

# THE FARMER'S ADVOCATE

AND HOME MAGAZINE

PERSEVERE AND SUCCEED FOUNDED 1866

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

J. G. Burtchford, V.S.  
in dec 29, 01

VOL. XXXVI. WINNIPEG. MARCH 5, 1901. MANITOBA. No. 521

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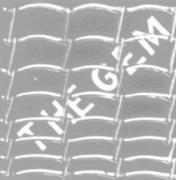
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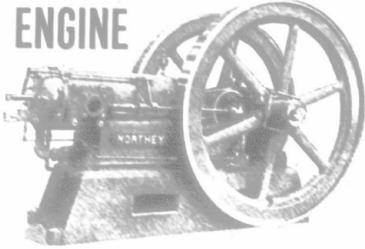
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WHEN WRITING MENTION THIS PAPER.

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# THE FARMER'S ADVOCATE

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

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VOL. XXXVI.

WINNIPEG, MAN., AND LONDON, ONT., MARCH 5, 1901.

No. 521

## A Plan for a Provincial School of Agriculture.

In the issue of February 5th, a School of Agriculture was mentioned as a pressing need of this Province, and reasons why advanced, the statement being made that the education given by such an institution should be of a practical nature, something that would be of everyday use to the progressive agriculturist, whether old or young. While the need is evident, judged by the thirst for agricultural knowledge evinced by so many of our best farmers, witness the motions in favor of such an institution by the various agricultural societies, Farmers' Institutes, municipal councils, and even boards of trade.

The question of ways and means is of vital importance, and one that needs careful consideration, because the scheme for establishing such a school must be as practical as the school itself before any government can be expected to take it up. In drafting the scheme herewith submitted, we have endeavored to make a careful study of the various Agricultural College courses of the continent, and to keep in mind the conditions of this Province, and while necessarily imperfect, the general outline will, we believe, commend itself to the Government and to the up-to-date farmers of the Province. We may at once assume that the initial outlay will be considerably larger than that needed annually; in fact, it can be stated broadly that whereas an agricultural school with say 320 acres of land can be put into operation for about \$50,000 to \$60,000, the necessary annual expenditure will only amount to \$15,000. The initial outlay would be somewhat as follows: 320 acres of land, costing from \$10,000 to \$16,000, depending on the location; a building three stories and basement, containing lecture rooms and offices, laboratories and gymnasium, library, reading room, and fittings, would cost about \$25,000; farm barns for horses and cattle would cost \$25,000; for sheep and swine, poultry and farm implements, \$750 each. It must be kept in mind that the Province cannot afford elaborate buildings, neither would it be wise to erect such. In addition, the farm would need to be stocked with representatives of some of the breeds of cattle suited to the Province, say a bull and three cows of four or five breeds, which would cost in the aggregate about \$2,500, all of which would be used for teaching purposes. Horses would be required for the farm work and for instruction, say two teams of Clydesdales, \$800; one team of lighter horses, \$250; sheep representatives of one of the long and of the medium woolled breeds, of each one ram and ten ewes, which could be got for about \$250; while the breeds of swine, one boar and two sows of reasonable quality, of say three leading breeds, could be got for \$150. One hundred dollars invested in utility breeds of poultry would be ample for a start. Good specimens of other breeds of live stock could be rented for breeding and instruction purposes. Implements, harness, etc., would call for another \$1,000, making a total cost of somewhere in the neighborhood of \$50,000.

Given such an equipment, what would be taught, what teaching force would be required, and what would be the cost? In the first place, the course should be one of two years, of 16 to 18 weeks each, starting, say, November and ending in March, thus allowing students to be home during the busy season, and permit the college force to do some experimental and outside work during the summer vacation. While other institutions have a large teaching personnel, at the start the force could consist of four professors and three instructors, one of the professors being appointed Controller of the institution: First, a Professor of Agriculture, to teach the principles of soil cultivation, the growing of the crops, cereals and grasses, drainage, silos, and the principles of agricultural physics,

