it is a fact that the institutes in such prove an attraction, and draw large and enthusiastic audiences if the weather is favorable. It is thought to be the best plan to confine the winter institutes to the towns that are easily accessible by means of the railroads, and to make the more distant points during the summer season. Travelling in such parts is much easier and more agreeable at that season, and the weather is likely to be more favorable for attendance from a distance, if the date of the meeting is arranged for a time when the pressure of farm work is light.

Flax Culture.

An industry that does not receive the attention in Manitoba or the Territories that its importance deserves is that of growing flax. Very considerable quantities are grown every year in Southern Manitoba, by the Mennonite population, located on that magnificent stretch of land, lying between Gretna and the Pembina Mountains. It is grown entirely for the seed, being harvested with a binder or cut loose with a mower, and it usually receives little attention, being left out till other grains are cared for, as it does not easily shell; it is threshed with an ordinary separator very satisfactorily, by using proper flax screens. Sown on breaking early in June, it generally yields a very fair return on old land. Care should be taken that the land be free as possible from weeds, as flax comes away slowly in the spring, and being sown rather thin (when for seed), gives weeds a great opportunity.



The Winnipeg Linseed Oil Mill, owned by Messrs. Body & Noakes (and of which the accompanying cut gives a good idea), has been running for some years; it uses the bulk of the flax grown in Manitoba, manufacturing boiled and raw oil—the residue being the oil cake, so highly prized by stock feeders, large quantities of which are shipped to Eastern Canada and England after the local demand is supplied. It is yet an open question whether flax could be profitably grown here for fibre. We are inclined to think labor too scarce, and also that the fibre would grow too woody in this climate.

But it might be more generally grown for the seed in many districts. The last crop bulletin issued by the Department of Agriculture gives the area under flax as 9,737 acres, average yield of 11.96 bushels per acre, making a total of 116,451 bushels; from 15 to 20 bushels per acre, however, is frequently obtained, and the price, though down to 70 cents this year, has been generally 80 and 90 cents per bushel, so that the flax crop might well become another "egg in the basket."

Occasionally we hear of dairymen who have trouble with their milk. One writer, in Hoard's Dairyman, says his milk becomes "ropy" in about twelve hours after milking. His cows have been in the habit of drinking from a pond of still water, and the opinion of the Dairyman is that bacteria from the pond has a good deal to do with the trouble. It is also suggested that the milk vessels be closely looked after, that all the pans and creases be thoroughly cleaned and scalded out.

QUESTIONS AND ANSWERS.

Veterinary.

ANSWERED BY W. A. DUNBAR, V. S., WINNIPEG. INDIGESTION—LICE ON HORSES.

HARRY DELF, Indianford:—"1. A nine-year-old horse of mine sweats when standing in the stable. I clipped him and do not cover him with blankets. He sweats from the flanks back over the hips and down to the hocks, the rest of him being perfectly dry. He is in poor condition, but eats well; has no strength to stand any work. He is also troubled with pin worms, which I can not get rid of; has been in this condition for the past year. A V. S. examined his teeth, but pronounced them all right. Please prescribe. 2. What will destroy lice on horses?"

1. Your horse is suffering from a form of indigestion, probably brought on by improper feeding. Feed exclusively, but sparingly, on bran mash for sixteen hours, and then give laxative lall composed as follows: Barbadoes aloes, six drachms; calomel, one drachm; ground ginger, two drachms; syrup or soap, a sufficient quantity. Continue the mash diet until the medicine has ceased to operate. It is also necessary, whatever the diet may have been, that a change should be made. If the animal has been fed on dry grains, this ought to be changed to soft food, such as alternate rations of boiled or steamed oats, barley, wheat, bran mash, with flax-seed, etc. Give in food, morning and evening, for two weeks: sulphate of iron and nux vomica, of each half a drachm; gentian, one drachm; bicarbonate of soda, two drachms. Give walking exercise daily in the open air, when not too cold or stormy.

2. Powdered stavesacre seed, four ounces; soft soap, four ounces; carbolic acid, one ounce; water, one gallon. Boil for half an hour. Rub this ointment well into the lousy part, and repeat once a week until the lice disappear.

MARKINGS OF PLYMOUTH ROCKS, ETC.

T. Saltcoats, Assa.:—"Kindly publish correct markings of pure-bred Plymouth Rock fowl, in order to select from a flock of mixed and pure-breds, male and female. Also give cure for coughs, with hard breathing, swell heads, and egg eating." See FARMER'S ADVOCATE, December 5th, page 465, for markings of Plymouth Rock.

1. The disease is probably the "gapes" or "roup," which consists of an inflamed state of the trachea, caused by the presence of small worms. These worms can be removed by very carefully introducing into the windpipe the end of a feather properly trimmed, turning it around once or twice and then drawing it out. The infected fowls should be kept in a dry, well-ventilated and warm place, apart from the rest of the flock. The inhalation of tobacco smoke is recommended for the destruction of the parasites. Washing the beak and mouth with a weak solution of chloride of lime is also said to be beneficial. The food should be pulaceous and composed chiefly of barley meal. Give, morning and evening, in food, a little sulphur and ground ginger.

2. Allow plenty of gravel, oyster shells, bone-meal, meat, etc. Have nests with a hole in the bottom, so that the egg will fall through as soon as dropped. There is no infallible remedy for this foolish vice.

ANSWERED BY J. H. TENNANT, V. S., LONDON. HEAVES.

J. J. BLACKBURN, Smith's Falls:—"I have a horse that has been troubled with the heaves for about eight months. Kindly give a remedy?"

In the first place, give the horse a dose of some purgative medicine. A good one is 7 or 8 drachms of aloes given in the form of a ball. Then give 1 drachm of Digitalis night and morning in the feed. Care must be exercised in feeding not to give dusty hay or too bulky feed. It will also be well to dampen the feed. Do not work or drive the horse on a full stomach. Give plenty of time for him to empty himself before putting to hard work in the morning."

INDIGESTION.

SUBSCRIBER:—"I have a driving horse, that after being driven four or five miles frequently scours very badly. I know no cause for it, have only had him under a year. Can you give reason and remedy, and oblige?"

The scouring is caused by the improper digestion of food, which may be due to various reasons. If worms are suspected, give a pint of raw linseed oil and one ounce of turpentine, once a week, as a drench. In my practice I have found that more than one-half of the cases of indigestion are caused by imperfect mastication of food owing to some defect in the teeth, and would advise "Subscriber" to have his horse's mouth examined by a competent veterinary surgeon.

Miscellaneous.

BUCKWHEAT.

R. A. FAIRMAN, Beaverton:—"What is the value of buckwheat as a stock food?" Buckwheat does not occupy a very prominent place on the farm as a feeding grain. It makes a good food for poultry, and when mixed with corn is sometimes used for fattening swine. It can also be fed to other kinds of stock with good results; but under ordinary circumstances it is not likely to prove a profitable grain to feed, for the price per

bushel as compared with its feeding value is usually high. When the price is low, and other feed is dear, it will undoubtedly pay well to feed it in connection with other grain. Compared with oats the digestible nutrients in a hundred pounds of grain are as follows:—Buckwheat—Albuminoides, 6.8; carbo-hydrates, 47.0; fat, 1.2; nutritive ratio 7.4. Comparative value per 100 lbs., 77 cts. Oats—Albuminoides, 9.0; carbo-hydrates, 43.3; fat, 4.7; nutritive ratio, 6.1. Comparative value per 100 lbs., 98 cts. We would be pleased to hear from any of our readers who have had experience in feeding this grain.

FATTENING HOGS.

J. J. B. Smith's Falls:—"Would you advise feeding peas whole or grinding them and mixing with other chopped grains? Should the feed be fed dry or soaked in boiling water?"

A more profitable ration can be made by grinding the grains finely and then mixing in varying proportions, according to the amount of each on hand and the present market price of the same. It would be necessary for us to be in possession of the above facts before we could recommend a ration for you. We have always found the best results to follow the feeding of grain ground finely and fed dry, with plenty of water in a separate trough. Many practical men feed soaked chop, for which cold water is usually used as answering the purpose equally as well, and also being much cheaper and involving less labor.

We cannot do better than to give the following points on pig feeding, which were given to us by a very successful breeder, Mr. J. M. Hurley, of Belleville. He says that he has solved the problem of the successful raising of pigs without milk. He feeds the young pigs barley ground very fine, mixed with an equal amount of shorts; this is fed dry. The youngsters should not be weaned until at least two weeks after they had learned to eat. He gives pure water as drink. All his pigs are fed ground grain dry and given plenty of water. His favorite mixture for general feeding is composed of equal parts of peas, rye, barley and shorts. The peas, rye and barley should be ground very finely.

THE BEST KIND OF CHURN.

"What kind of a patent churn is the easiest to operate, and at the same time make good butter?"

We do not know of a better churn for farm use than the revolving box or barrel churn, similar to those in use by the creamery men and the travelling dairy. The size of the churn should correspond to the size of herd. It should have a capacity of at least twice the amount of cream which will need to be churned at any one time. Two or three times during the first ten minutes of churning the plugs should be removed to allow the escape of gas. The churn should revolve at the rate of about sixty or seventy turns to the minute.

SAWDUST.

SUBSCRIBER, North Nation Mills:—"Kindly give the value of sawdust as manure—that is, sawdust used for bedding cattle. Is it of benefit as a top-dressing to meadow and pasture land, or should it be plowed down? Should manure saved during winter be put out in the spring and plowed down, or left over to autumn to put out and plow under?"

Sawdust makes an excellent material for bedding animals in sections where it can be easily obtained. It is a good absorbent, easily handled, and the manure is readily spread on the fields. Dry sawdust will absorb three times its weight of liquid. In regard to its manurial value, it compares fairly well with other materials used for bedding purposes. In comparison with straw its value is as follows:—

	Sawdust.	Straw.
Potash.....	0.10	0.50 to 1.00
Phosphoric Acid.....	0.05	0.20 to 0.30
Nitrogen.....	1.00	0.33

From the above it will be seen that the value of sawdust as a manure is not very great. Unless it is rotted even this slight amount of plant food will not be made available for years. The time will depend upon the variety of the wood. Hardwood sawdust will rot much sooner than that made from cedar or pine. Sawdust when applied to heavy soils has a beneficial influence through its mechanical action in loosening and pulverizing the soil. On lighter lands this very action will have an injurious effect, and unless the sawdust is rotted it may be a positive injury to the soil. Some say that sawdust is too cold for use in the winter time, but this idea is chiefly due to the fact that green or wet, frozen sawdust has been used. To obtain the best results the sawdust should be drawn in the summer or fall, and thus time would be allowed to dry before needed for use. Some farmers say that when sawdust is used as bedding for horses it has a tendency to make their hoofs dry and brittle. Manure mixed with sawdust requires more careful watching to prevent fire-fanging, as it will heat more readily than it would if mixed with straw. Taking everything into consideration, we would advise as a general rule the drawing out of the manure and spreading it directly upon the land. In exceptional cases where the land is rolling or there has been a very heavy fall of snow, the manure would be liable to be leached out and the best part of it carried away with the spring flood. We would draw it out and pile it in large piles in the field where it is to be used the next spring. In regard to the question whether it would be of benefit as a top-dressing to meadows, it certainly

would help the crop, but the advisability of doing so would depend upon the system of farming that is practised and the amount of manure on hand. In ordinary mixed farming it would doubtless pay better to apply the manure to the land with a root crop, corn or other grain, and then if the manure holds out, apply a dressing to the meadows and pastures.

Legal.

LEGALITY, Yorkton:—"Kindly answer the following query: A owes an implement firm a certain sum of money and refuses to give a chattel mortgage for the security thereof; the firm threatens legal proceedings in consequence. Can A, without incurring any risk of fraud, transfer his property, horses, cattle, etc., beyond what is allowed by the exemption law, to his brother, so that in case of judgment being obtained against A, the stock could not be seized? A has paid fairly promptly until this year. When a person signs a promissory note for an implement, does he forfeit his exemption rights?"

[If the transfer to A's brother is a bona fide sale for value, and without any trust in A's favor, the goods could not be seized under an execution against A.]

APIARY.

Annual Meeting of the Ontario Bee-Keepers' Association.

BY ALLEN PRINGLE.

The annual meeting of the O. B. K. A. was held in the Council Chamber of the town of Lindsay, on the 9th, 10th and 11th of January, 1894. There were three sessions a day the first two days, and two the third day. This was one of the best annual meetings for many years in the character of the papers read, the discussions thereon, attendance, etc.

The evening sessions were more of a popular and social than business character, the proceedings being varied by music, singing, etc. A popular, entertaining and instructive address on "Honey," was given the first evening by R. McKnight, Esq., of Owen Sound. Besides the President's address by F. O. Gemmill, the papers read and discussed were:—"Extracted Honey," by R. H. Smith; "How to make Bee-keeping Profitable," by R. F. Holtermann; "Apiculture at the World's Fair," by Allen Pringle; "The Management of Out Apiaries and Shipping Bees by Rail in Summer," by C. W. Post. The various reports, financial, Directors', that from Legislative Committee, and the Foul Brood Inspector's Report, were presented, discussed, and adopted as satisfactory. The committee appointed a year ago, at the annual meeting, to seek legislation by the Dominion Government, to prohibit the importation, etc., of adulterated honey, reported excellent progress towards that end, and were reappointed to continue the prosecution of the work. This legislation is aimed at the proposed "sugar honey" of some American apiarists and journals. A committee was also reappointed to secure, if possible, from the railways a readjustment of the freight rates on honey, or a reclassification, as we contend that extracted honey in tins, properly boxed or crated, ought to be scheduled for rates the same as extracted honey in kegs or barrels, which is not now the case, the rates being higher on the former.

The Foul Brood Inspector's Report showed satisfactory progress during the year in the work under the Act of eradicating the scourge from this province.

An interesting and profitable feature of the Convention was the "Question Box," through the medium of which the hard nuts to crack and the knotty questions, apicultural, up to date, are presented and threshed out.

The report from the Superintendent of the Ontario Honey Exhibit at the World's Fair (which position the writer had the honor and responsibility of filling) was looked forward to with much interest, and, in the form of a paper entitled "Apiculture at the World's Fair," was received with unanimous approval, and in a manner exceedingly gratifying to the Ontario Bee-Keepers' representative. The very flattering and unanimous resolution of thanks was evidence that his efforts to discharge the duties of his position had not been without success and were duly appreciated. He succeeded in getting 17 awards for the province; fifteen individual awards and two collective awards. He also succeeded, notwithstanding the heavy duty which practically amounts to two or three cents per lb., in netting to the exhibitors, after all expenses were paid, 7 to 8½ cents for their extracted honey and 13 to 14½ cents for their comb honey. This was more in some cases than they received for their home sales, and more than they expected, as they have so informed me in acknowledging remittances "with thanks." The two leading and essential objects of making an exhibit at the World's Fair, together with that of advertising the apicultural capabilities of Ontario, are thus secured in the large number of awards taken and the high prices received for the exhibits. That the Ontario honey stood higher than the other foreign products, and higher than the native product by its side, and brought a higher price, must be peculiarly gratifying to every bee-keeper in Ontario. I do not claim that it was better than any at the World's Fair, but I

do claim that it was superior to all except some from three or four of the States of the Union and Great Britain; and the results are in evidence, as it received twice as many awards as that of any State, and more than all other foreign countries combined, among about 35 competitors.

I was somewhat surprised to find in Chicago numerous evidences of the adulteration of extracted honey, and such a widespread suspicion and prejudice among consumers against extracted honey that they do not care to buy it out of the shops at all. This, however, does not extend to the comb honey, which still seems to command the confidence of the consumer. The adulteration of extracted honey is evidently done, not by the producers, but by the handlers and dealers, after it has gone out of the producer's hands. Prof. Wiley, official chemist in the Agricultural Department at Washington, gave some startling figures about the adulteration of extracted honey in the U. S. in his address before the North American Bee-Keepers' Association at its annual meeting in Chicago, in October last. He had gathered a large number of samples of honey from different quarters, drawn mostly from dealers, and the results of his analyses were anything but reassuring to the already suspicious and prejudiced consumer. It must be stated, however, that these chemical analyses of honey are not always reliable, as honey known to be pure has been, in some instances, pronounced adulterated by the chemist; and hence the honey producers on the other side, knowing that the honey is pure when it leaves their hands, naturally receive the results of analyses with many grains of allowance. I think they are not without justification in this attitude, though there is palpable proof of adulteration without the aid of science at all.

That we have so little honey adulteration in Canada is a matter for congratulation. Our honey is pure and of superior quality, and hence its high reputation at home and abroad, and this we must preserve and maintain.

The election of officers for the Ontario Bee-Keepers' Association for the current year resulted as follows:—President, A. Picket, Massagaweya; Vice-President, R. F. Holtermann, Brantford; Foul Brood Inspector, Wm. McEvoy, Woodburn; Sub-Inspector, F. O. Gemmill, Stratford. Auditors—J. Alpaugh, St. Thomas; S. T. Pettit, Belmont. Directors:—District No. 1, W. J. Brown, Chard; No. 2, J. K. Darling, Almonte; No. 3, M. B. Holmes, Athens; No. 4, Allen Pringle, Selby; No. 5, S. Corneil, Lindsay; No. 6, Wm. Couse, Streetsville; No. 7, D. Chalmers, Poole; No. 8, F. A. Rose, Balmoral; No. 9, J. B. Hall, Woodstock; No. 10, R. McKnight, Owen Sound; No. 11, John Myers, Stratford; No. 12, E. A. Jones, Kertch; No. 13, R. H. Smith, Bracebridge.

Stratford was selected as the next place of meeting.

Preparation for Another Season.

BY JOHN MYERS, STRATFORD, ONT.