such as draft of implements, roadmaking, meteorology, construction of implements, applied agricultural chemistry, showing its relation to the preservation of soil fertility; judging of cereals, etc. A Professor of Horticulture and Botany, taking up the teaching of plant life, small-fruit culture, gardening, forestry, the identification and destruction of weeds, prevention of smut, rust and other fungus, diseases of plants, and the judging of roots and vegetables; he could, during the summer, have full charge of the tests belonging to his department and supervise provincial weed inspection. A Professor of Animal Husbandry would be necessary to teach the principles of breeding and breeds of live stock, feeding of animals, elements of veterinary science and bacteriology, and to have charge of the live stock of the farm. A Professor of Dairying, to teach farm dairying, factory work in butter and cheese, and attend to inspection during the summer. Men who would be thoroughly posted in their work and energetic could be secured for \$1,500 per year. An instructor in farm economics, farm bookkeeping, drawing and parliamentary practice could be got for \$1,000 a year, being also bookkeeper and secretary of the College. A carpenter and blacksmith would also be needed during the school term, to give instruction; each could be got for \$75 a month, say \$750 for the two men for the course. The stock would need attention by skilled men, a horseman, cattleman, and a man to look after sheep, swine and poultry, each at \$10 a month. Wear and tear, incidentals, printing and advertising would bring the total to \$15,000 yearly.

It may be stated that the College need not be expected to pay its way; no school, college or university is expected to; neither would it be fair to expect an agricultural school to do so. The following schedule will suffice to show how the students' time might be occupied during the winter term: A first-year man, Monday morning at 8 o'clock would meet the Professor of Animal Husbandry for a lecture on breeding; at 9 a. m., the Professor of Agriculture, to be instructed in the physics of agriculture; at 10 a. m., the Horticulturist, for instruction in plant life (applied botany, seed germination and testing combined); 11 a. m. to 1 p. m., laboratory work in agricultural physics and plant life; 2 to 4 p. m., stock judging, blacksmithing, carpentering or farm dairying. In the second half of the term, the day would be divided up similarly: In the morning, lectures on feeding of animals, agricultural physics, veterinary science, plant life, dairying, farm bookkeeping; the afternoons again being spent in stock judging, farm dairying, shop work, etc. The second-year man would take more advanced work, such as lectures on feeding, veterinary science, farm economics, stock judging, from 8 a. m. until 1 p. m. daily; and from 2 until 4 agricultural physics and horticulture; from 4 to 5:30 p. m. being spent at stable management, including practical feeding, etc., nursing animals, farm mechanics (running farm engines, windmills, grinders, applying the brake tests, etc.), fitting horses, cattle, sheep and hogs for the show-ring and showing them, making rope halters, etc. The student would in the second half of the term have lectures on bacteriology, parliamentary practice (organizing school meetings, etc.), breeds of live stock, applied agricultural chemistry, and have two hours stock judging every morning, the first four days of each week.

Any young man of average ability could take such a course as above outlined if he gave strict attention to business. It will be noticed that no provision is made for instruction in grammar, arithmetic, and composition, as the present public-school system should be ample to meet the requirements along these lines.

At the present time over \$9,000 goes annually to government work in dairying, and \$2,000 to weed inspection, which money could be diverted to the

College, the work being done more effectively by the College staff.

Tuition should be free, minimum charges being made for laboratory material supplied to students.

At the College creamery during the summer, investigations could be conducted with the view of throwing light on the problems now confronting the butter and cheese makers of the Province.

While the question of agricultural education has been discussed for several years, the above is, we believe, the first attempt to formulate a plan in anything like detail, suited to western conditions. We shall, however, be pleased to receive criticisms with a view to getting a fuller expression of the opinions of the people most interested.

## Grass and Grass Seeding.

Timothy, so far, has proved itself a good all-round grass in this section, and after trying other grasses we have concluded to stay with it. For putting fiber into land that is liable to drift it is all right. We can get a good catch with any grass we have tried. We have never gone to the expense of a grass seeder, just using the ordinary drill. Our method has been to sow the grass seed with wheat or oats, mixing it thoroughly with grain, and not allowing it to settle in the drill hopper. It is a little trouble to mix it up every round, but for anyone who does not want to go to the expense of a grass seeder, this plan answers very well. Clean land is desirable for grass. A good catch can be had by sowing grass seed on fallow, the grass then gets a good start before frost.

About two crops of hay is as much as should be cut, if it is desired to plow for grain, breaking it as soon as the hay is off. Backsetting it after harvest leaves the land in good condition for wheat. When it is broken deep and not backset it requires so much harrowing that it is worked down fine and the surface is liable to drift, but when backset it acts like new land, and when harrowed presents a rougher surface so that the winds have not the same chance at it. Any cultivated-grass sod we have broken without backsetting has not given a very good crop, so it is by far the best to backset and work same as new land.