As the bees are all housed or packed for winter, it behooves the apiarist who intends to make a success of bee-keeping to commence preparations for another season. If you are a specialist and keep one hundred or more colonies, you will have great need to get everything in readiness before the warm weather comes, as you will have all you can attend to in the spring building up the weak colonies, uniting queenless ones, and the thousand and one things that are needed to be done in order to get the bees in readiness for the honey season. If you are only an amateur, with from ten to thirty or forty colonies, and run them as a side issue in connection with some other business, I am afraid that, unless you make thorough preparations for the bees during the winter months, in the spring your other business will require so much attention that the bees will be neglected, and instead of getting a good income from them, you will be likely to get only half a crop, and then say there is no money in keeping bees; whereas, if you have everything in readiness before the honey flow comes, it may make all the difference between failure and success. Therefore, the time to prepare is now, when you have time. The question may suggest itself here: What can be done at this time of year? I propose to draw your attention to a few of the things that ought by all means to be done during the winter, so as to have the dish right side up when the honey flow comes. In the first place, all the hives that are not occupied by bees should be brought in and cleaned, the propolis all scraped off, and repaired, painted, etc., if necessary. Be sure and see that the covers are all picked up, repaired and painted. We need to be more particular with the covers than the hive bodies, as a leaky cover is an intolerable nuisance in any well-kept apiary. We should also see if we have as many hives and covers as we will be likely to need for next season's use; and if not, we should either buy or make some more. We believe it does not pay to make hives by hand, as they can be bought so cheap in the flat; and they are so much more accurately constructed, being made by machinery, that we think it pays to buy them in the flat and put them together and paint them ourselves. If we are going to work our bees for comb-honey, we should have at least three cases for each hive to hold sections. Now is the time to get sections put together and starters in them; put them in the cases and pile the cases up in one corner of the honey-house; put a hive cover on the top case to

keep out dust and mice, and they will be all ready to be used when needed. "Oh," but says some one, "I have been told that bees will not work the foundation as well when it has been kept so long." After fourteen years' experience in using foundations, I am fully convinced that the bees will work it just as readily and as well as that which is newly made. When looked at in cold weather, it seems almost impossible that bees could work this old, hard-looking stuff; but wait till the warm summer days come, and the warmth of the bees affects it, and we will find it as soft and pliable as that which is fresh from the mill. We must procure a sufficient quantity of frames for next season's use; put them together, wired and the foundation put in them; then hang them in our empty hives and pile them up the same as we did our cases of sections, being sure to place a cover on the top one to keep the mice, etc., out. Now, let us be sure that we have sufficient hives, frames, supers, sections, etc. I always provide for a good honey flow, and if we do not get it, the things we do not use will do for another season; and if we do get a real good flow, and are prepared to receive it, the amount we get over what we would have got had we been unprepared will pay us many times over for the things we have to carry over in a poor season. We ought to have at least two upper stories for each hive for extracting, or three section cases to each hive if working for comb honey. Then we want to prepare hives to receive swarms; at least one brood chamber and one or two upper stories will be needed for each new swarm. Let us see that all our honey-boards and other utensils are cleaned and put away some place where they will be handy for use next season. These long winter evenings are just the time to study up and gain all the knowledge possible pertaining to our pursuit, therefore every bee-keeper ought to have one or more of the many text-books, and should take some journal that is either in part or wholly given up to bee-keeping, and read and study up everything that will be likely to be of benefit to him in our line of business; and we are assured that any one doing this will be more likely to succeed than he will if he spends his evenings at the corner store or the saloon. After having attended to all the above and any other of the many things we may see necessary to be done, if we still have any time on our hands, let us visit other bee-keepers and have a chat with them about the honey market prospects of the coming season, or any of the many topics which bee-keepers can find to talk about, and my word for it, you will be a better man for the visit, and will be more likely to make a success of your calling than if you always stay at home, or, leave everything to be done until the bees are swarming.

VETERINARY.

Dentition and Dental Diseases of Farm Animals.

BY DR. MOLE, M. R. C. V. S., TORONTO, ONT.

(Continued from Page 48.)

The determination of age by means of the horns in cattle has been long known, but very little has been recorded on the subject. The horns of cattle rising more or less gracefully from the frontal bones were undoubtedly intended for weapons of offence and defence. The base of the horns is composed of two cores or conical bony projections of porous structure, richly supplied with blood vessels, and always communicate with the sinuses of the head. Soon after birth the calf shows two little button-like points of horn, which slowly emerge from the skin; in eight or ten days the points are through, showing the color of the horns; at three weeks flexible horn has appeared; at five or six months the horn commences to curve on its long axis, which continues for twelve months.

In the second year the horn starts a fresh growth, and a small groove is found encircling it between the substance secreted the first year; during the third year a second groove forms. These grooves or furrows are not well marked, and all traces of them disappear as the animal becomes older. From three years the growth of horn is marked by a decided groove or furrow; between them is a decided ring or elevation of horny substance, which forms an accurate basis for judging the age of cattle. The growth of a new coat of hair in the spring of the year is marked by the development of an extra thickness of horn, while the cold season corresponds to a period of comparatively interrupted growth.

With this proviso, counting the apex as three years, add one year for each groove or ring which is present towards its base; this will give an accurate record of the animal's age. The rings are always better marked on the inner than the outer side of the horn.

Many causes tend to diminish their value in estimating age. The horns are frequently sand-papery, filed, scraped and polished, to give them fine appearance when fitted for show purposes, so that for the first four years the teeth are the most valuable indications, whilst from four to ten the horns furnish the more accurate signs. Dealers will

scrape and rasp the horns to destroy the evidence of age, but to any one acquainted with the anatomy of the growth, they can rarely be deceived. The two horn processes arising from the frontal bone correspond to the shape of the horn which they support. These are termed the flints or horn core, which are porous in their nature, especially at the roots; as age advances the interior sinuses become larger, and the foramina or holes through which travel arteries and veins are continuous with the frontal sinuses to the nostrils. We suppose some unenlightened individual happened to pierce one of these foramen, and finding a cavity made the marvellous discovery they were hollow; from that, we are inclined to think, dates the absurd designation of every cattle complaint in America "Hollow Horn."

How it arose we cannot get any data. It is not known in the Old Country, that we are quite certain; it is one of the common and popular errors that will never die. The cavity in the horn core is a part of the system of air chambers, which serve to lighten the head without altering its size or shape. This bone of the horn has a rough, uneven surface, which holds firmly the fibrous and vascular membrane known as the matrix or horn shell.

The blood required for the nourishment of the bone is furnished by capillary vessels passing into the bone; from the deep layer of the periosteum the nerve trunk enters the horn on the inner front above the eye, and there branches off into numerous filaments.

PART II.—THE TEETH OF THE OX.

It is difficult to get specimens of oxen that will show exactly the age desired. We should be pleased to receive from any of our numerous readers the incisor teeth of pedigreed stock, where the birth has been recorded, as illustrating the extreme age of cattle.

The anterior surface of the frontal bone is flat and broad, especially in the male. A cow with too broad a forehead is likely to prove a poor milker, having very small teats; whilst an animal fine in the horn will have fine hair, get fat easy, with a fine sleek skin. If too broad in the bull or steer, the animal is usually a bad feeder—as butchers say, "all front"—that is, big lumbering shoulders, no quarter, and very small hind parts. In front of the mouth there are eight incisors or cutting teeth in the lower jaw only; in the upper jaw there is an elastic pad of fibrous tissue covered with mucous membrane. As bearing on the question as to how the teeth of the ox disappeared from the upper jaw, it is to be seen by comparative anatomy, that when an animal required weapons of offence or defence, the canine teeth disappear and horns appear, showing as one weapon increases in efficiency another dwindles or disappears.

The kind of food made use of has also another bearing in determining the character of the organs of mastication of an animal. The muscles may be divided into two classes—those opening the jaws and those for biting, crushing and grinding. The temporal or biting muscle is inserted into the lower jaw, near the angle or hinge, being far too weak to do much work in crushing or masticating the food; but what they lose in power they gain in quickness. Hence we find it largely developed in the badger, hyenas, cats, wolves and dogs, whereas in the herbivorous sheep and ox it is exceedingly small. In chewing the crushing power requires greater force, hence we find the masseters are large, as in horses and oxen. True ruminants embrace many widely spread and numerous species. Vast herds of antelopes in Africa, which browse on the open plains, retreat to the hills, woods or marshes to chew the cud, living less in the woods than the deer tribe, depending on their fleetness rather than upon their horns as weapons of defence.

Gordon Cumming, in his African travels, relates an instance of an antelope, when brought to bay, stabbing right and left by means of his horns amongst his hounds, killing four of them before he was able to arrive to their assistance.

Sheep and goats select mountainous districts to feed, and their horns are generally so turned at the end to protect the head and receive the brunt of falls over rocks, etc. Oxen depend upon their powerful horns and mutual association for defence.

The mass of grass which ruminants have to chew requires to be cut and crushed in every direction. The means adopted for this purpose is very perfect.

The molars are so arranged that they fit into one another; the tops of the lower teeth fit into the cavities of the upper, so that when they pass each other there is a sort of scissors-like action, by means of which the food is first divided, and there held until the crowns meet and crush it.

The incisors may be distinguished as centrals or first pair, middles or second pair, laterals or third pair, and corners or fourth pair, the same terms being applied to the temporary and permanent teeth. Why should all animals have two sets of teeth—temporary and permanent? One author suggests that it is in order to accommodate the adult animal with a larger set than would have been convenient for its young state; they are easily distinguished from the temporary by their size and dark color. The fangs of the temporary teeth are much shorter; the size, whiteness and smallness point out their distinguishing character, whilst the term "broad teeth" indicates the permanent.

[TO BE CONTINUED.]

POULTRY.

Prize Essay.

Mr. W. J. Stevenson, Oshawa, Ont., offers a setting of Wyandotte eggs to the young man or woman, under twenty years of age, who sends us on or before February 20th the best essay "On the Management of Fowls on the Farm." Mr. Stevenson writes us: "My flock of Wyandottes are very fine; the cock now in use won a prize at the World's Fair, the hens are of equal quality."

Poultry on the Farm.

BY MRS. IDA E. TILSON, WEST SALEM, WIS.

At the Juneau Co., Wis., Institute, where I read a poultry article, there was some discussion concerning the kind of hens to be recommended, and one speaker thought tame hens, which could be handled and controlled, answered the inquiries. At another western Institute, where the best breed of swine was being sought, an old lady said the "swillpail breed," I presume meaning any sort that would eat thankfully what was offered. These general answers, though suggestive, hardly answered after all. There are many varieties which it might be possible but not expedient to keep in certain localities and circumstances. The main things to be considered are our purpose and our climate. For several virtues I have tried and loved several or more breeds. There are Leghorns, which a modest young woman called "Limbhorns," known time out of mind in the Mediterranean countries, probably akin to the very fowls of Socrates and Caesar. Recent travellers tell of Leghorns seen tethered to stakes in the very hearts of old Italian cities—so easy, common and persistent is poultry culture there. They find the brown color prevailing, and I think such are more active than the white, though with combs still larger and tenderer. If we raised fowls for sentiment, everybody would choose Leghorns. In the course of a year they do, by unanimous assent, yield more eggs than any other breed, but, unfortunately, are apt to lay most of them in summer when prices are lowest. A neighbour, whose flock averaged 132 eggs apiece last year, said all the work was done in warm weather, and she had not coaxed an egg this winter. I think Leghorns are the choice a little farther south, but here they sit on the roost too often, nursing their toes and combs. Mine lay fairly all the time, and good care is much in their case, but a five or six-months winter is more. Other fowls can endure a severer climate with less attention and better results. Though it is impossible to secure everything in one breed, hardness can never be ignored at this latitude, nor permanent success come till we use as breeders, each year, those strongest and heartiest, and thus get a weather-proof flock. I have done very well with a first cross of Plymouth Rock and White Leghorn. Some settings of such eggs given an old lady, a mile or so away, brought two of her neighbors here to ask the name of that large white breed laying so beyond usual in winter. Brown Leghorns are so small that the surplus cockerels are not ready for market till they are nearly grown, which, on a farm, where chicks cannot so conveniently be forced along, makes their sale late and profit less. My Plymouth Rock broilers, pure and crossed, were fine eating the last of June, but at a neighbour's I saw Brown Leghorns only just suitable in August, and their owner proposed changing breeds for that very reason. An acquaintance of mine disposed of his common stock and secured an entire flock of full-blooded White Leghorns; warned that the latter were non-setters, he declared he had never met a hen but would set all he wished her to, yet, notwithstanding Leghorns may set when old or late in the season, and prove extra mothers, his wife did borrow Plymouth Rock cluckers, and their chickens were late and few. On a farm, where fowls are not yarded, it is usually best to keep one breed—some general purpose kind. Nevertheless, I shall part from my Leghorns with genuine regret. They seem to say, "Are we such very poor little things?" as young Indian girls at Hampton, Virginia, asked their teacher when a visitor exclaimed, "Poor little things!" These fowls are good foragers, and not excessive eaters. They have an extra quantity and quality of breast meat, which I, with many others, enjoy. A Leghorn egg is large, its pearly white outside is always fashionable for boiling in the shell.

My own choice for this climate lies between Wyandottes and Plymouth Rocks. A Minnesota paper has stated that Mr. Gilbert, of your own Canadian Central Experiment Station, endorses them. For me, the Wyandottes lay rather better, and provide more breast meat with a less greasy flesh throughout. They also grow old more gracefully, that is, do not as soon nor often put on excessive fat and then set "forever and a day." I have seen Plymouth Rock hens so fat they could be of no use except to show lazy pullets what any of them might become. I believe the Wyandottes are hardy enough, and they are proving particularly suitable for crossing on and grading up common flocks. Each year get a new Wyandotte rooster, constantly save the best pullets, and, without much expense,

you can soon have a flock practically full-blooded, and yet with a valuable foundation of that old, common, hardy stock; or pursue a similar course and get a Plymouth Rock flock. The latter are certainly adapted to this climate; I can get their chickens ready for market ahead of all other kinds tried, and their very yellow skin is attractive to buyers. The fluffy breeds are good in their place for winter layers only, early mothers and broilers, but, take them all in all, hens that spend their strength making down and feathers cannot, in consequence, make as many eggs nor as much breast meat. A layer should be trim, active, red-combed and bright-eyed. That hen scratching around nights, after her companions are abed, or rather at roost, is the one which will drop an egg in the basket next day.

This winter I changed from bone meal to shell, and talked "oyster shells" with my friend ordering, but her supply came from "R. C. Leete, Shipper of Fine Sea Shells for Poultry, Leete's Island, Conn.," and I think is mainly beach shells, not differently constituted from oyster shells, I suppose, and, since crushed easier, less grit-like though cheaper, being now \$1.15 a cwt., delivered here. Lard scraps have risen to 2 cents a lb., while wheat is lower than ever—only 50 cents a bushel. At an Institute where inquiries were made about "germ meal," a chemist said it comes from grains with germinal parts left, when their gluten and starchy parts have been removed to make glucose, starch, or other preparation. We can imitate the original eastern "germ meal" for poultry, by grinding oats, corn, wheat and barley together, but will have more fat-forming material.

DAIRY.

Ontario Creameries Association.

The ninth annual meeting of the Creameries Association of Ontario was held in the City Hall, in the city of Belleville. Beginning on the 10th of January, the meetings were continued on through the two following days. Among the speakers were Prof. James, Deputy Minister of Agriculture; Prof. Robertson, Dominion Dairy Commissioner; Prof. Dean, O. A. C., Guelph; John Boyd, Chicago; John S. Pearce, London; A. A. Ayer, Montreal; J. W. Wheaton, Secretary Western Dairymen's Association, London; W. G. Walton, Hamilton; John H. Croil, Autsville, and others.

The sessions were well attended by dairymen from all over the province, and with farmers from the vicinity of Belleville.

The President, Mr. D. Derbyshire, in his opening address, thanked the citizens of Belleville for the hearty reception which they had accorded to the Creameries Association, and expressed the pleasure which he felt in being permitted to open the ninth annual convention. He commended the farmers of the vicinity of Belleville for their zeal in promoting this great national industry, until now Canadians had the reputation of being the leaders of the world in the manufacture of fancy butter and cheese. "We have," he said, "made rapid advancement since the formation of this association. The changes which have taken place in the condition and surroundings of the dairymen in Ontario during these nine years are, perhaps, greater than have attended any other industry, and I am sure that we can do even better work in the future. We have sixty-two regular creameries in this province and twelve winter creameries—a gain of over fifty per cent. We know that where dairying and stock raising are carried on intelligently, the farmers are progressive and well-to-do. This should stimulate us to greater activity in seeing that proper instructions are placed within the reach of our friends, so that the best possible work can be done in every section of this empire province." He then reviewed the work of the past year, which, he said, had been a most important one to dairymen, and one from which they could draw many important lessons. We had met our neighbors in friendly competition at the World's Columbian Exhibition, and while the results were not so gratifying to the buttermakers as they were to the cheesemakers, still we should not be discouraged, but should strive to find out in what respects we failed, and to profit by these lessons in the future. He then gave as reasons why Canadian butter did not score higher, the following:—The body of Canadian butter was on the whole rated very high, but it lost several points in flavor; this could be remedied by careful attention in the handling of the milk and the making of the butter. One reason of this loss was that a number of the exhibitors used poor, off-flavored salt. The butter from the United States was put up in a more attractive package, and more taste was displayed in giving it a nice appearance. Another factor which weighed against the Canadian buttermaker was the distance from which most of the butter had to be sent, taking about ten days in transit, besides the restrictions of the United States customs regulations. It was im-

possible to have Canadian butter stored in Chicago and brought to the judges as required, while the Americans could store their butter in the refrigerator until the judges were ready. Taking everything into consideration, Mr. Derbyshire thought that the Canadians did exceptionally well to win 27 awards for butter, and have such a large number of exhibits come within a point of the minimum fixed for this class. The past year should also teach us another lesson—to make provision for the hot, dry weather, which is sure to come. In 1893, only a limited number of the farmers were prepared, and the cows decreased in milk nearly 50 per cent. in July and August. If cows are allowed to go down, it is impossible to make them increase the flow of milk again during the season. He showed what an enormous loss this meant to the province, and how it could have been prevented if all dairymen had been ready with clean, airy stables, with screens to keep the flies out, and plenty of silage or other green food, and had kept the cows in the stables in the daytime, turning them out at night when the flies would not bother them. If the dairymen had seen that their cows had plenty of the best food, pure water, salt every morning, and lastly, kind treatment, there would have been two millions more money distributed among the dairymen of the province, and this would mean prosperity to every other industry. In conclusion, he urged all dairymen to begin the new year with a full determination to keep only profitable cows, in the best way, and to give undivided attention to every detail in connection with the business. In this way our exports of butter and cheese could be increased from thirteen millions to twenty millions in 1894. This, he said, could only be done by building silos and having plenty of good, nutritious food to keep up the flow of milk through the season.

CANADIAN BUTTER IN ENGLAND.

Mr. Graham, in moving the adoption of the address, stated that he had shipped butter to the Old Country the past season, and that the best Canadian mild-cured butter brought as high a price on the English market as the best Danish product. We have, he said, just as good a country as Denmark, just as rich food, as good cattle, and as intelligent men. If Canadians took precautions to cure the butter to suit the English trade, and saw that it arrived there in good condition, it would find an unlimited market at paying prices.

CREAM GATHERING VS. SEPARATOR.

Professor Dean gave the advantages and disadvantages of the two systems in a very impartial manner, and as will be seen from the summary there is room in Ontario for buttermaking. In speaking of the dissatisfaction which prevailed in many creameries, he said that unless the management of a creamery has the confidence of the patrons it cannot succeed. In order to obtain this confidence, the patrons should know how the business was standing. A good way was to furnish them all with monthly statements; although this plan would cause much extra labor, still it would pay well in the success of the institution. Another frequent cause of dissatisfaction is the variation in the tests from day to day. This was owing largely to different persons doing the skimming—or, where the drivers were doing it, to their not taking true samples—incomplete churning and inaccurate reading of the test. Where these points are properly observed the reading will vary but very slightly. The advantages of the cream-gathering system were: Possibility of gathering from a large area, the cost of hauling is much less for cream than it is for whole milk, and the skim milk is left on the farm without the additional cost of the return haul from the creamery. For this reason the cream-gathering plan would doubtless be the most profitable in a rough or mountainous country. The disadvantages were: Tainted or poor milk, especially where shallow pans were used, complaints of patrons as regards the reliability of the test, and loss of butterfat through incomplete creaming. The last is a most serious objection, as was proved from experiments which had been conducted at the college dairy. He showed by means of a chart that under the very best conditions, with the deep pail system the loss of fat was six times greater than with the separator, and with the shallow pan system that the loss was doubled. The averages of tests made daily for a period of six months showed that the percentage of butterfat left in the milk by the different methods was as follows:—Separator, .26; deep setting, 1.45, and shallow pan, 2.94. A factory handling 10,000 pounds of milk per day would lose \$600 in 200 days, butter being worth twenty cents per pound; while with farmers the loss would be at least twice as great, owing to improper methods of setting. In giving advice to the patrons of a cream-gathering factory, he advised them not to work for a high test. Cream should not be judged by its thickness, as it actually grew thinner the longer it set. In proof of this he gave the average of nine trials, in which milk set twelve hours gave 3.22 inches of cream, at the end of twenty-four hours it had reduced to 2.98 inches, and in thirty-six hours it was down to 2.81 inches. The advantages of using the separator were shown to be: (1) That practically all the butterfat is obtained. (2) The milk may be tested with certainty and the proceeds divided equitably. (3) That better quality of butter would be manufactured. The disadvantages were: (1) The cost of hauling milk both ways. In this

respect good roads are closely connected with the success of separator creameries. (2) The difficulty of returning the skim milk in good condition to the patrons. (3) Extra cost of outfit. As a compromise, he would recommend putting in a separator in the creamery, and also the use of skimming stations where the cream could be sent to the central factory, and thus do away with much of the hauling of milk. In the discussion which followed, Mr. Hannah, of Seaforth, reported that he had begun the use of skimming stations and found them to be a great advantage, but unless there was a large, even population in the section it would be more expensive than the cream-gathering system.

IMPROVING THE QUALITY OF BUTTER.

Mr. John Croil read a paper on "How to improve the quality of our creamery butter." This was a practical treatise by a practical creamery man. He declared that the main object of the association should be to teach the members how to obtain the highest price for their butter. This can only be done by improving the quality and enlarging the market. The only successful way of carrying on the butter industry is by the co-operation of all those engaged in it. To improve the quality of our creamery butter, it would be necessary, in the first place, to exercise more care in the handling of the milk by the farmers, and also more care in the manufacturing and storing of the finished article; and secondly, by placing the butter in the hands of the consumer while it is fresh and in its finest condition. The speaker emphasized this point very strongly. He said that it was fresh butter that was needed for the export trade, and that it would be ruined if we did not give the Englishman what he wanted. He advised creameries to sell their butter quickly and get it off their hands.

CARE OF THE DAIRY COW.

Mr. W. G. Walton, of Hamilton, then read a paper on the selection and care of the dairy cow. "It was right here" he said, "that the success or downfall of the dairy farmer depended, and if he did well the creamery men, business men and manufacturers will all do well."

"The selection of a cow would depend upon whether she was wanted for a large milker for the city trade, for cheese factory purposes or for a butter cow. There is not much trouble in selecting a large milker, but the time has come when the quantity of butterfat will be the basis of future dairying. A dairyman will not sell his best cow, but on the contrary will keep them and breed them to the progeny of great butter cows; so if the farmer wants to get the best butter cows he must breed them for himself. He believed that a firmer grain of butter could be produced from the Jersey than any other breed, and that it would stand a greater degree of heat. This was a very important matter to the dairymen of Ontario to know and practise, for our butter would then reach the English market with a much better grain. The testing of individual cows in the herd should be practised by every farmer, so that he could distinguish between those which were paying and those that were losing him money."

From his experience in buying cows, he said that not one cow in every hundred was up to a standard of perfection that all our cows could be easily brought up to.

It was quite possible, with a united determination in the line of breeding, to produce three times as much butter and cheese from the same number of cows as was being done at present, which meant that instead of \$13,000,000, which we now realize from the dairying industry, we would then make \$40,000,000 annually.

After you get a good cow, the next thing is to take care of her. The stable should be kept at a temperature of from fifty to sixty degrees; it should be well ventilated and have plenty of light. She should be kept clean and dry, and have plenty of good food and water before her in the stable instead of being turned out in all weathers to drink. He advised giving the cows half an hour's exercise on the tread power two or three times a week.

At the close of this paper an animated discussion took place, chiefly upon the value of the Jersey as a cheese cow and whether all the fat in rich milk could be incorporated in the cheese. Mr. Graham thought that it was a mistake to encourage a larger percentage of fat than three and a-half for cheese-making.

Prof. Dean stated that his experiments had shown that they could incorporate all the fat up to four and a-half per cent., while other experiments showed that in six per cent. milk there was no loss of butterfat. Mr. Boyd, of Chicago, said that there was no such thing as a cheese cow; that the cow that would make the most butter was the best cow for the cheese factory; and that if one thing had been more thoroughly proved at the World's Fair than another, it was that the Jersey cow produced more butter, more cheese, and also more milk than any of the other breeds.

BANQUET IN THE EVENING.

The usual evening session of the association gave place to a grand banquet, which was tendered to the visitors by the citizens of Belleville. About two hundred guests sat down to the repast, and a very enjoyable time was spent in speech-making and singing.

TO BE CONTINUED.



Mischief-Making.

Only a tiny dropping from a tiny hidden leak,
But the flow is never stopping, and the flaw is far to seek.
Only some trickling water, nothing at all at first,
But it grows to a valley-slaughter, for the reservoir has burst.
The wild flood once in motion, who shall arrest its course?
As well restrain the ocean as that ungoverned force.

A look of great affliction, as you tell what one told you,
With a feeble contradiction, or a "hope it is not true!"
A story quite too meagre for naming any more,
Only your friend seems eager to know a little more.
No doubt, if explanation, if all was known, you see;
"One might get information from Mrs. A. or B."
Only some simple queries passed on from tongue to tongue,
Though the ever-growing series has out of nothing sprung.
Only a faint suggestion, only a doubtful hint,
Only a leading question with a special tune or tint,
Only a low "I wonder!" nothing unfair at all;
But the whisper grows to thunder, and a scathing bolt may fall,
And a good ship is dismantled, and hearts are like to break,
And a Christian life is blasted for a scarcely guessed mistake.
F. R. H.

The Power of Words.

"I will keep my mouth with a bridle" - Ps. xxxix, 1.

It is not safe for a man or woman to open the lips and permit the heart to pour itself fourth by that channel without selection or restraint. If the spring within were pure, the stream could not be too constant or too strong. But the heart is full of corruption, and from a corrupt fountain sweet waters cannot flow. It is the part of a wise man to set a watch upon his own lips. This is a more profitable exercise, if it be less pleasant, than to set a watch on the lips of our neighbors. If we fling the door open, and allow the emotions to rush forth as they arise, it is certain that many of our words will be evil and do evil. Weigh the words; those that are allowed to take wing should be few and chosen. To bridle the lips is an exercise hard and healthful to our spirits. It requires some practice to make one skilful in it, but skill in that art will be very profitable in the long run. It is easier and more natural when one is full of emotions to open the sluices, and let the whole gush forth in an impetuous stream of words. It is easy, but it is not right; it is pleasant to nature, but offensive to God, and hurtful to man. You must consider well, pull the bridle hard, and permit no false or proud words to pass the barrier of the lips. "The tongue of the just," that is, the stream of words that flows from it, "is like choice silver." Silver is bright and pure and not corrosive. It may safely be applied to the body, whether on a sound place or on a sore. Certain surgical instruments that penetrate the human body and come in contact with the blood must be made of silver; other materials would be liable to contract rust, and thereby inflame the wound. Silver, applied as a healing instrument, does not bite like an adder, and leave a poison festering behind. Thus, when an operation of faithfulness becomes necessary, the tongue of the just is a safe instrument wherewith to probe the sores of a brother's soul. The truth spoken will perform the needful operation; and spoken in love it will not leave the seeds of fever behind it. A biting, corrosive tongue is a curse alike to the serpent who wields it and the victims whom it strikes.

"An hypocrite with his mouth destroyeth his neighbor." - Prov. vi, 9. Beware of carrying deadly weapons. For what end did God give to man, and to man alone, a speaking mouth? The maker of that tongue meant it not to be a dart to pierce a brother with. Remember who gave you that wonderful instrument, and how He intended it to be used. When a kind parent sends to his distant child a case of curious mechanical instruments, he takes care to send with them "directions for use." Even such a set of directions has our Father in Heaven sent to us, along with the case of cunning instruments which our living body contains. Look into the directions and see what is written opposite the mouth and tongue - S. James, 3. The tongue is one, and that not the least, of the ten talents. "Occupy till I come," is the condition of the loan; near, though unseen, is the day of reckoning.
Rev. W. Arnot.

Words.

Words are lighter than the cloud-foam of the reckless ocean spray,
Vainer than the trembling shadow that the next hour steals away.
By the fall of summer rain-drops is the air as deeply stirred,
And the rose leaf that we tread on will out-live a word.
Yet, on the dull silence breaking with a lightning flash, a word,
Bearing endless desolation on its blighting wings, I heard.
Earth can forge no keener weapon, dealing surer death and pain,
And the cruel echo answered through long years again.
I have known one word hang starlike o'er a dreary waste of years,
And it only shone the brighter looked at through a mist of tears;
While a weary wanderer gathered hope and heart on life's dark day.
By its faithful promise shining clearer day by day.
Words are mighty, words are living; serpents with their venomous stings,
Or bright angels crowding round us, with Heaven's light upon their wings.
Every word has its own spirit, true or false, that never dies;
Every word man's lips have uttered echoes in God's skies.
A. A. Procter.

FAMILY CIRCLE.

Adventures of Sherlock Holmes.

THE MAN WITH THE TWISTED LIP.

BY A. CONAN DOYLE.

(Continued from page 32.)

"No, I don't think you would guess. Every pocket stuffed with pennies and halfpennies—four hundred and twenty-one pennies, and two hundred and seventy half pennies. It was no wonder that it had not been swept away by the tide. But a human body is a different matter. There is a fierce eddy between the wharf and the house. It seemed likely enough that the weighted coat had remained when the stripped body had been sucked away into the river."

"But I understand that all the other clothes were found in the room. Would the body be dressed in a coat alone?"

"No, sir, but the facts might be met speciously enough. Suppose that this man Boone had thrust Neville St. Clair through the window, there is no human eye which could have seen the deed. What would he do then? It would of course instantly strike him that he must get rid of the tell-tale garments. He would seize the coat then, and be in the act of throwing it out when it would occur to him that it would swim and not sink. He has little time, for he has heard the scuffle downstairs when the wife tried to force her way up, and perhaps he has already heard from his Lascar confederate that the police are hurrying up the street. There is not an instant to be lost. He rushes to some secret hiding, where he has accumulated the fruits of his beggary, and he stuffs all the coins upon which he can lay his hands into the pockets to make sure of the coat's sinking. He throws it out and would have done the same with the other garments had not he heard the rush of steps below, and only just had time to close the window when the police appeared."

"It certainly sounds feasible."

"Well, we will take it as a working hypothesis for want of a better. Boone, as I have told you, was arrested and taken to the station, but it could not be shown that there had ever before been anything against him. He had for years been known as a professional beggar, but his life appeared to have been a very quiet and innocent one. There the matter stands at present, and the questions which have to be solved, what Neville St. Clair was doing in the opium den, what happened to him when there, where he is now, and what Hugh Boone had to do with his disappearance, are all as far from a solution as ever. I confess that I cannot recall any case within my experience which looked at the first glance so simple, and yet which presented such difficulties."

Whilst Sherlock Holmes had been detailing this singular series of events we had been whirling through the outskirts of the great town until the last straggling houses had been left behind, and we rattled along with a country hedge upon either side of us. Just as he finished, however, we drove through two scattered villages, where a few lights still glimmered in the windows.

"We are out on the outskirts of Lee," said my companion. "We have touched on three English counties in our short drive, starting in Middlesex, passing over an angle of Surrey, and ending in Kent. See that light among the trees? That is The Cedars, and beside that lamp sits a woman whose anxious ears have already, I have little doubt, caught the clink of our horse's feet."

"But why are you not conducting the case from Baker street?" I asked.

"Because there are many enquiries which must be made out here. St. Clair has most kindly put two rooms at my disposal, and you may rest assured that she will have nothing but a welcome for my friend and colleague. I hate to meet her, Watson, when I have no news of her husband. Here we are. Whoa, there, whoa!"

We had pulled up in front of a large villa which stood within its own grounds. A stable-boy had run out to the horse's head, and springing down I followed Holmes up the small, winding gravel drive which led to the house. As we approached, the door flew open, and a little blonde woman stood in the opening, clad in some sort of light mousseline de soie, with a touch of fluffy pink chiffon at her neck and wrists. She stood with her figure outlined against the flood of light, one hand upon the door, one half raised in her eagerness, her body slightly bent, her head and face protruded, with eager eyes and parted lips, a standing question.

"Well," she cried, "well?" And then, seeing that there were two of us, she gave a cry of hope which sank into a groan as she saw that my companion shook his head and shrugged his shoulders.

"No good news?"

"None."

"No bad?"

"No."

"Thank God for that. But come in. You must be weary, for you have had a long day."

"This is my friend, Dr. Watson. He has been of most vital use to me in several of my cases, and a lucky chance has made it possible for me to bring him out and associate him with this investigation."

"I am delighted to see you," said she, pressing my hand warmly. "You will, I am sure, forgive anything which may be wanting in our arrangements, when you consider the blow which has come so suddenly upon us."

"My dear madam," said I, "I am an old campaigner, and if I were not, I can very well see that no apology is needed. If I can be of any assistance, either to you or to my friend here, I shall be indeed happy."

"Now, Mr. Sherlock Holmes," said the lady, as we entered a well-lit dining-room, upon the table of which a cold supper had been laid out, "I should very much like to ask you one or two plain questions, to which I beg that you will give a plain answer."

"Certainly, madam."

"Do not trouble about my feelings. I am not hysterical, nor given to fainting. I simply wish to hear your real, real opinion."

"Upon what point?"

"In your heart of hearts do you think that Neville is alive?"

Sherlock Holmes seemed to be embarrassed by the question. "Frankly now!" she repeated, standing upon the rug, and looking keenly down at him, as he leaned back in a basket chair.

"Frankly, then, madam, I do not."

"You think that he is dead?"

"I do."

"Murdered?"

"I don't say that. Perhaps."

"And on what day did he meet his death?"

"On Monday."

"Then perhaps, Mr. Holmes, you will be good enough to explain how it is that I have received a letter from him to-day."

Sherlock Holmes sprang out of his chair as if he had been galvanized.

"What!" he roared.

"Yes, to-day." She stood smiling, holding up a little slip of paper in the air.

"May I see it?"

"Certainly."

He snatched it from her in his eagerness, and smoothing it out upon the table, he drew over the lamp, and examined it intently. I had left my chair, and was gazing at it over his shoulder. The envelope was a very coarse one, and was stamped with the Gravesend postmark, and with the date of that very day, or rather of the day before, for it was considerably after midnight.

"Coarse writing!" murmured Holmes. "Surely this is not your husband's writing, madam."

"No, but the enclosure is."

"I perceive also that whoever addressed the envelope had to go and enquire as to the address."

"How can you tell that?"

"The name, you see, is in perfectly black ink, which has dried itself. The rest is of the grayish color which shows that blotting-paper has been used. If it had been written straight off, and then blotted, none would be of a deep black shade. This man has written the name, and there has then been a pause before he wrote the address, which can only mean that he was not familiar with it. It is, of course, a trifle, but there is nothing so important as trifles. Let us now see the letter!"

Ha! there has been an enclosure here!"

"Yes, there was a ring. His signet ring."

"And you are sure that this is your husband's hand?"

"One of his hands."

"One?"

"His hand when he wrote hurriedly. It is very unlike his usual writing, and yet I know it well."

"Dearest, do not be frightened. All will come well. There is a huge error which it may take some little time to rectify. Wait in patience—Neville. Written in pencil upon the fly-leaf of a book, octavo size, no watermark. Hum! Posted to-day in Gravesend by a man with a dirty thumb. Ha! And the flap has been gummed, if I am not very much in error, by a person who had been chewing tobacco. And you have no doubt that it is your husband's hand, madam?"

"None. Neville wrote those words."

"And they were posted to-day at Gravesend. Well, Mrs. St. Clair, the clouds lighten, though I should not venture to say that the danger is over."

"But he must be alive. Mr. Holmes."

"Unless this is a clever forgery to put us on the wrong scent. The ring, after all, proves nothing. It may have been taken from him."

"No, no; it is, it is, it is his very own writing!"

"Very well. It may, however, have been written on Monday, and only posted to-day."

"That is possible."

"If so, much may have happened between."

"Oh, you must not discourage me, Mr. Holmes. I know that all is well with him. There is so keen a sympathy between us that I should know if evil came upon him. On the very day that I saw him last he cut himself in the bedroom, and yet I in the dining-room rushed upstairs instantly with the utmost certainty that something had happened. Do you think that I would respond to such a trifle, and yet be ignorant of his death?"

"I have seen too much not to know that the impression of a woman may be more valuable than the conclusion of an analytical reasoner. And in this letter you certainly have a very strong piece of evidence to corroborate your view. But if your husband is alive, and able to write letters, why should he remain away from you?"

"I cannot imagine. It is unthinkable."

"And on Monday he made no remarks before leaving you?"

"No."

"And you were surprised to see him in Swandam-lane?"

"Very much so."

"Was the window open?"

"Yes."

"Then he might have called to you?"

"He might."

"He only, as I understand, gave an inarticulate cry?"

"Yes."

"A call for help, you thought?"

"Yes. He waved his hands."

"But it might have been a cry of surprise. Astonishment at the unexpected sight of you might cause him to throw up his hands?"

"It is possible."

"And you thought he was pulled back?"

"He disappeared so suddenly."

"He might have leaped back. You did not see anyone else in the room?"

"No, but this horrible man confessed to having been there, and the Lascar was at the foot of the stairs."

"Quite so. Your husband, as far as you could see, had his ordinary clothes on?"

"But without his collar or tie. I distinctly saw his bare throat."

"Had he ever spoken of Swandam-lane?"

"Never."

"Had he ever shown any signs of having taken opium?"

"Never."

"Thank you, Mrs. St. Clair. Those are the principal points about which I wish to be absolutely clear. We shall now have a little supper and then retire, for we may have a very busy day to-morrow."

A large and comfortable double-bedded room had been placed at our disposal, and I was quickly between the sheets, for I was weary after my night of adventure. Sherlock Holmes was a man, however, who when he had an unsolved problem upon his mind would go for days, and even for a week, without rest, turning it over, rearranging his facts, looking at it from every point of view, until he had either fathomed it, or convinced himself that his data were insufficient. It was soon evident to me that he was now preparing for an all-night sitting. He took off his coat and waistcoat, put on a large blue dressing gown, and then wandered about the room collecting pillows from his bed, and cushions from the sofa and arm-chairs. With these he constructed a sort of Eastern divan, upon which he perched himself cross-legged, with an ounce of shag tobacco and a box of matches laid out in front of him. In the dim light of the lamp I saw him sitting there, an old brier pipe between his lips, his eyes fixed vacantly upon the corner of the ceiling, the blue smoke curling up from him, silent, motionless, with the light shining upon his strong set aquiline features. So he sat as I dropped off to sleep, and so he sat when a sudden ejaculation caused me to wake up, and I found the summer sun shining into the apartment. The pipe was still between his lips, the smoke still curled upwards, and the room was full of a dense tobacco haze, but nothing remained of the heap of shag which I had seen upon the previous night.