Of course, the longer the land has been down to grass the tougher the sod. A piece that has been pastured for a number of years is better to be broken in June and backset when the sod is rotted. It is a good plan to have a field in grass; it makes good early and late pasture, if not needed for hay. If cattle are allowed to feed on it till the prairie grass is up, the hay will not be so good.

We have also sown Brome by mixing with oats and got a good catch. It is a hard grass to save for hay, as the slightest shower of rain turns it black, and if there is much rain during haying it is entirely spoiled; whereas, with timothy it does not lie so close, and dries quicker, and so far as our experience has gone it does not seem to stand the drought much better than timothy. Another objection we have to it, is that it spreads all over the farm. We began to think that it was as bad as twitch grass. No doubt it may be good for a permanent pasture, as it is a stayer, but so far as we could judge, the stock prefer the timothy, and don't go onto the Brome until the timothy is eaten bare. Brome grass leaves a very hard, tough sod, requiring an extra horse to break and backset. If the weather is not hot and dry at the time of breaking, it seems to take on a new life and grow just the same as the twitch grass. We had a piece that we plowed three times to kill it. As for what the results will be on Brome sod, I cannot say, as the last season was the first time that we have broken any up. We would advise anyone thinking of sowing Brome, not to sow too big a piece at first till they see how they can get rid of it. Most farmers know how to handle timothy, but with new grasses we have to find out by experience.

We have about ten acres now seeded down; we seeded seventy-five acres, but owing to last year being so dry, turned the cattle on it, and it proved their salvation, as the prairie grass was dried up. When the time for fallowing came we plowed it up. We would like to keep about twenty-five acres in grass all the time.

Before sowing cultivated grasses, it is just as well to fence the farm, otherwise all the cattle for miles around will graze on it. A fence will pay for itself in a short time, because one is not bothered with stray cattle, and always know where to find your own.

W. P. MIDDLERS.

Elton Municipality, Man.

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AND HOME MAGAZINE.

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**The Oat Crop.**

EXTRACTS FROM AN ADDRESS BY S. A. BEDFORD.

Oats are a despised crop for the simple reason that, as a rule, they are not what might be termed a cash crop, and, as a result, are sown on poorly-prepared, dirty land, and often late in the season. Oats should be sown in good time, one reason being that late-sown oats rust readily. The soil should be strong and moist. The variety to be selected as seed should depend on its characteristics, a medium oat with a thin hull, bright stiff straw being preferable. It is not advisable to select an oat having a coarse straw, as it is more liable to rust; neither should the straw be too fine, as it crinkles or breaks down easily. The oats selected for seed should be taken from the top of the bin, as oats heat readily, thus destroying their germinating power. Sow *always* oats of good quality. In this connection it is a good plan to sow sufficient for next year's seed on backsetting. All seed used should be well cleaned, especial care being taken to get rid of noxious weed seeds. Ball mustard is very common in the western oats being offered for sale this season. A good fanning mill will take this small round black seed out. It is practically impossible to get the wild oats out of seed oats of the tame variety.

**A Yankee's Opinion.**

Being a new subscriber to the ADVOCATE, have given it a careful reading. It seems to be O. K., but I cannot agree with S. A. Bedford on sowing 40 to 80 pounds of flax per acre where the crop is not intended for fiber, but for seed. The most reliable experience and experiments in N. Dakota place the amount of seed required at one bushel for three acres. The flax plant does not stool at the root as does other grain, but branches at the top as does a bush. The sowing of too much seed renders the plants too thick, and retards the branching and greatly hinders the formation of seed heads. Then, too, the heavily-seeded crop is much more difficult to harvest, there being a greater number of plants to be cut, while experience demonstrates that it does not yield as much seed, for reasons given above. Some say, sow flax very shallow, but from observation the past dry season, I would say, don't sow it too shallow. ERNEST HILLER, North Dakota.