"Awake, Watson?" he asked.

"Yes."

"Game for a morning drive?"

"Certainly."

"Then dress. No one is stirring yet, but I know where the stable boy sleeps, and we shall soon have the trap out." He chuckled to himself as he spoke, his eyes twinkled, and he seemed a different man to the sombre thinker of the previous night.

As I dressed I glanced at my watch. It was no wonder that no one was stirring. It was twenty-five minutes past four. I had hardly finished when Holmes returned with the news that the boy was putting in the horse.

"I want to test a little theory of mine," said he, pulling on his boots. "I think, Watson, that you are now standing in the presence of one of the most absolute fools in Europe. I deserve to be kicked from here to Charing-cross. But I think I have the key of the affair now."

"And where is it?" I asked, smiling.

"In the bath-room," he answered. "Oh, yes, I am not joking," he continued, seeing my look of incredulity. "I have just been there, and I have taken it out, and I have got it in this Gladstone bag. Come on, my boy, and we shall see whether it will not fit the lock."

We made our way downstairs as quietly as possible, and out into the bright morning sunshine. In the road stood our horse and trap, with the half-clad stable boy waiting at the head. We both sprang in, and away we dashed down the London road. A few country carts were stirring, bearing in vegetables to the metropolis, but the lines of villas on either side were as silent and lifeless as some city in a dream.

"It has been in some points a singular case," said Holmes, flicking the horse on into a gallop. "I confess that I have been as blind as a mole, but it is better to learn wisdom late than never to learn it at all."

In town, the earliest rivers were just beginning to look sleepily from their windows as we drove through the streets of

the Surrey side. Passing down the Waterloo Bridge road we crossed over the river, and dashing up Wellington street wheeled sharply to the right, and found ourselves in Bow street. Sherlock Holmes was well known to the Force, and the two constables at the door saluted him. One of them held the horse's head while the other led us in.

"Who is on duty?" asked Holmes.

"Inspector Bradstreet, sir."

"Ah, Bradstreet, how are you?" A tall, stout official had come down the stone-flagged passage, in a peaked cap and frogged jacket. "I wish to have a quiet word with you, Bradstreet."

"Certainly, Mr. Holmes. Step into my room here."

It was a small office-like room, with a huge ledger upon the table, and a telephone projecting from the wall. The inspector sat down at his desk.

"What can I do for you, Mr. Holmes?"

"I called about that beggarman, Boone—the one who was charged with being concerned in the disappearance of Mr. Neville St. Clair, of Lee."

"Yes. He was brought up and remanded for further inquiries."

"So I heard. You have him here?"

"In the cells."

"Is he quiet?"

"Oh, he gives no trouble. But he is a dirty scoundrel."

"Dirty?"

"Yes, it is all we can do to make him wash his hands, and his face is as black as a tinker's. Well, when once his case has been settled he will have a regular prison bath; and I think, if you saw him, you would agree with me that he needed it."

"I should like to see him very much."

"Would you? That is easily done. Come this way. You can leave your bag."

"No, I think that I'll take it."

"Very good. Come this way, if you please." He led us down a passage, opened a barred door, passed down a winding stair, and brought us to a white-washed corridor with a line of doors on each side.

"The third on the right is his," said the inspector. "Here it is!" He quietly shot back a panel in the upper part of the door, and glanced through.

"He is asleep," said he. "You can see him very well."

We both put our eyes to the grating. The prisoner lay with his face towards us, in a very deep sleep, breathing slowly and heavily. He was a middle-sized man, coarsely clad as became his calling, with a colored shirt protruding through the rents in his tattered coat. He was, as the inspector had said, extremely dirty, but the grime which covered his face could not conceal its repulsive ugliness. A broad wheel from an old scar ran right across it from eye to chin, and by its contraction had turned up on the side of the upper lip, so that three teeth were exposed in a perpetual snarl. A shock of very bright red hair grew low over his eyes and forehead.

"He's a beauty, isn't he?" said the inspector.

"He certainly needs a wash," remarked Holmes. "I had an idea that he might, and I took the liberty of bringing the tools with me." He opened his Gladstone bag as he spoke, and took out, to my astonishment, a very large bath sponge.

"He! he! You are a funny one," chuckled the inspector.

"Now, if you will have the great goodness to open that door very quietly, we will soon make him cut a much more respectable figure."

"Well, I don't know why not," said the inspector.

"He doesn't look a credit to the Bow street cells, does he?" He slipped his key into the lock, and we all very quietly entered the cell. The sleeper half turned, but then settled down once more into a deep slumber. Holmes stooped to the water jug, moistened his sponge, and then rubbed it twice vigorously across and down the prisoner's face.

"Let me introduce you," he shouted, "to Mr. Neville St. Clair, of Lee, in the county of Kent."

Never in my life have I seen such a sight. The man's face peered under the sponge like the head of a tree. Gone was the coarse brown tint! Gone, too, the horrid scar which had seamed it across, and the twisted lip which had given the repulsive sneer to the face! A twitch brought away the tangled red hair, and there, sitting up in his bed, was a pale, sad-faced, refined-looking man, black-haired and smooth-skinned, rubbing his eyes, and staring about him with sleepy bewilderment. Then suddenly realizing the exposure, he broke into a scream, and threw himself down with his face to the pillow.

"Great heaven!" cried the inspector. "It is, indeed, the missing man. I know him from the photograph."

The prisoner turned with the reckless air of a man who abandons himself to his destiny. "Be it so," said he. "And pray, what am I charged with?"

"With making away with Mr. Neville St. Clair. Oh, come, you can't be charged with that, unless they make a case of attempted suicide of it," said the inspector, with a grin. "Well, I have been twenty-seven years in the force, but this really takes the cake."

"If I am Mr. Neville St. Clair, then it is obvious that no crime has been committed, and that, therefore, I am illegally detained."

"No crime, but a very great error has been committed," said Holmes. "You would have done better to have trusted your wife."

"It was not the wife, it was the children," groaned the prisoner. "God help me, I would not have them ashamed of their father. My God! What an exposure! What can I do?"

Sherlock Holmes sat down beside him on the couch, and patted him kindly on the shoulder.

"If you leave it to a court of law to clear the matter up," said he, "of course you can hardly avoid publicity. On the other hand, if you convince the police authorities that there is no possible case against you, I do not know that there is any reason that the details should find their way into the papers. Inspector Bradstreet would, I am sure, make notes upon any thing which you might tell us, and submit it to the proper authorities. The case would then never go into court at all."

"God bless you!" cried the prisoner, passionately. "I would have endured imprisonment, ay, even execution, rather than have left my miserable secret as a family blot to my children."

"You are the first who have ever heard my story. My father was a schoolmaster in Chesterfield, where I received an excellent education. I travelled in my youth, took to the stage, and finally became a reporter on an evening paper in London. One day my editor wished to have a series of articles upon begging in the metropolis, and I volunteered to supply them. There was the point from which all my adventures started. It was only by trying begging as an amateur that I could get the facts upon which to base my articles. When an actor, I had, of course, learned all the secrets of making up, and had been famous in the green-room for my skill. I took advantage now of my attainments. I painted my face, and to make myself as pitiable as possible I made a good scar and fixed one side of my lip in a twist by the aid of a small slip of flesh-colored plaster. Then with a red head of hair, and an appropriate dress, I took my station in the busiest part of the city, ostensibly as a match-seller, but really as a beggar. For seven hours I plied my trade, and when I returned home in the evening, I found, to my surprise, that I had received no less than twenty-six shillings and fourpence."

"I wrote my articles, and thought little more of the matter until, some time later, I backed a bill for a friend, and had a writ served upon me for £25. I was at my wit's end where to get the money, but a sudden idea came to me. I begged a fortnight's grace from the creditor, asked for a holiday from my employers, and spent the time in begging in the city under my disguise. In ten days I had the money, and had paid the debt."

"Well, you can imagine how hard it was to settle down to arduous work at two pounds a week, when I knew that I could earn as much in a day by smearing my face with a little paint, laying my cap on the ground, and sitting still. It was a long fight between my pride and the money, but the dollars won at last, and I threw up reporting, and sat day after day in the

corner which I had first chosen, inspiring pity by my ghastly face, and filling my pockets with coppers. Only one man knew my secret. He was the keeper of a low den in which I used to lodge in Swandam-lane, where I could every morning emerge as a squalid beggar, and in the evenings transform myself into a well-dressed man about town. This fellow, a Lascar, was well paid by me for his rooms, so that I knew that my secret was safe in his possession."

"Well, very soon I found that I was saving considerable sums of money. I do not mean that any beggar in the streets of London could earn over seven hundred pounds a year—which is less than my average takings—but I had exceptional advantages in my power of making up, and also in a facility in repartee, which improved by practice, and made me quite a recognized character in the city. All day a stream of pennies, varied by silver, poured in upon me, and it was a very bad day upon which I failed to take two pounds."

"As I grew richer I grew more ambitious, took a house in the country, and eventually married, without anyone having a suspicion as to my real occupation. My dear wife knew that I had business in the city. She little knew what."

"Last Monday I had finished for the day, and was dressing in my room above the opium den, when I looked out of the window, and saw, to my horror and astonishment, that my wife was standing in the street, with her eyes fixed full upon me. I gave a cry of surprise, threw my arms to cover my face, and, rushing to my confidant, the Lascar, entreated him to prevent anyone from coming up to me. I heard her voice down stairs, but I knew that she could not ascend. Swiftly I threw off my clothes, pulled on those of a beggar, and put on my pigments and wig. Even a wife's eyes could not pierce so complete a disguise. But then it occurred to me that there might be a search in the room, and that the clothes might betray me. I threw open the window, re-opening by my violence a small cut which I had inflicted upon myself in the bedroom that morning. Then I seized my coat, which was weighted by the coppers which I had just transferred to it from the leather bag in which I carried my takings. I hurried it out of the window, and it disappeared into the Thames. The other clothes would stand up to the stair, and a few minutes after I found, rather, I confess, to my relief, that instead of being identified as Mr. Neville St. Clair, I was arrested as his murderer."

"I do not know that there is anything else for me to explain. I was determined to preserve my disguise as long as possible, and hence my preference for a dirty face. Knowing that my wife would be terribly anxious, I slipped off my ring, and confided it to the Lascar at a moment when no constable was watching me, together with a hurried scrawl, telling her that she had no cause to fear."

"That note only reached her yesterday," said Holmes.

"Good God! What a week she must have spent!"

"The police have watched this Lascar," said Inspector Bradstreet, "and I can quite understand that he might find it difficult to pose a let moment. Probably he handed it to some sailor customer of his, who forgot all about it for some days."

"That was it," said Holmes, nodding approvingly. "I have no doubt of it. But have you never been prosecuted for begging?"

"Many times; but what was a fine to me?"

"It must stretch far, however," said Bradstreet. "If the police are to hush this thing up, there must be no more of Hugh Boone."

"I have sworn it by the most solemn oaths which a man can take."

"In that case I think that it is probable that no further steps may be taken. But if you are found again, then all must come out. I am sure, Mr. Holmes, that we are very much indebted to you for having cleared the matter up. I wish I knew how you reach your results."

"Reached this one," said my friend, "by sitting upon five pillows and consuming an ounce of shag. I think, Watson, that if we drive to Baker street we shall just be in time for breakfast."

MINNIE MAY'S DEPARTMENT.

PRIZE ESSAY.

Home Nursing.

BY DORA FARNCOMB, NEWCASTLE, ONT.

The comfort and safety of a patient depend very largely on the nurse; her quiet cheerfulness, and firm, yet gentle touch, give the invalid confidence. A fussy nurse often does a great deal of harm, especially in cases of nervous illness. In home nursing, when the nurse is anxious or troubled, she must control her feelings, at least in the sick room, or she will do more harm than good.

DIRECTIONS TO THE AMATEUR NURSE.

Do not over-tire yourself, take regular hours for rest, if possible, and it is often advisable to write out directions for the one who is to take your place when "off duty." In serious cases keep a record of temperature and pulse, amount of nourishment taken, and hours of sleep. This will be of great assistance to the doctor. Be very particular about giving medicines at the proper times. Never let a room get close or stuffy, open the windows as much as possible, first covering the patient closely; shut out draughts with a screen—one can easily be extemporized by hanging a shawl over a clothes-horse. An open fire-place is a good ventilator; in summer a lighted lamp placed in it will help to carry the bad air up the chimney. A thermometer should hang in the sick-room, and the temperature be kept at about 68° or 70°. Remove all draperies and unnecessary pieces of furniture, and use a damp cloth for dusting. If the carpet cannot be taken up sweep with a carpet sweeper, or a broom covered with a damp cloth; never raise a cloud of dust with your broom. In long-continued illness, try to make a little variety in the appearance of the room. Hang up a fresh picture or two occasionally, or set a bouquet of dainty flowers where the invalid can see it.

Never use a feather bed if it is possible to avoid it. A soft hair mattress, over woven wire springs, is the most satisfactory. The under sheet should be smooth and tight; tuck it under the mattress and pin tightly at the corners. Wrinkles often cause bed sores. It is advisable to fold a strip of rubber sheeting in another sheet and place it in the middle of the bed, this saves the lower sheet, and can easily be changed. Tuck the top sheet in at the foot. Put on enough blankets, but not too many. Florence Nightingale says: "Feverishness is often caused by bed clothes rather than by fever." Have plenty of pillows, shake them frequently,

putting a fresh, cool one under the weary head. Often a small pillow, placed between the feet and the foot-board, will keep a weak person from slipping down in bed; a long, narrow one placed between the legs prevents chafing.

Bed-sores can usually be prevented by keeping the lower sheet smooth and free from crumbs; bathing the back, hips, elbows and heels with alcohol, and powdering them with corn starch. The patient should be frequently turned on one side if he can be moved. If the skin shows signs of cracking use oxide of zinc ointment, and remove all pressure from the parts affected. When dressings are to be applied, always have the new ready before removing the old. Two people can easily lift a helpless patient by placing their hands under his shoulders and hips. When the under sheet is to be changed, roll the clean one half way across, putting the roll next the patient and pushing the soiled one before it. Lift the patient over the roll, go to the other side of the bed, unroll the clean sheet and tuck in smoothly. To change the upper sheet lay it on top of the bed clothes with a blanket over it, then the soiled things can easily be pulled out from under without exposing the patient. The teeth should be washed with a clean rag dipped in borax water or some other cleansing preparation. A bath should often be given, unless the doctor forbids it; this can easily be accomplished without wetting the bed. Blankets, towels, warm water, and everything else needed, should first be got ready. Have the clean night clothes warmed and aired. Place a folded blanket under the patient—this can be done in the same way the under sheet is changed (see above). Place another on the bed clothes and draw them away from underneath it. To remove the night clothes draw them up in folds under the neck and place the arms above the head. Then gather the folds in one hand and slip them quickly off, keeping the blanket well up to the chin. Bath the face, neck and ears, and dry them carefully; then wash one arm under the blanket and dry it; proceed in this way, drying each part before wetting another. The night-dress should be put on the arms first, then the gathered folds can be slipped over the head and pulled down. If the hair is long, braid it in two braids or it will become tangled.

BATHS, POULTICES, ETC.

A vapor bath can be given, if ordered, without much trouble. Seat the patient on a cane-bottomed chair, cover with blankets, and put a pail of hot water underneath—the steam will be kept in by the blankets. In ten or fifteen minutes put your patient to bed, first rubbing the skin briskly.

A cold pack is sometimes given in cases of fever. Prepare three pieces of flannel about a yard long and twenty inches wide—they should reach from the neck to the hips. Dip one piece in cold water and wrap around the body, next the skin. Then put on the dry piece of flannel and roll the patient in a blanket. Remove in about half an hour, rub the skin briskly, and put on the third piece of flannel, well warmed.

Poultices are usually made of linseed meal. Stir handfuls of the meal into boiling water until the mass is like dough. Spread on a piece of cotton, and cover with cheese cloth or muslin. This poultice can be heated and used again, unless it has been applied to a discharging wound. Poultices are also made of bread, oatmeal, cornmeal or mashed carrots. Charcoal is often mixed with linseed poultices when applied to foul sores. Never let a poultice get cold before changing it, and always have the hot one ready before removing the other. A "poultice jacket" is sometimes necessary to cover the back and chest. Make it of oiled muslin and line with cotton batting. It should be in two pieces, fastening with strings on the shoulders and under the arms; put the poultices underneath it. A hot-water bag, made of India-rubber, laid over a poultice, will keep in the heat. Of course this can only be used in some places, as it is heavy.

Fomentations are often used instead of poultices: two pieces of flannel are needed, a towel, basin and hot water. Lay the towel across the basin, place the flannel on it, pour on boiling water, then wring well by twisting the dry ends of the towel in opposite directions. Shake the flannel and apply, covering with rubber sheeting to keep in the heat. Sometimes mustard is added to the water—a heaping teaspoonful to the pint.

Ice poultices are best applied in an ice-bag; if one cannot be obtained, put the ice in a piece of muslin or handkerchief, having first broken it in small pieces.

Mustard plasters, if mixed with white of egg, will not blister. Leave them on about twenty minutes, dust the spot thickly with flour.

Turpentine stupes are fomentations sprinkled with turpentine. To make a sprinkler cut a hole in the cork of the bottle.

Blisters should be opened at the lowest part—snip the skin with a pair of sharp scissors, and dress with vaseline, washed lard, or any other simple ointment.

CARE OF INFECTIOUS DISEASES.

Pure air is the best disinfectant, so keep the windows open as much as possible. If the sick room can be entered through another room, keep the door into the hall locked, and always pass through the adjoining room, where the windows should be kept open. If there is only one entrance to the sick room hang a sheet, wet with a solution of corrosive sublimate, over the doorway. Every

article of clothing, taken from bed or patient, should be soaked in this disinfectant for some hours before washing. *Corrosive sublimate solution: 15 grains corrosive sublimate, 15 grains muriate of ammonia, one quart of water.* Nothing should be allowed to leave the sick room until it has been disinfected. The nurse should change her dress and wash her hands and face before going near any other person. Before the room can be used again by the family it should be carefully disinfected. Close all the cracks in doors or windows—paste paper over them if necessary, put two pounds of sulphur in an old coalscuttle or other pan, laying some paper under it, set fire to the paper, go out and close the door. In twenty-four hours open the windows; the room should then be well cleaned, and the walls scraped, washed and re-papered.

CARE OF CONVALESCENTS.

Visitors should never be admitted unless the doctor gives permission, and the nurse should see that they do not tire the patient. Let the friends know whether they should come in the morning or afternoon; admit them when the invalid is strongest and brightest. Do not admit more than one or two a day—at first, at least—and never let them stay long. If you notice that any particular visitor is tiring your patient, get rid of her promptly, and be careful not to admit her again until the invalid is stronger. When the visitors have gone, don't sit down and do a lot of talking yourself, but make your charge comfortable and perhaps a sleep may follow.

Nourishment must be given sparingly or freely, according to the disease and the doctor's orders. It is well to vary the dishes as much as possible, and give the patient pleasant little surprises of dainty, tasty eatables, served up on spotless linen and pretty china.

Medicines should be kept out of sight, yet taken regularly if directed. Do not neglect them because the patient may seem to be pretty well. Always look at the label before measuring. Never pour over the label, as the drops sometimes discolor and obscure its direction. If there is any doubt about the contents of a bottle, throw them away. Medicines should never be given without good reason; the saying, "A little learning is a dangerous thing," is very true in this respect. Some people get an idea that something must be done, in cases of illness, and perhaps give a medicine which may do great harm, because "It did Mr. So-and-so good" in an entirely different disease.

Recipes for making light and nourishing dishes may be found in everybody's house—or in the next door neighbor's—so it is not needful to name them here. In conclusion, let me repeat the statement made in the first paragraph of this paper, viz., that the comfort to a patient of having a calm, firm, cheerful nurse cannot be overestimated.

A proper sitting position requires that the spine shall be kept straight, and that the support needed for the upper part shall be felt in the right place. Therefore, sit as far back as possible in the chair, so that the lower end of the spine shall be braced against the back of the seat. If this back is straight, the shoulders will also rest against it; if not, they will have no point of support, and it will be found that they do not need it. This position makes no strain upon the ligaments of the spine. It allows a proper position of the shoulders, consequently of the lungs, stomach and every other organ of the body. Their work is carried on naturally and comfortably, as is also the circulation of the blood, which in a wrong position is seriously interfered with. With the feet resting squarely upon the floor, the hands resting easily upon the lap, perfect equilibrium, and consequently perfect rest of the body, is secured. There is no strain upon any part of the body; no muscle or organ is required to do more than its own amount of work. The arms should never be folded.



PAT'S PERPLEXITY.

PAT (just landed, as Chinaman passes)—"Well, byme sowl, an' it's a great country. Shure an' it's a naygur wid yelly fever, begob!"

UNCLE TOM'S DEPARTMENT.

MY DEAR NEPHEWS AND NIECES:—

Already the festive season has passed away, with its glad home-comings and sweet reunions; pleasant memories and pretty souvenirs are all that remain by which to remember it. And now that you are all settled for the year's work, I expect to be very busy reading the many letters and other contributions to Uncle Tom's department. Under the new arrangements there is a greater incentive to work, as there is a prize offered for each issue, and I hope to receive some wonderfully good puzzles. I wish to make this department—which is your very own—better than ever before, and to replenish the forces of my once large, but now sadly-diminished army.

Any number of recruits wanted! Our barracks can accommodate a great number, so I hope all will make the trial, and I know many will be surprised at the success of their efforts. With manual labor, the more you do the more tired you feel, but with puzzles and letter writing it is quite the opposite—the more you do the easier it becomes, or at least, so some of my veterans tell me.

There is no reason why any should hesitate to enter the ranks; only remember the mottoes, "Never Despair" and "Labor Conquers Everything," and you will surely succeed. But do not expect to reach the top of the ladder at one bound; the most famous people have had to start at the bottom and climb.

I have no doubt some of you meet with very little encouragement from those who should rather urge you on. Yes, indeed, some parents really think that the time, paper and postage spent on "that nonsense" (as they are pleased to term it) is all lost; but with all respect to their opinions, I must say that such is not the case, and if those parents would make closer observations, they would find that I speak truly.

I know of nothing which, while it is supposed to be only pastime, is so useful to develop one's perceptive faculties, brighten the intellect, and create a taste for literature (a taste too often lacking in our young folks), as this very art of puzzling. "Art!" I hear some one exclaim. Yes, art. In the United States it is an acknowledged fact that puzzling is an art, and one which has for followers many very clever and notable persons; so any of you who are taunted about wasting your time may find comfort in this remembrance. And when I say that puzzling helps to brighten the intellect, I have only to look at our Souvenir Photograph for confirmation of my statement.

Our Souvenir Photograph—why really if I have not forgotten to write of it before, and I so proud of it too! Well, well, how absent-minded I am becoming, to be sure! Ah, me! the infirmities of age are showing themselves more plainly day by day.

But it is better late than never, and I must now tell you that I am very proud, and justly too, of my family group. What a pleasure it is to hear the remark, that surely comes when I exhibit it to my friends, "What an intelligent, happy-looking family!" And I am better pleased to hear you thus spoken of, than to hear you called merely "pretty." For "handsome is as handsome does," they say, and judging from the bright, open countenances of my young friends, I know that they are handsome in what is worth a thousand times more than good looks—character.

There is nothing which makes boys and girls so careful of their honor, even in very small things, as the confidence reposed in them by those dearest to them—their parents, teachers and friends; so you all know what faith Uncle Tom has in each and every one of his family, and I feel sure you will all strive to show him it has not been misplaced. In our puzzle corner we want only new puzzles—not stale ones cribbed from other papers; our department has passed the creeping stage and is quite competent to walk alone, and I trust it will be the pride of each of you to keep it so. It is not necessary to have very long puzzles; "brevity is the soul of wit," and shorter puzzles leave space for a greater number.

All of you have been visited by the infant-guest who cheered your old Uncle in his slumbers; yes, and remained with him in his waking hours. Already has this pure young visitor passed a month in your midst, and I hope all my dear boys and girls have given him a warm welcome and made him thus far, as Uncle Tom wishes him to remain, a happy new year.

It is such a pleasure to write to you all that I become regardless of the flight of time; but twilight shadows closing round me remind me that it is time to say "good-night." UNCLE TOM.

Generous of Praise.

How much better the world would be if only people were a little more generous of praise! Let no one suppose that we are speaking of flattery—we mean simply praise, or, as Webster gives it, "Honor rendered because of excellence or merit." How easy it is to find fault when everything does not run smoothly—when anything is omitted which ought to have been done! Why should it not be just as easy to give commendation for the right done?

The day is drawing to its close, and the wife and mother, weary with household care, sits for a moment waiting the sound of the home-coming feet. The door opens quickly, and they have come. "How bright and cherry you look here! But you always make home that!" and the husband's kiss on her cheek brings back the careless girlhood days, and the life looks suddenly bright again.

"The boys wanted me to stay all night, mother, it was stormy; but I thought I would rather come home, and I am glad now I did!" and the boy glanced round the pleasant sitting-room with a look that told plainer than words how attractive a spot it was to him. The mother's weariness had gone like the shadows before the light.

How many homes are rendered unhappy by too much fault-finding and too little just praise! And if one cannot praise—what then? Whittier, in his beautiful poem, "My Birthday," says:

"Love watches o'er my quiet ways,
Kind voices speak my name,
And lips that find it hard to praise,
Are slow at least to blame."

Yes, one can always be "slow at least to blame." The fact that little faults try and vex us, in those dear to our hearts, only goes to prove that the general character is good, and there is much to praise. The whiter the snow, the darker look all objects against it. Why not admire the whiteness which forms the background?

Then, if we look within, if we see with impartial eyes the shortcomings of our own lives, will we not be slower to notice flaws in others? Shall we not say, in the words of Shakespeare: "I will chide no breather in the world but myself, against whom I know most faults"? If, then, we are so frail, so weak ourselves, so dependent on the kindness and forbearance of others, shall we not do the little we can to make the world brighter in turn for them?

If there is anything to admire or praise—and there is always something—speak the word now; it will brighten the weary hours, it will prevent, mayhap, a failure to-morrow—a failure caused by discouragement and pain. Oh, there is no time like to-day for speaking the words of praise: and, then, to-morrow may never come!

The Churchman.

Puzzles.

PRIZE PUZZLE.

1—ANAGRAM.

A convention was held by the merchants all,
They came for miles around;
There were merchants tall, there were merchants small,
From places where they abound;
They came from Hayre, they came from Java,
And from beyond Ceylon;
They came from Prussia, they came from Russia,
Yet a merchant was every one.
The trades of all I will not name,
Yet one I must surely mention,
'Tis a rindler of Poco Rio, who came
To this far-famed great convention.

MORLEY SMITHSON, Greystock, Ont.

2—BEHEADINGS.

My first is only a "well-known plant,"
Most everywhere it's grown,
Behead and I mean "to agitate,"
Again and I am "to corrode,"
"Nearness, relation and presence" all
Beheaded I denote.

ADA SMITHSON.

3—ENIGMA.

My shape it is queer, great roughness I bear,
For I am subject to much wear and tear;
I am used by the housemaid as well as the queen,
I'm worn by the teacher, and on the student I'm seen;
Although I do come from an animal's back,
You cannot have comfort if me you do lack;
And now if my name appears not unto you,
Just think, for I am divided into two.

THOS. W. BANKS.

4—SQUARE WORDS.

(a) 1, To puff up; 2, a hag or witch; 3, making part of the number; 4, to color; 3, ardent. (b) 1, Mental; 2, what none of my cousins are; 3, growing out; 4, a performer; 3, altures with smiles.

HENRY REEVE.

Answers to January 1st Puzzles.

1 The answer to the prize puzzle is Incantatory. In cantatory. The second line gives the word's meaning. It was cut in five pieces, the *tor* filled the *can* with water, put in some *tea* and drank it. In his speech the syllables *in* and *o*, as well as the others, are used. 2 Winsome. 3 Tomahawk. 4 Handicraftsman.

Names of Those Who Have Sent Correct Answers to January 1st Puzzles.

Thos. McKim, Joshua Umbach, A. Snider.

CROSS-CUT SAWS.

The famous Stanley Blade, Lance Tooth, Cross-cut Saws lead them all. There is no better tempered and no faster cutting saw in the world to-day. Every blade is warranted. If your dealer does not keep the Stanley Blade then take no other, but send direct to us for one or more saws. We pay freight to all Ontario stations when your order reaches \$10 or upwards. Our prices are as follows:—

5-foot Stanley Blade\$2.50	Without
5 1/2 " " "2.75	" "
6 " " "3.00	Handles.

Patent Saw Handles, 25c. per pair extra. In addition to the ordinary cross-cut saw, as above, we have

One-Man Stanley Blades.

These one-man cross-cut saws have the lance teeth, and our prices are as follows:—

3 1/2-foot one-man Stanley Blade complete, with handles, price each\$1.90
4-foot one-man saw, each2.00
4 1/2-foot " " "2.25

For 75c. we will mail, to any address, the well-known Whiting Cross-cut Saw Set, the only perfect set yet produced. Terms—Cash with the order. Write for Catalogue to

STANLEY MILLS & CO

WHOLESALE HARDWARE MEN,
Hamilton, Ont.

SPECIAL OFFER.—Send us 25c. in stamps and we will mail you a gold-plated ladies' brooch with mother-of-pearl setting. 7-y-om

IMPORTANT SALE OF SCOTCH SHORTHORN CATTLE, THURSDAY, FEBRUARY 22nd, '94.

We will sell by public auction at Maple Bank Stock Farm, one mile north of Strathroy, 14 Cows and Heifers, nearly all young, and 13 young bulls nearly all from 12 to 14 months old. All got by our well-known stock bulls (imp.) Mariner - 2720 = and Young Abbotts-burn's Heir - 15947 =, a son of the famous World's Fair champion. Send for catalogue and come to our sale. Terms: Ten months' credit on approved notes, or six per cent. discount per annum for cash. Sale to commence at 1 o'clock.



3-a-om T. DOUGLAS & SONS, Strathroy, Ont.

GREAT DISPERSION SALE

SCOTCH - SHORTHORNS

On WEDNESDAY, FEBRUARY 14,
At one o'clock, on

CLEAR SPRING FARM

Two and one-half miles west of Sunderland Station, on the Midland Division of Grand Trunk Railway.

The herd consists of 32 females and 3 bulls, descended from two of Mr. Arthur Johnston's best families of Shorthorns (Stamfords and Crimson Flowers); topped by the best imported Scotch bulls. Hopeful (53903), the stock bull in the herd for the past five years, is still active, and a sure getter. Weight, 3,000 lbs.; heart girth, 9 feet 6 inches. No consumption about him—only the consumption of food. Send for catalogues.

TERMS.—Eleven months' credit on approved notes. No reserve.
JOHN SMITH, Auctioneer, Sunderland, Ont.
WM. SHIER, Brampton, Ont.

FARMS FOR SALE!

I have several improved and unimproved farms for sale for very small payment in cash, balance to be paid by delivery of half the crop each year. Prices moderate; land first quality, within 100 miles of Minneapolis, in good, settled neighborhoods, with schools, churches and towns near. No such opportunity to buy such farms has ever been offered before. Not on frontier but in centre of Minnesota. For particulars address—

A. G. WILCOX,
130 Temple Court, MINNEAPOLIS, MINN.
1-c-om

FOUR IMPORTED GLYDESDALE STALLIONS.

All four years off. Fresh horses of fine quality and the best breeding. Prices according to the times.
3-c-om **NEIL SMITH, Brampton.**

PETER ARKELL, Teeswater, Breeder & Imp. of Registered Oxford-Down Sheep, 345-y-om

DISPERSION - SALE OF THE ROSEDALE HERD OF SHORTHORN CATTLE

On Wednesday, February 28th, 1894, at 1 o'clock.

As I am about to retire from business, I will sell, by Public Auction, on the above date, at my farm, 2 miles from Malton Station and 15 miles west of Toronto, my entire herd of Shorthorns, consisting of 60 head, among which are 2 imported cows and the produce of 3 imported cows by imported bulls, comprising such families as Verbenas, Clarets, Rosebuds, Waterloos, Crimson's Flowers and other standard sorts, topped with the best imported Scotch bulls. There are 20 young bulls ranging from 9 to 14 months old, sired by imported Warfare (56712) and Earl of Aberdeen 3rd, bred at Bow Park. Also at the same time the imported SHIRE STALLION GARFIELD 2ND (2786).
TERMS:—Nine months' credit on approved notes; for stallion, half cash at time of sale. For further information see Catalogues, which will be ready about the 15th January.
JOHN SMITH, Auctioneer, 349-a-om Brampton.
JAMES GARDHOUSE, Highfield, Ont.

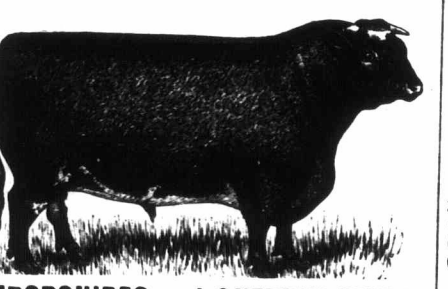
AN IDEAL COACH HORSE.

I have the most perfect Coach Horse in Canada to-day (bar none). He is imp., and is registered "Ambassador" (1661), three years old last fall, a good bay, all black points, about 16 hands, and for strength, quality and action I defy the world to beat him. He has been shown at Toronto, London and many other places, and has never been defeated. I have proved him a sure breeder, and will warrant him right in every particular. Will sell him very cheap. I will also have for sale, in March and April, a few choice sable collier pups out of imp. stock on both sides. For further particulars address—
3-a-om **FRED. ROW, Belmont, Ont.**



JUST IMPORTED—THREE SHIRE STALLIONS, including the six-year-old Fylde King 2nd; Diseworth Blue, a five-year-old; Blagdon Marquis, a four-year-old. The names of the most celebrated English winners of late years are to be found on their pedigrees. These are fresh young horses. Will be sold on easy terms. Send for catalogue. Farm is 11 miles west of Toronto; 2 miles from Weston on G.T.R. & C.P.R.
3-c-om **George Garbutt, Thistleton P.O., Ont.**

GREENHOUSE : SHORTHORNS.



SHROPSHIRE and SUFFOLK SHEEP.
New importation arrived, consisting of ewes and rams, all ages, for sale.

W. B. COCKBURN ABERFOYLE, ONT.

2-y-om Corwin, C.P.R., 7 miles from Guelph.

WESTRUTHER PARK

Herd of Bates Shorthorns, consisting of Oxford Barrington, Waterloo, Gwynne, Darlington, and other families, has outgrown the place and must be reduced in numbers. Four yearling bulls and a number of females for sale, at lowest prices and on liberal terms. Farm a mile from the station.
24-y-om **JOHN IDINGTON, Stratford.**

SHORTHORNS & BERKSHIRES.

A choice lot of young bulls on hand for sale at reasonable figures. **JNO. RACEY, JR., Lennoxville, Que.** 17-1-y-om

VALENTINE FICHT, Maple Leaf Farm, Oriol, Ontario,

Offers for sale at reasonable figures and on liberal terms, 30 head of well-bred Shorthorn bulls and heifers, yearlings, and two-year-olds also a three-year-old shire stallion from imported sire and dam (2nd prize, Toronto), and a grand lot of Cotswold sheep. STATION: Woodstock, on C.P.R. R. and G.T. K. 11-1-y-om

I HAVE FOR SALE AT REASONABLE PRICES 6 EXTRA SHORTHORN BULLS

(FIVE REDS AND ONE ROAN).
From three to fourteen months old; sire, Ottawa Chief, bred by J. & W. Russell, and full brother to the champion heifer at World's Fair. They are from dams bred by J. & W. Watt's stock. Oxford-Down sheep of both sexes always for sale, both English and Canadian-bred. **HENRY ARKELL, ARKELL, 10-1-y-om**

IF YOU WANT a well-bred Shorthorn Bull for use on grade cows, or a heifer to start a herd with, or some Improved Yorkshire pigs from imported sow Lady Lindsay [422], write **C. G. DAVIS, Woodland's Terrace Farm, Freeman P. O.** 13-1-y-om

MEADOW-LAWN SHORTHORNS.

I will sell bull calves from my stock Bull Royal Sovereign at prices to suit the times. Come and see me or write.
M. J. IRELAND, Copetown, Ont. 15-1-y-om

FOR SALE.

A choice lot of Shorthorns—bulls & heifers, of good quality and of the most approved breeding. Show animals a specially. The accompanying cut represents one of the animals now offered for sale. Come and see us, or write for particulars.
JOHN MORGAN & SONS, 7-1-y-om KERWOOD, ONT.

FOR SALE—Two choice Shorthorn Bull Calves, 10 & 13 months old, sired by Barmpton Chief - 14380 =. Also a few Berkshire Sows, 5 months old, at prices to suit the times.
E. B. BROWN & SON, 13-1-y-om Spring Hill Farm, WALKERTON.

Shorthorn Bulls

I now offer three Superior Young Bulls, sired by Wimple Hero and Doctor Lennox. Dams are of the Upper Mill and Syme families. Also a few choice heifers of similar breeding.
JOHN MILLER, 349-1-c-om Markham, Ont.

LINDEN STOCK FARM.

At the head of my herd is the Kinnellar bull imp. Royal George, while my cows and heifers are principally of the Wimple and Rosedale, also of Kinnellar breeding. Young bulls are now offered.
JOHN GILLSON, 3-1-y-om London, Ont.

Shorthorn Bulls For Sale

I have six excellent bulls for sale at hard times prices. They range in age from ten to eighteen months. They are all sired by the imported Cruickshank bull Victor Royal - 2750 =. SHROPSHIRE RAMS AND EWES for sale; also some useful SHORTHORN HEIFERS.
CHAS. CALDER, 2-g-om BROOKLIN P. O., Ontario Co., Ont.

H. CARGILL & SON, Cargill, Ont.

SHORTHORNS.
Two imported bulls are now at the head of our herd. Stock of both sexes and different ages from the best imported and home-bred cows now for sale. 11-1-f-om

Ample Shade Stock Farm

Ten young Shorthorn Bulls for sale, low down, blocky fellows, with plenty of size, at prices to suit the times. Come and see us, or write for particulars.
E. GAUNT & SONS, 13-1-y-om St. Helens.

BOW PARK HERD OF PURE-BRED SHORTHORNS

Have always on hand and for Sale young Bulls and Females, which we offer at reasonable prices. Address,
JAS. SMITH, Manager, 3-1-y Bow Park, Brantford, Ont.

IMPORTED SHORTHORNS.

My last importation of Scotch Shorthorns from the famous herds of William Duthie and W. S. Marr has arrived. I now offer for sale the two imported bulls Prime Minister and Defiance the former a grandson of the famous Field Marshal and the latter sired by Gravesend. I have also three of my own breeding—a red and a roan by Defiance and a red by Prime Minister, all out of imported dams. They are the right sort. Prices reasonable. Farm on mile from station. **D. D. WILSON, Ingleside Farm, Seaforth, Ont.** 11-om

SHORTHORN : BULLS

An extra good lot now for sale of the following Scotch families: Village Blossom, Duchess of Gloster, Mina and others.
H. & W. SMITH, Hay, Ontario.
Exeter Station, half mile. 13-1-y-om

We now have FOR SALE Four Superior Shorthorn Bulls of different ages, sired by such noted bulls as imported Baron Lenton and imported Reporter and Cavalier, also some extra good Cows and Heifers.
J. & A. SOMMERVILLE, 3-1-y-om ELDER'S MILLS, Ont.

H. I. ELLIOTT, Riverview Farm, Danville, P. Q.
Breeder of Scotch Shorthorns. Representatives of the most noted Scotch families: Duchess of Glosters, Claret, Lovely, Nonpareils, Minas, Rosebud and Mayflower. Herd headed by the imp. Cruickshank bull, King James. 15-1-y-om

HOLSTEIN-FRIESIANS.

If you want the choicest of the breed, then write or visit Maple Grove. Only the very best are kept and bred here. No culls sold from my herd, they go to the butcher. Choice young things from the great Colanthus Abbe-kerk now for sale at living prices. Also some extra fine Berkshire pigs. Address,
H. BOLLERT, 3-1-y-om CASSEL, ONT.

SUNNYSIDE HOLSTEIN-FRIESIANS

Choice animals, either sex, all ages, for sale at any time. Correspondence solicited. Address
McDUFFEE & BUTTERS, Stanstead, P.Q. 16-y-om

A HERD OF HOLSTEIN-FRIESIANS.

My circumstances oblige me to dispose of my entire herd of Holstein-Friesian Cattle, which have been carefully bred. I will therefore sell any number to suit purchasers. Males or females of different ages.
ELIAS PANNABECKER, 3-c-om Hespeler, Ont.

F. A. FOLGER RIDEAU FARM, KINGSTON, ONT.

FOR PRICES ON

Holstein - Cattle.

7-1-y-om
HOLSTEINS & YORKSHIRES
None but the best are kept at
BROCKHOLME FARM, Ancaster, Ont.
R. S. STEVENSON, Proprietor.

Write me for prices if you want first-class stock at moderate figures. Holsteins in the advanced registry. Yorkshires all recorded.
13-1-y-om

HOLSTEIN-FRIESIANS

Of the Choicest Milking Strains.
Extra individuals of both sexes for sale.
J. W. JOHNSON, 14-om SYLVAN, P. O.

JERSEYS AND TROTTERS.

At the head of herd is Nell's John Bull, grandson of Ida of St. Lamberts. Females from \$75 to \$150.
Our stud is principally composed of the get of Almont Wilkes 2191 and General Stanton, the sire of more horses in the 30 list than any sire in Canada.
Jonathan Carpenter, 13-1-y-om WINONA, ONT.

GLEN ROUGE JERSEYS

WILLIAM ROLPH, Markham, Ont., offers Twelve Jersey Bulls and Heifers (pure St. Lamberts), out of tested cows. Grand individuals. Prices right. 19-y-om

FIRST PRIZE JERSEY HERD.

Two young bulls from first prize cows and first prize bull at Toronto. Several heifers to calve shortly, suitable for family cows.
3-1-y-om **J. H. SMITH, Highfield, Ont.**



W. C. EDWARDS AND COY IMPORTERS AND BREEDERS.

PINE GROVE STOCK FARM, Rockland, Ont.

SCOTCH SHORTHORNS.

The imported Cruickshank bull Grandeur is at the head of this herd of imported and Home-bred Cows and Heifers of the most approved Scotch families.

ALEX. NORRIE, Manager.

ELMHURST STOCK AND DAIRY FARM CLARENCE, ONT.

Shorthorns, Shropshires and Berkshires

Our flock is from the choicest English flocks, headed by the ram sent out by Mr. Thos. Dyke; also milking Shorthorns, with imported bull Pioneer at the head of the herd.

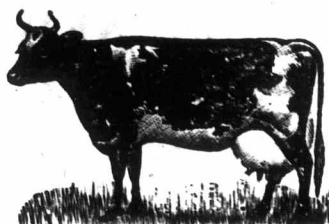
HENRY SMITH, Manager.

Laurentian Stock AND Dairy Farm

NORTH NATION MILLS, P. Q.

Ayrshires, Jerseys and Berkshires.

Imported Emperor at the head of a grand lot of imported and Canadian-bred Ayrshires; also St. Lambert Jerseys and Imported Berkshires.



COTSWOLD RIDGE FARM

The largest breeding flock of pure-bred Cotswold Sheep on Ontario. Shearing Rams and Ewes from imported sires and dams. A grand lot of Ram and Ewe Lambs also from imported sires & dams.



STOCK GOSSIP.

In writing to advertisers please mention the Farmer's Advocate.

Chas. Calder offers, in this issue, six Short-horn bulls. See his advertisement.

The Grange Wholesale Supply Company have a change of advertisement in this issue. We advise our subscribers to read what they say.

Mr. Richard Rivers, Walkerton, Ont., in this issue, offers for sale, at prices to suit the times, two well-bred Shorthorn bull calves and a few Berkshire sows. See his advertisement.

Mr. Fred. Row, of Belmont, has leased his thoroughbred stallion, Norwegian, to Hendric & Co., of Hamilton, from January to April 15th. Mr. Hendrie owns some thirty thoroughbred mares, and will breed a good number of them to above-mentioned horse.

In this issue will be found an auction sale advertisement of Shorthorns, comprising 14 cows and heifers, and 13 young bulls, the property of Messrs. T. Douglas & Sons, of Strathroy. This sale should be well attended, as Mr. Douglas is an old, careful breeder and is offering some good things.

In this issue will be found an advertisement of an excellent coach horse, Ambassador - 1881 - coming four years old, owned by Mr. Fred. Row, of Belmont. He offers this promising stallion for sale. Parties desiring this breed would do well by writing Mr. Row at once. He also advertises some choice sable collie puppies out of imported stock.

The first annual meeting of the Berkshire Breeders' Institute of the National Berkshire Record Association will be held in Indian-apolis, Ind., in the parlors of the Hotel English, Wednesday, February 14, 1894. An interesting programme to Berkshire breeders and fanciers has been prepared, which will be carried out by men who thoroughly understand the Berkshire hog.

Mr. R. G. Steacy advertises for sale, in this issue, the magnificent Ayrshire bull Gold King. His dam is Nelly of Osborn, imp., the champion cow at the Columbian Exposition, and one of the most beautiful animals which will appear in our new engraving, "Canada's Columbian Victors." Those in need of a grand Ayrshire stock bull should write Mr. Steacy for price and other particulars.

R. Rivers & Son, of Springhill Farm, Walkerton, have just sold to Mr. Rosewell, Brant Tp., the excellent Shorthorn bull calf Royal Chief, the winner of 1st prize at the Northern Exhibition, sired by Bampton Chief - 14380 - a calf of good substance and quality throughout, and, if well cared for, should retain the honor bestowed on him this fall. They have two good calves for sale yet, from deep-milking dams - a red and roan. See ad. in another column.

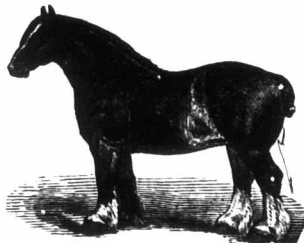
Messrs. DICK & Co., Montreal. I have analysed and tried your Blood Purifier in a large number of cases, with the most salutary results. I am continually prescribing it in my practice. It is invaluable for worms, hide-bound, impoverished blood, and debility; while I know nothing to equal it for general improvement of stock, and enhancing their value.

VETERINARY EDITOR "FAMILY HERALD," Montreal.

THE CLEAR SPRING HERD OF SHORTHORNS AT AUCTION.

We are in receipt of Mr. Shier's sale catalogue, which contains the names and pedigrees of thirty-five head of cows and heifers of two noted families of Scotch Shorthorns, which are to be disposed of at public sale on Feb. 14th inst. In his announcement, Mr. Shier states "they are honestly put upon the market and will be honestly sold to the highest bidder." Just three families are represented by two cows and heifers. On opening the catalogue one is struck with the success Mr. Shier has attained in breeding these families, and how remarkably prolific they have proved, which demonstrates most clearly how paying an investment a few carefully selected Shorthorn cows may become. Of the thirty-two cows and heifers, eleven offered are descended from the imported cow Stamford 8th, bred by Mr. W. S. Marr, at Upper Mill, Scotland, and all this family are from two cows purchased by Mr. Shier, viz.: Stamford 12th and Stamford 13th, both bred by Mr. Arthur Johnston and by his imported bull, Lewis Arundel. The after crosses on this family are bulls bred at Kinnellar. And Scotsman 3rd, which also appears, was a right well-bred one, sired by the imported prize-winning bull Scotsman 2nd; his dam was imported Princess 2nd, bred by Mr. James Bruce, Burnside, Scotland, she also having been a noted show cow in her day. Mr. Shier states that in his hands the Stamfords have proved heavy milkers. The catalogue also includes nineteen of the well-known Crimson Flower, which have been so justly appreciated wherever they have been purchased, and from which so many prize winners have sprung. Several noted, highly-bred, imported bulls appear in the top crosses of the pedigrees of this family; two bred at Kinnellar are Red Knight and Hopeful; the latter is included in the sale. Then there are the Sittyton bull Julius, the two Bates-bred bulls Lewis Arundel and Baron Kirklevington, and the Booth-bred bull K. C. B. 2nd, bred by Mr. Jas. White, of Clintery, Scotland. There are also a couple of female descendants of the grand old Atha family, which none can go astray in purchasing. Only three bulls are offered for sale; one of these is imported Hopeful, which his proprietor claims is the largest bull in Canada, and further claims that he has proved successful a sire of bulls that these have been sold as fast as they have been produced, which explains why so few bulls are included in the sale.

THORNCLIFFE STOCK FARM!



Montrose, The Ruler, Carruchan Stamp, Knight Errant and other celebrities. My stock in the above lines were very successful at all the large shows last year. Call and examine our stock before purchasing elsewhere.

19-1-y-om

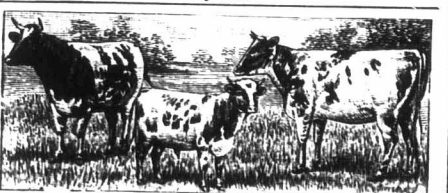
ROBERT DAVIES, Proprietor. P. O., Toronto.

EXMOOR JERSEYS.

Breeder and importer of the choicest milking strains of Jerseys. Inspection solicited. Prices right.

JERSEY-CATTLE

Of the heaviest milking strains. One of the largest herds in Canada; bred closely to the great dairy cow at Chicago, also the famous two-year-old. Sires of both were sold from this herd. Also Welsh Blood Ponies for ladies' and children's driving. Stock for sale always on hand. GEO. SMITH & SON, Grimsby, Ontario.



Champion Dairy Herd of Ayrshires at various government tests. Prize winners at the World's Columbian Exposition, Chicago. Write R. ROBERTSON, Howick, Que. 19-y-om

WOODROFFE STOCK AND DAIRY FARM. Ayrshire Cattle and Yorkshire Swine. A choice lot of young Bulls of the richest milking strain now on hand. Correspondence solicited. Address, J. G. CLARK, Ottawa, Ont. 19-L-om

BARCHESKIE HERD OF AYRSHIRES

Andrew Mitchell, the largest breeder and exporter of Ayrshire cattle in Scotland, has always on hand and for sale bulls, cows and heifers of the choicest breeding and quality. Inspection invited. Prices on application. Apply to ANDREW MITCHELL, Barcheskie, Kirkcubright.

3-1-y-om

FOR SALE.

Ayrshire bull Gold King, rising 2 years. Dan Nellie Osborne, imp. champion at the Columbian World's Fair, Chicago; also champion at Montreal two years in succession, and in Scotland best cow in milk, etc. Sire, Chieftain of Barcheskie (imp.), of prize records, etc. Few choice calves imported in dam from Scotland's most noted milk and prize record strains. For further particulars, address R. G. STEACY, Importer and Breeder of Ayrshires, Maple Grove Ayrshire Stock Farm, line G. T. R., Lyn, Ontario. 3-1f-om

IMPORTED SHROPSHIRE

My stock was selected by myself, and consists of Shearing Ewes and Ewe Lambs from the leading flocks of England, and of the highest quality and breeding. Stock of all ages for sale.

C. W. GURNEY, Paris, Ontario. 3-y-om

SHROPSHIRE.

Orders can now be booked for Shearing Rams, Ram Lambs and Ewes, sired by the celebrated prize-winning English ram, Bar None. Also Rams and Ewes of this year's importation.

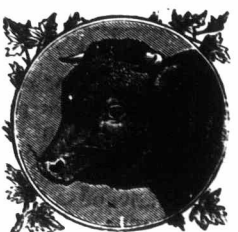


SHORTHORNS!

CHOICE YOUNG HEIFERS and BULLS

by the celebrated Cruickshank bulls

NORTHERN LIGHT - AND - VICE CONSUL



ISALEIGH GRANGE FARM, DANVILLE, P. Q.

SOLD AGAIN! Three of the four Guernsey bulls advertised by us are sold and delivered. We still have one more, the 3rd prize calf at the World's Fair, now fourteen months old - a dandy. Lowest price, \$200.

IMPROVED YORKSHIRES. - We claim to have the longest, deepest and most typical LARGE YORKSHIRES in AMERICA, and the reason is we have paid more money and imported more pigs from the best herds in England than any two Yorkshire breeders on the continent. Orders booked now for spring pigs. Two very handsome COLLIE BITCHES, seven months old, \$10 each. Address, 9-y-om

J. Y. ORMSBY, Manager.

The Most Celebrated Stud of Clydesdales and Hackneys in Canada is owned by GRAHAM BROS., CLAREMONT, Ont.



The choicest animals that money and experience can buy, and well qualified to maintain the reputation of our stud for importing. More first prize and sweepstakes winners at the leading shows in Canada and the United States than all other establishments of its kind in the Dominion. The Clydesdales have immense size, large flat bone, with style, quality and choice breeding combined. The Hackneys have fine colors, style, quality, high knee action and choicest breeding. The home of the Champion Clydesdale Stallion, Queen's Own, and the Champion Hackney Stallion, Firefly. Parties wishing the best animals at reasonable prices are cordially invited to examine our stock. Catalogues free.

GRAHAM BROS., CLAREMONT, ONT. 25 miles east of Toronto, on the C. P. R. 3-1-y-om

Many Old Farms require so much fertilizing that farms and gardens Won't Produce a Profit. The rich, loamy soil of Michigan Farms produces a fine crop of climate and freedom from cyclones, blizzards, together with good society, churches, etc., make Michigan Farms the best in the world. Write to me and I will tell you how to get the best farms on long time; low rate of interest. O. M. BARNES, Land Commissioner, Lansing, Mich. 23-L-0

SHROPSHIRE! JOHN DRYDEN, BROOKLIN, ONT.

Makes a specialty of breeding choice SHROPSHIRE SHEEP

Cruickshank Shorthorns

Low down, heavy weights, thick fleshed and easy feeders. A few choice young bulls, good colors and good quality, are ready for immediate shipment. PRICES MODERATE. 3-y-om

SHROPSHIRE - FOR - SALE

My whole flock of 60 head of imported Rams and Ewes, a few home-bred Shearing Rams, and a choice lot of lambs of both sexes. Also a choice lot of young Yorkshire Pigs. T. H. MIDDICRAFT, Sparta, Ont. 19-y-om

SHORTHORNS AND SHROPSHIRE.

For sale, seven young Shorthorn bulls, from 8 to 12 months old, got by Grand Fashion - 15401 - also a choice lot of Yearling Ewes, due to lamb in March. All Stock Registered. W. G. PETTIT, 13-y-om Freeman P. O., Burlington Stn., G. T. R.

SHROPSHIRE.

A fine selection of Shearing Rams and Ewes by Royal Uffington, also Ram and Ewe Lambs from imported ewes and sired by Royal Marquis. To head to select from. Address, J. & J. SMITH, Paris, Ont. 7-y-om

T. W. HECTOR, Importer and Breeder of Dorset Horn Sheep. The oldest flock in Canada. P. O.: Springfield on the Credit. Stations: Springfield and Cooksville, C. P. R.; Port Credit, G. T. R. 5-1-y-om

JOHN A. MCGILLIVRAY, Jerseydale Farm, Uxbridge, Ont., Midland Div. C. T. R., importer and breeder of Dorset Horned Sheep 19-1-y-om

PREMIUMS! SECURE NEW SUBSCRIBERS TO THE FARMER'S ADVOCATE PREMIUMS!

THE BELOW DESCRIBED GRAINS ARE OFFERED AS SUBSCRIPTION PRIZES:



SELECTED CANADIAN THORPE

BARLEY.

SELECTED CANADIAN THORPE (Two-Rowed).—This barley was first generally introduced two years ago, and has proved beyond doubt the best two-rowed barley in cultivation in Canada to-day. It closely resembles the English Thorpe in some respects, but is a much superior variety and very much better suited to Canadian soil and climate. It grows an abundance of straw, which stands as well and stiffly as the best sorts of wheat. Stools very freely, and will outyield any six-rowed sort. It is a very upright grower, and the heads never droop. We have never seen it lodged. Five pecks to one and a-half bushels per acre of seed is quite sufficient. Its color is as bright and nice as the best Six-Rowed when carefully saved, and will outweigh any of the English sorts that we have seen. It will do well wherever the Six-Rowed succeeds; has done remarkably well in Manitoba and the N. W. T. Every farmer should try this variety. Our stock has been grown on the shores of Lake Ontario, the best barley country in America, and is absolutely pure. The extra yield of this barley over any other makes its purchase a good investment, if only grown for feed.

We will express one peck of this variety to any old subscriber who sends us one new name accompanied by \$1

OATS.

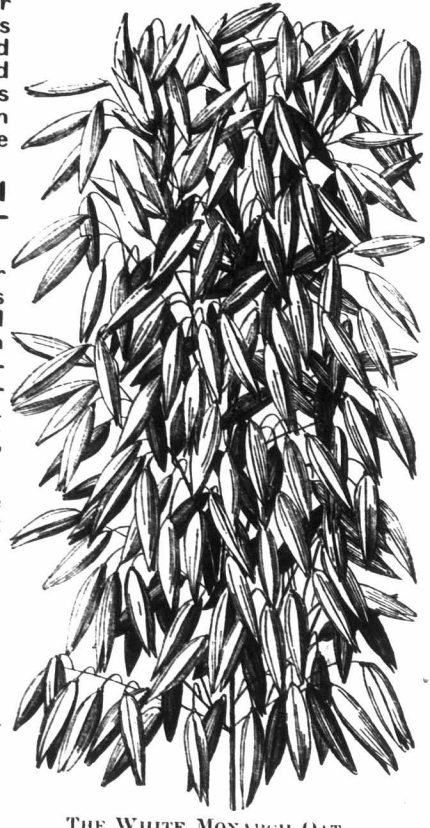
THE WHITE MONARCH OAT.—This magnificent white oat was grown for us by one of the best farmers of Ontario, and has given the greatest satisfaction. Our stock is grown from imported seed sent out by one of the best English seedsmen, and is a cross-fertilized variety produced by this gentleman. It has given the very best results in England, where it has been thoroughly tried. Its English introducer, in writing of it, says:—"It surpasses all others for earliness, while its productiveness may be realized from the fact that it yielded from eighty to one hundred bushels to the acre. The straw is frequently six feet to six feet four inches in height; of a splendid quality; large, close panicles, completely clothed with grain of the finest quality and very hardy. It has a wonderfully thin skin, and is consequently much appreciated and valued by millers." A leading agriculturist, who has tested it for two years, says:—"I find this oat is much thinner in the skin than any of the sorts we have been growing. From its appearance and character, I judge it will be a valuable addition to the varieties we have in this country." We have carefully tested it for two years, and like it well. With us it has grown a fair amount of straw and yielded very well. The grains are thin in the skin, and the fleshy parts heavy. With us it has done MUCH BETTER than the Gothland, and we prefer it to the Golden Giant, though the last named has done well with us.

We will send one peck of this oat to any old subscriber who sends us one new name accompanied by \$1.

BLACK TARTAR OATS. Imported from one of the most reliable European firms. ONE PECK BY EXPRESS FOR ONE NEW NAME ACCOMPANIED BY \$1.

N. B.—We do not prepay the charges on any grain or goods sent by us as subscription prizes. If our friends desire grain prepaid, we will do so by reducing the amount sent from one peck to five pounds. This amount can be sent by post.

We also call your attention to the page of premiums on page 19, January 1st, and page 39, January 15th issues. Everyone is delighted with them.



THE WHITE MONARCH OAT.

LIVE STOCK

FOR 100 NEW SUBSCRIBERS at \$1.00 each we will give a young registered Bull or Heifer of any of the following breeds, viz.: Shorthorn, Ayrshire, Jersey or Holstein. For 30 NEW NAMES we will send a pure-bred Ram or Ewe Lamb of any of the following breeds: Cotswold, Leicester, Lincoln, Shropshire, Oxford, Southdown, or Horned Dorset, or a pair of young Berkshires, Yorkshires, Tamworths, Poland-Chinas, Chester Whites or Suffolk Hogs.

ALL STOCK SENT OUT BY US WILL BE REGISTERED AND OF GOOD QUALITY. ACTIVE AGENTS WANTED IN EVERY TOWNSHIP.

Imported Cotswold Ewes

In lamb to an English royal winner that has proved himself a great stock sire. Ram lambs and ewe lambs from imported stock, which will make good show sheep, for sale at hard times prices.

WM. THOMPSON,
MT. PLEASANT, Uxbridge Station, G. T. R.
9-1-y-om

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-ERLING, Sec., Lafayette, Indiana. 13-1-y-om

IMPROVED SUFFOLK SWINE

Six choice young Improved Suffolk breeding sows for sale. They have all been successful prize winners at the late Fat Stock Show held in Guelph, and among them is the winner of the 2nd prize for best sow under six months at the Industrial Exhibition. Also one young imported Yorkshire boar, registered, and two fashionably-bred Shorthorn bulls, in color red with a little white, and sired by imported Cruickshank and Campbell bulls; they are choice animals. A. FRANK & SONS, The Grange, four miles from Cheltenham Station, C. P. R. & G. T. R. 21-2-y-om

YORKSHIRE PIGS

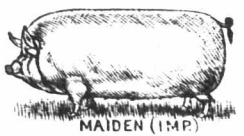
Of the best type and breeding. Pairs not akin for sale at all seasons. J. M. HURLEY & SON, Belleville, Ont. Box 412. 1-3-y-om

THE MARKHAM HERD

Farm at Locust Hill Station, C. P. R. Registered Improved Large Yorkshire and Berkshire pigs. As we do not intend to exhibit, we will now sell a choice lot of show pigs of each breed. 17-y-om JOHN PIKE & SONS.

LARGE (WHITE) IMPROVED YORKSHIRES AND LARGE ENGLISH BERKSHIRES.

Please notice: All parties ordering pigs from us for the next thirty days will be allowed a reduction of from 25 to 30 per cent. off our regular prices. Our stock consists of a few hours fit for service at once; also some very fine Yorkshire Sows, last April and June pigs. We also have on hand a fine lot of young pigs, both breeds, send in your orders early, and get a genuine reduction in prices. Apply to WM. GOODGER & SON, Box 169, Woodstock, Ont. 11-1-y-om



MAIDEN (IMP)

IMPROVED: LARGE: YORKSHIRES

The largest and most carefully bred herd of this breed of hogs on the continent. Fifty sows are being bred for the spring trade. Stock of all ages for sale. A specialty made of smoothness and uniformity of type. All stock shipped to order are guaranteed to be as described. Personal inspection solicited. J. E. BRETHER, Burford, Brant Co., Ont. 3-y-om



MAIDEN (IMP)

THE HOME OF THE BERKSHIRES.

J. G. SNELL & BRO.,
Edmonton, Ontario.

We have some very promising young boars for sale from two to seven months old. Also twenty young sows, which we are now breeding to first class boars. Come and see our stock, or write for description and prices. Our station is Wrampton, G. T. R. and C. P. R. 2-y-om



BERKSHIRES

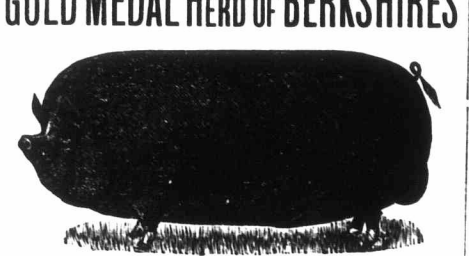
Of the best strains not connected, from a number of grand sows and three different boars. Fifty-eight prizes won last season. All ages for sale, including sows in farrow. 3-1-y-om WM. McALLISTER, Varna, Ont.



S. COXWORTH, CLAREMONT, ONT.,

Breeder and Importer of Berkshire Hogs. Twenty young sows for sale, bred to my three stock boars, Highclere Prince, King Lee, and Champion Duke, Imp. Write for prices or come and see my stock. Station and Telegraph Office - CLAREMONT, C. P. R. 8-y-om

GOLD MEDAL HERD OF BERKSHIRES



Young stock of both sexes and of various ages for sale. Come and see, or address—

J. C. SNELL,
EDMONTON, ONT. 32-y-om

H. J. DAVIS, Woodstock, Ont., Breeder of High-class Large Berkshire and Imp. Large White Yorkshire Swine, Short-horn Cattle. — A grand lot of young pigs ready for shipment of both breeds; also boars fit for service from prize-winning stock. Stock shipped to order. Satisfaction guaranteed. Young Bulls generally on hand. 8-y-om



ISRAEL CRESSMAN, New Dundee, Ont.

Importer and breeder of Large English Berkshires. Young Hogs always on hand; got by imported stock. 4-y-om

Great Sweepstake Herd of Ohio Imp'd Chester White Swine, our herd having won more prizes and sweepstakes than all other herds combined at Toronto Industrial Quebec Provincial at Montreal, and Western Fair, London, of 1893. Orders now booked for fall pigs in pairs or trios not akin. Also a number of young sows in farrow to an imported boar. Pedigrees furnished. Reduced rates by express. Write for particulars and prices.

H. GEORGE & SONS, Crampton P.O., Middlesex County, Ontario. 5-1-y-om

IMPROVED CHESTER WHITE SWINE

DORSET-HORNED SHEEP

A SPECIALTY. Write for particulars, or call and inspect the stock. Visitors welcome. R. H. HARDING, Mapleview Farm, Thorndale, Ont., Middlesex Co. 7-1-y-om

E. D. GEORGE

PUTNAM, ONT. Importer and Breeder of Ohio Improved Chester White Swine. The largest and oldest established registered herd in Canada. I make this breed a specialty, and furnish a good pig at a fair price. Write for prices. 9-1-y-om

Duroc-Jersey Swine

are the best all-round hog known. No squealing; quiet disposition; good grazers; defeated Berks and P. C. on all points at Mich. Agr. Coll. test. Pigs for sale. Address PETER LAMARSH, Wheatley, Ont. 15-1-y-om

THE OXFORD HERD OF REGISTERED POLAND CHINAS

Our herd of Improved Poland-Chinas won 35 first, 18 second and 6 third prizes at Montreal and Toronto, for best boar and two sows; any age. Stock, both sexes and all ages. Pairs and trios not akin and sows safe in pig for sale at all times. Correspondence solicited or inspection of herd invited. 15-y-om W. & H. JONES, Mount Elgin, Ont.

PINE GROVE HERD

POLAND-CHINAS. I am breeding and importing Poland-Chinas Pigs. Cornish and Teumseh strains a specialty. Pigs of this breed for sale; also plants, small fruits and honey. CAPT. A. W. YOUNG, Tupperville, Ont. 1-1-y-om

CANADIAN BLACK BESS HERD

Of Registered Poland-Chinas—A choice lot of young pigs for sale. Selected = 48#, the great ribbon winner, at the head of herd, assisted by Rht's Chief, who weighs 1,000 pounds. Correspondence or inspection of herd solicited. J. J. PAYNE, Chatham, Ont. 8-y-om

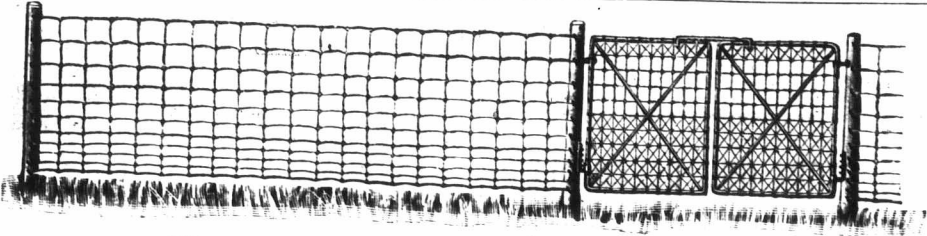
RED - TAMWORTH - BOARS

Fit to serve; young sows ready to breed. Also young Ayrshire Bulls and Heifers of deep milking strains. CALDWELL BROTHERS, Briery Bank Farm, Orchardville, Ontario. 23-1-f-om

TAMWORTHS FOR SALE

I have for sale a few choice Tamworth Boars, fit for service; also sows from four to seven months old. I am booking orders for spring litters. My breeding pens contain twenty typical Tamworth Sows and two Imported Boars, all of superior quality. I guarantee all stock sent out by me to be as represented. 1-y-om JOHN BELL, Amber, Ont.

HEADQUARTERS for Pure-bred S. C. B. & W. Lehighs. Eggs, \$1.50 per 13. Also B. P. Rocks, S. Wyandottes, B. Minorcas and B. R. R. Games. Eggs, \$2.00 per 13. Write for circular. J. E. McCOMBS, Ridgeville, Ont. 3-1-y-om



How He Took an Agency.

Page Woven Wire Fence Co.:

AUGUST 1st, 1893.

DEAR SIRS.—I wish to give you my experience with your remarkable fence and how I came to be willing to take the agency of this Company.

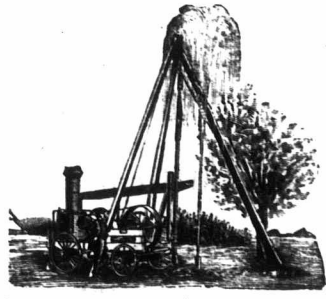
About a year ago I wanted to do some light fencing, so wrote all the woven wire fence companies I could find advertising in my farm papers for their price lists, thus addressing six different companies, all of which replied promptly, each claiming to have the best fence on the market, which left the question open for me to determine. I noticed that all except you used straight wires which required to be occasionally tightened by ratchet and other devices in order to keep them serviceable, and I knew what that meant from past experience. I at once put them down as no good for this climate of such extremes of temperature. Not fully understanding your fence, I classed it along with that kind that is claimed to be so wonderfully drawn that all the stretch has been taken out so that it cannot get loose. Therefore I decided to use boards and build a solid five-board fence. While considering the cost of the board fence, which was the best fence I knew of, Mr. A. M. Keeney drove into my yard and showed me a model of your fence, offering to sell me a neater, tighter, higher, stronger and more durable farm fence at 15c. per rod less money than my board fence would cost, not counting the extra labor of building and hauling of the board fence.

I objected to buy, saying that I did not like to try new patent things, whereupon he said it was not a new thing and that if I would loan him the ground on which to place his fence that he would send a man to put it up and let me try it for 60 days, then if I did not wish to buy I should write him a letter and he would come and take it away and pay me for the damage it had been to me during the time of trial. Well, to this I consented, so up went the 11-bar 5-ft. high farm fence around my barn. The fence had not been there long when my buggy team took fright and ran away, going into the fence at full speed. As they struck the fence it sprang out of line several feet, then back, lifting team, buggy and all clear back out of the line, so that I ran up and caught them before they recovered themselves. To my surprise neither horse was hurt, and not a wire of the fence was broken or sagged, and I could not even see the place that the team struck the fence. The buggy tongue being broken, I hitched the horses to the lumber wagon and drove them 16 miles. I at once sent payment for the string of fence and ordered a lot of the 2-ft. 7-bar hog fence which I placed around a young grove, with two new Glidden barbed wires above it, thus making a pig-tight, 4-ft. high, all-purpose fence. As winter came on the young grove stopped the drifting snow, which completely covered the fence, breaking the barbed wires in several places along the string and pressing your 2-ft. hog fence to the ground between the posts, which were 32 feet apart. I therefore concluded that I would find most of the wires broken under the snow, and that those that were not would be so stretched that they would have to be re-tightened, but, to my great surprise, one morning after a heavy night's rain I saw that the fence was released from the snow, erect, uninjured and apparently as tight as when first stretched there. This so convinced me as to the superiority of your fence over all other fences that I complied with Mr. Keeney's request to go and call on some of my neighbors with the model to see how the fence would sell, which I did one Saturday morning, taking orders of three of my nearest neighbors for 200 rods, which they wished put up as soon as possible. This I did, and all being so well pleased with their fence, I then wrote Mr. Keeney to make me out a contract for Hancock County territory, which he had for some time been urging me to take. I also asked him to write me all particulars in regard to constructing and erecting a Royal Bunter, under which I proposed to try the fence, making a public exhibition at Garner, our celebrating town, July 4th. According to instructions, I stretched up 6 rods of 4-ft. high town lot fence, and erected astride of it a three-legged 20-ft. high derrick, from the top of which I swung a kerosene barrel filled with earth and hanging, while at rest, a foot above the ground and an inch from the fence. I then fastened a long rope to the lower end of the weighted barrel, with which to draw it back as far as I could from the fence and then let it go. I saw that the springs of the fence threw back the barrel, which soon enabled me to get a very high motion with my battering-ram, but finding that it made no impression whatever on the fence I began to offer the fence, free for all, to hammer. The first to try were three men at once, two of whom drew back the barrel with the long rope whilst the other expelled it with his hands each time it struck the fence. They soon got up a motion which fairly made things jingle, so that the bottom must have come with several tons weight against the fence, considering speed and high rapid motion under which the 500 lbs. struck. The men, finding they could make no impression on the fence, soon gave it up as a bad job, saying that it beat all the fences they ever saw. The next to try it were five fellows, two of whom climbed on top of the barrel and clung to its supporting ropes, thus adding 300 lbs. to the weight of the batterer, whilst the others worked it back as the previous three had done, but, to the amusement of the crowd, as soon as a good motion was gained, on striking the fence one of the men went sprawling headlong off the barrel and the other jumped and fell off, exclaiming, "That's too hard on my gizzard." Others going and coming tried the battering-ram all day, and at sunset there was not a wire of the fence broken, and all those who sighted down the line said that it was not sagged a particle between the posts, which were set two rods apart. I being so well pleased with my success in exhibiting the fence on July 4th, at once filled out and signed my contract for the county agency, returning it to Mr. Keeney the morning of the 5th. I have since been very busy stretching up fence, and have just got another machine, as I can plainly see that I have more work ahead of me than I can do with one stretcher. Every man that I have put up fence for so far is greatly pleased with it, and they all say they will want more as soon as they are able to buy it. I think my trade will call for a ten-mile carload this fall if it continues to increase as it now is. These close times for money I find to be a great drawback in taking orders. Please write me the longest time terms you can allow on a carload of fencing, to arrive here about October 1st.

Yours truly, JNO. MARRIAGE, JR.

Goodell, Hancock Co., Ia.

For particulars of fence and agency address, THE PAGE WIRE FENCE Co., of Ontario, Limited, Walkerville, Ont.



TO - PRESERVE - HEALTH
You must have PURE WATER
To secure this you require a
drilled well and it pays to em-
ploy a practical driller. Write
for full information.

WM. SHARP, Practical Well Driller,
184 Hamburg Ave.,
TORONTO, ONT.



\$2.00 **\$2.00**
\$2.00 **\$2.00**

THIS is an American Watch. The cut is 3/4 size. It will go and keep good time as long as it is well used. For \$2.00 we will mail it to any address in Canada.

THE SUPPLY COMPANY
NIAGARA FALLS, ONTARIO

STOCK GOSSIP.
MEETINGS OF LIVE STOCK ASSOCIATIONS.

CATTLE.
The fifth annual meeting of the Dominion Ayrshire Breeders' Association, for the presentation of the report of last year's proceedings, and the election of officers for 1894, and other business, will be held at Shaftesbury Committee Room, 26 Queen St. west, Toronto, on Thursday, the 8th of February, at 11 o'clock a. m. Interesting papers on Ayrshire subjects will be read. A meeting of the directors will be held at 10 o'clock a. m., at the office of the Association.

The eighth annual meeting of the Dominion Shorthorn Breeders' Association for the presentation of the report of last year's proceedings, and the election of officers for 1894, and other business, will be held at Shaftesbury Hall, 26 Queen St. west, Toronto, on Friday, the 9th of February next, at 11 o'clock a. m. Interesting papers on Shorthorn subjects will be read. A meeting of the directors will be held at 10 o'clock a. m., at the office of the Association.

HORSES.
The annual meeting of the Shire Horse Breeders' Association will convene at 3 p. m. on the 6th of February, in Mr. Henry Wade's office, corner Queen and Yonge Sts., Toronto.

The annual meeting of the Clydesdale Association will be held on the 7th February, at 2 p. m., at the Albion Hotel, Toronto.

Persons attending these meetings should obtain from the R. R. agent, at the starting point, a Standard Certificate Receipt, which must be signed by the agent from whom it is procured. If a passenger travels over two separate R. R. lines, two certificates must be procured.

NOTICES.
One of the oldest American agricultural journals, and one of the best of our exchanges, is the Cultivator and Country Gentleman, published weekly by Luther Tucker & Son, Albany, N. Y. It always contains much well-written and carefully-edited matter relating to dairying, gardening and "intensive" farming. And those who are specially interested in these lines will always find much to interest and instruct them in its columns.

A NEW THROUGH SLEEPING CAR LINE FROM CHICAGO TO SEATTLE.
Via the Chicago, Milwaukee & St. Paul and Great Northern Railways, has been established, and first-class sleeping cars will hereafter run daily from Chicago at 10.30 p. m., arriving at Seattle 11.30 p. m., fourth day. This is undoubtedly the best route to reach the North Pacific Coast. For time tables, maps and other information, apply to the nearest ticket agent, or address A. J. TAYLOR, Canadian Pass. Agent, C. M. & St. P. Ry., 37 York St. Toronto, Ont.

MACHINERY WHICH IS A VALUABLE INDIRECT ASSISTANT TO THE FARMER.

In these days when thorough underdrainage is a necessity, if successful farming is to be practised, it requires to choose what material is most suitable to be used in constructing drains. In this there is no shadow of doubt but that properly made and burnt tile are the most durable and satisfactory, and, in fact, the only material that it is at all suitable to use in the ground, with the hope of constructing successful working drains. But it may be contended by some that tile are not readily procured, that the nearest tile kiln is too far distant, or that cost of carriage or the labor of hauling adds largely to the bill of expense in the draining in certain localities.

To this we would say that there are few industries that will yield a surer or better profit for the amount of capital invested than tile making, if only the proper machinery is provided for their manufacture. For this variety of machines has been put on the market, which are by no means satisfactory, as they are not turning out good, smooth tile, nor can they put them out in sufficient quantities to pay, but this is the fault of the machine, and not with the business. After examining some of those in use, a machine manufactured by H. C. Baird & Son, Parkhill, has attracted our notice. The fact that in the vicinity of their machine shops, where their tile-making machines were first introduced, the price of tile was first reduced to the present reasonable rate, proves how valuable an assistant this machine has become to those interested.

Doubtless one reason why Messrs. H. C. Baird & Son have made such a success of their tile-making machinery is because they have made a specialty of building clay working machines, and have made a thorough study of this department, which beside the Kell's Combined Tile and Brick Machine and the Quaker Special Brick Machine, includes all the attendant supplies required in a first-class tile and brick yard. Kell's Combined Tile and Brick Machine can be changed in ten minutes from making tile to making brick, or vice versa. The proprietors claim that this machine will work almost any clay in its crude state just from the bank, thus avoiding the expense of handling twice, as all it requires is to have the clay conveyed directly from the bank to the tread. Their No. 1 machine makes tile from 2 1/2 to 12 inches, and will turn out all sizes as indicated as rapidly as they can be handled. The following quantities are claimed to be a fair day's work:

- 2 1/2 inch till, from eight to nine thousand.
- 3 " " " eight " "
- 4 " " " six " seven " "
- 5 " " " four " five " "
- 6 " " " three " "
- 8 " " " two " two and a-half thou'd "
- 10 " " " fifteen hundred to two thou'd "

Messrs. Baird say that many of their customers claim that they double these figures, but where moderately good working clay is obtainable they guarantee that the above number can easily be made. While the same machine, with 4 men and two boys, will make 15,000 brick in ten hours.

The Quaker, a special brickmaking machine which is also made by this firm, turns out a splendid quality of pressed-brick; it has a number of advantages. The Messrs. Baird will be only too glad to place either of their machines in competition with others in this line, as they are confident of favorable results. Those interested will do well to send for catalogue, which describes machines made by this firm.

CURES OTHERS WILL CURE YOU

PURE BLOOD **CLEAR SKIN** **HEALTH** **MENTAL ENERGY**

PERFECT DIGESTION **SOUND SLEEP** **LONG LIFE** **VITALITY** **STRONG NERVES**

AYER'S SARSAPARILLA

M. Hamnerly, a well-known business man of Hillsboro, Va., sends this testimony to the merits of Ayer's Sarsaparilla: "Several years ago, I hurt my leg, the injury leaving a sore which led to erysipelas. My sufferings were extreme, my leg, from the knee to the ankle, being a solid sore, which began to extend to other parts of the body. After trying various remedies, I began taking Ayer's Sarsaparilla, and, before I had finished the first bottle, I experienced great relief; the second bottle effected a complete cure."

Ayer's Sarsaparilla
Prepared by Dr. J. C. Ayer & Co., Lowell, Mass.
Cures others, will cure you

JNO. J. LENTON,
PARK FARM, OSHAWA, ONTARIO,
BREEDER AND IMPORTER OF
INDIAN GAMES, WHITE, SILVER AND GOLDEN WYANDOTTES.

Stock always for sale. Eggs, \$1.00 per eleven. 19-3-0m

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Medal and Diploma on our INCUBATOR and BROODER Combined.

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Reliable Incubator and Brooder Co. Quincy, Ill.



CRADLE CHURN.
PAT. NOV. 28, 1892.

Address: B. R. HAMILTON & CO., Neepawa, Man., or to the WATSON MANUFACTURING CO., Ayr, Ont. 13-y-om

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A new Chemical Compound discovered by Dr. Warnock, Member of Royal College of Veterinary Surgeons, England; Fellow of the Glasgow Veterinary Medical Society.

A NEW DISCOVERY.

With a specific chemical action, for the immediate cure of wounds and ulcerated sores on Horses, Cattle, Dogs, etc., such as Barb Wire Cuts, Collar and Saddle Galls, Cracked Heels, Frost Bites, Foot Rot, Rope Burns, Malleaders, Sallenders, Broken Knees, Ring Worm, Scratches, Scalds, Cuts, Burns, and all foul and putrid sores of all descriptions. Recommended by the largest stock owners in Canada.

Tongue Creek, Alta., Aug. '93.
Messrs. A. E. Waldon & Co.:
Gentlemen,—I have had several opportunities of observing the wonderful curative properties of Warnock's Veterinary Uclerkure. Last year a valuable mare that I was breaking to harness ran into a wire fence and had the muscles of the forearm of one leg cut through to the bone. The wound was so deep and the lips so wide apart that it was impossible to stitch it, so I applied Uclerkure as directed and the wound rapidly healed. There was almost no scar left, the animal regained perfect use of her leg. Another of my mares sustained an ugly tear in front of one of her hocks, almost laying the joint open. A few days rest and the application of Uclerkure caused the joint to heal quickly, without leaving any stiffness of the joint. I have seen the medicine used in numerous other cases in this district, and always with the same satisfactory results.
WM. C. McDUGALL, Rancher.

PRICE \$1, OR SIX FOR \$5. Each bottle contains two hundred applications. Sold by all dealers in medicine, or sent to any part of Canada on receipt of price. A single trial will prove the wonderful curative properties of Uclerkure. Samples free. Send for Dr. Warnock's pamphlet on the treatment of wounds in domestic animals. Address,

A. E. WALDON & CO., Chemists, Calgary, Alta. 5-y-om



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ILLUSTRATIVE PURPOSES

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A MUCH NEEDED INVENTION.
THE Fly Horn Trap
WORKS COMPLETE.

Guaranteed to remove and secure nine-tenths of the flies on a herd of cattle at a single stroke, 15 minutes for 20 cows. Township and County rights for sale.

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HATCH CHICKENS BY STEAM
With the Improved Excelsior Incubator.

Simple, Perfect, Self-Regulating. Thousands in successful operation. Guaranteed to hatch a larger percentage of fertile eggs at less cost than any other hatcher. Lowest priced first-class hatcher made.

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The construction of the Calgary and Edmonton Railway, and the Qu'Appelle, Long Lake and Saskatchewan Ry. has opened up for settlement two new districts of magnificent farming land, viz., that between the North and South Saskatchewan Rivers, and that between Calgary and Red Deer.

Full information concerning these districts, maps, pamphlets, etc., free. Apply to

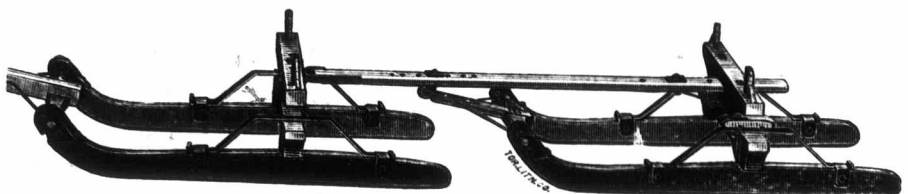
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LAND OFFICE, 381 Main St., WINNIPEG.
Calgary and Edmonton Railway, Qu'Appelle, Long Lake and Saskatchewan Railway Company. 17-1-y-om

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Fruit and Ornamental. Spring Planting. Handsome new Grapes, Shrubs, Roses, for 160 pages Catalogue Free. Awarded Several Medals at the World's Fair. —Mt. Hope Nurseries— Rochester, N. Y.

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IMMENSELY POPULAR, both in Ontario and Manitoba. It is with difficulty that we can supply the demand for these Sleighs. EVERYBODY wants them, because they are the easiest working Sleigh made. Only a few more left. Send in your orders quick and have the BEST.

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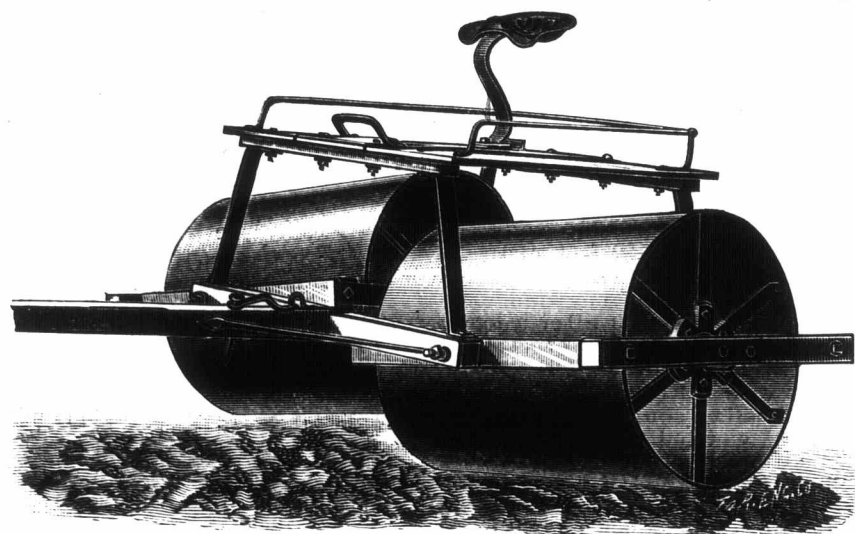


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Feed your plants on Freeman's High-grade Manures and you can depend upon your plants feeding you. Freeman's High-grade Manures contain plant-food in a soluble form, and in such proportions as will nourish your crops from beginning to finish. Send for catalogue for 1894, giving experience of leading Canadian and American farmers with fertilizers. Remember, Freeman's Manures head the list. Buy them. Have no other.

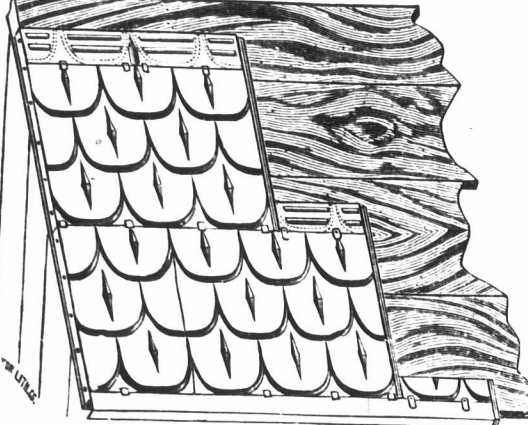
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The DALE PIVOTED LAND ROLLER (Patented)



It is unanimously recommended by those farmers who have used it. Orders are now being booked for the spring trade. Description and price furnished on application to 341-om T. T. COLEMAN, SOLE MANUFACTURER, SEAFORTH, ONTARIO.

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WILL LAST A LIFETIME.



FIRE PROOF,
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NEARLY AS CHEAP AS WOODEN SHINGLES.

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There is no place in Canada where the season is longer than here. Hence we get trees brought to the fullest maturity, capable of withstanding the severest cold. Having one hundred acres in fruit, from which cuttings, buds, scions, etc., are taken, I can safely guarantee the purity of my stock to be equal, if not superior, to any other nursery. The soil is specially adapted to produce vigorous, hardy trees, a grand lot of which are now growing and for sale. All the leading sorts of both old and new varieties deemed worthy of propagation. Catalogues free on application. Agents wanted in every township. 13-y-om E. D. SMITH, Winona, Ontario.



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We can make it to your advantage to deal with us. Our stock is well grown, and will please you. Send postal to-day for our NEW FREE Catalogue and see what we will do. You save agents and other expenses by dealing with us at the Central Nursery.

2-tf-o A. C. HULL & SON, St. Catharines, Ont.

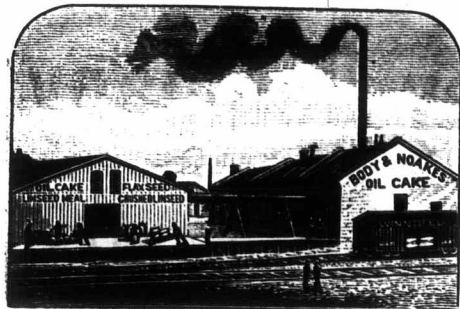
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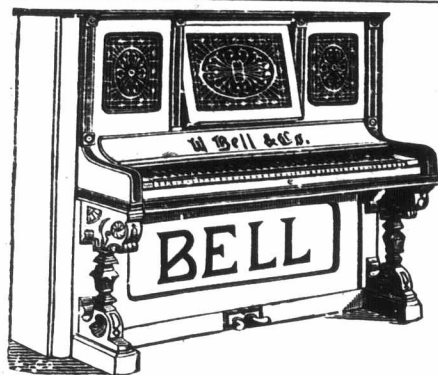
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Is in large demand now that it is known to have all the good qualities of the ORIGINAL BUFFALO
Made in one piece, of a dark Buffalo color, warmly lined, and handsomely trimmed.
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If you want the best value for your money.
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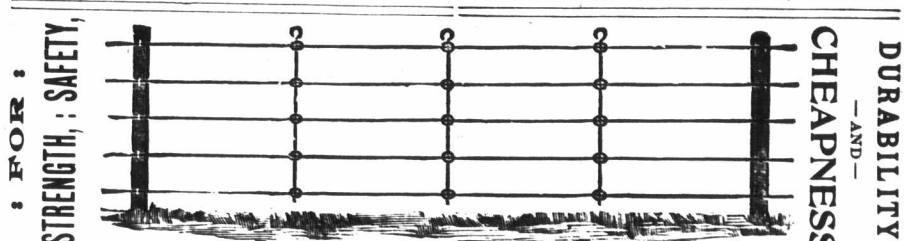
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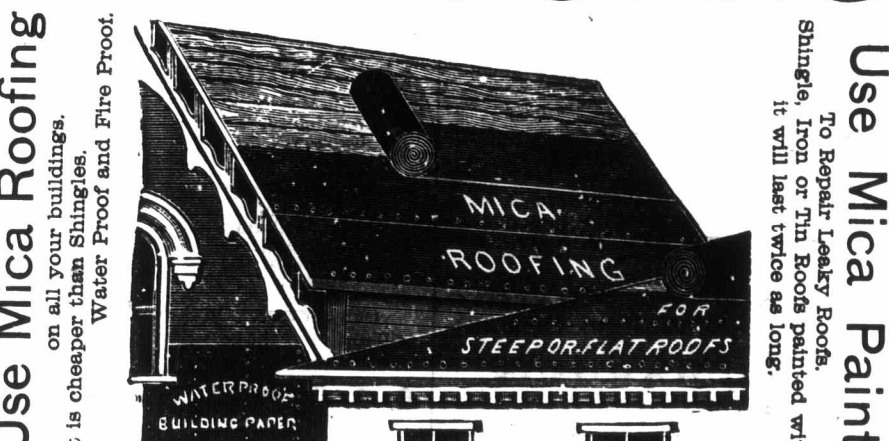


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Use Mica Paint To Repair Leaky Roofs. Shingle, Iron or Tin Roofs painted with it will last twice as long.

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BRICK MACHINE
FOR STEAM AND HORSE POWER.
MAKES EITHER FIVE OR SIX BRICKS TO THE MOULD.

ALSO MANUFACTURERS OF THE
Kells' Patented Combined
- Brick and Tile Machines -
IN TWO SIZES.

Brick and Tile Yard Machinery a Specialty!
SEND FOR CATALOGUE.

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We offer lands on the Islands of the Gulf of Georgia and on the water front of Mainland, where there are no cold winters, no snow and no frost, with good facilities for marketing.

"Settlers located on Government lands." For further particulars apply to **MACKINNON, MACFARLANE & CO.,** 39-1-y-om P. O. Box 928. VANCOUVER, B. C.

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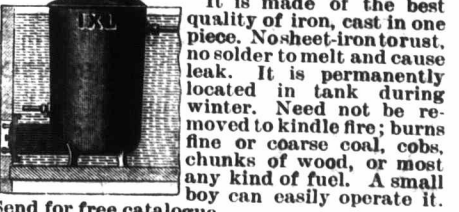
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Nearly five millions of these spouts have already been sold on their merits. The above cut is full size. The pail is hung on the spout on the side of the tree and turns on spout when being emptied. If your dealer does not handle them, write us for catalogue and sample spout. Price, \$1.25 per 100; if sent by mail, \$1.75.

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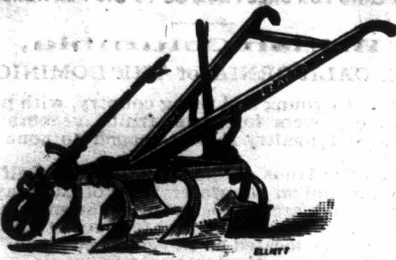
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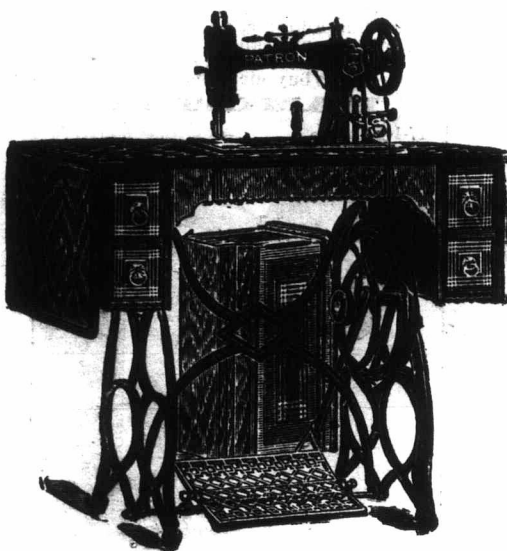
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