**Smut.**

There has not been very much complaint of late about smut; in many districts there was little or no damage done last season; but let no one be the less vigilant in treating the seed grain on that account. The smut spore seems always to be present, and only requires suitable conditions and neglect of precautionary measures on the part of the farmer to make itself felt on the market value and yield per acre of the grain. Chief Grain Inspector Horn considers that on the average smut does more damage to the grain crop of the West than frost. While a good deal can be done to avert danger from frost, it is not wholly under our control; but the man who grows smutty grain has himself to blame for it, as it can be prevented with little outlay of expense or trouble. Smut is a fungus, the spores (or seeds) of which are very minute and attach themselves to the kernels of grain. Even if there is no smut in the crop, the grain may become contaminated by contact with it in threshing machine, elevator, granary, bags, etc. The same heat and moisture that causes the seed to germinate in the soil causes the smut spore to grow also, and it immediately attacks the young plant, entering its tissues, where it lives and grows and in time reproduces itself in the kernel of grain. Treating the seed with bluestone or other effective remedy simply destroys the smut spores that may be attached to the seed. Methods of treatment are so simple and so well known that repetition is unnecessary; but let no one neglect to apply preventive measures. The following is the report of the smut tests at the Brandon Experimental Farm, by which it will be seen that bluestone treatment is quite effectual for wheat and formalin for oats:

**THE TREATMENT OF GRAIN FOR SMUT.**

For some unexplained reason, this fungus was almost entirely absent in the wheat crop of 1899 on the Experimental Farm. Even the most smutty sample procurable failed to produce any noticeable quantity of smut. In 1900, however, very satisfactory results have been obtained. As bluestone has increased in price considerably during the past year, and in some parts of the Province has been difficult to obtain, a test has been made with formalin, and, as will be seen from the accompanying table, the results have been excellent. The wheat used for seed was a very smutty sample.

**RED FIFE WHEAT, 1900.**

How Treated.	Good Heads.	Smut Heads.
Not treated.....	452	39
Steeped 5 minutes, 4 ozs. formalin to 10 gals. water.....	550	0
Steeped 15 minutes, 4 ozs. formalin to 10 gals. water.....	529	0
Steeped 1 hour, 4 ozs. formalin to 10 gals. water.....	531	0
Sprinkled, 4 ozs. formalin to 10 gals. water.....	528	0
Sprinkled, 9 ozs. formalin to 10 gals. water.....	474	0
Sprinkled, 1 pound bluestone to 1 pail water to 8 bushels of wheat.....	481	0
Steeped, 1 pound bluestone to 3 pails water to 8 bushels of wheat.....	433	2
Treated with Massal powder.....	504	0

Results of tests for the five years previous to 1899 show the difference in number of smutty heads in treated and untreated wheat:

Year.	Treated.	Untreated.
1898.....	0	151
1897.....	84	135
1896.....	32	3,685
1895.....	0	112
1894.....	10	396

**TEST OF SMUT PREVENTIVES FOR OATS, 1900.**

The seed for this test was a very smutty sample, as is evident from the resultant fifty-one per cent. of smut from the untreated seed.

Formalin has again proven itself an exceedingly useful preparation for this purpose, and its general use each year would save thousands of dollars to the Province.

Massal powder has again proven itself useless as a treatment for oats.

**DONCASTER PRIZE OATS, 1900.**

How Treated.	Good Heads.	Smut Heads.
Not treated.....	428	66
Steeped 5 minutes, 4 ozs. formalin to 10 gals. water.....	533	3
Steeped 15 minutes, 4 ozs. formalin to 10 gals. water.....	488	3
Steeped 1 hour, 4 ozs. formalin to 10 gals. water.....	511	0
Sprinkled, 4 ozs. formalin to 10 gals. water.....	466	3
Sprinkled, 9 ozs. formalin to 10 gals. water.....	522	0
Treated with Massal powder.....	486	68

When a large quantity of wheat has to be treated, it is not always convenient to have boiling water to dissolve the bluestone. Mr. Wm. Sharnan gives us the following plan, which he discovered by a mere accident a year or so ago, and has found quite as effective for dissolving bluestone as boiling water. Place the amount of bluestone required to make a barrel of pickle in an old sack and suspend the sack by a stick across the top of the barrel filled with water so that the bluestone is all just under the surface of the water. Thus suspended, the bluestone will dissolve completely in half a day; whereas, if allowed to lie in the bottom of the barrel it is almost impossible to

**The Ottawa Tuberculosis Conference.**

EDITORIAL CORRESPONDENCE BY A MEMBER OF OUR STAFF.

1st. Consumption is a contagious disease communicated from one person to another by means of germs.

2nd. It is not hereditary, but the weak and poorly nourished offer less resistance to its attack.

3rd. Germs are conveyed from diseased lungs in moist particles expelled in breathing and in the matter (sputa) cast off in coughing, which, when dried, floats like dust particles in the air.

4th. Its spread can be checked by separating the diseased from the healthy, and preventing the spread of the germs.

5th. In its earlier stages it is curable.

6th. The best preventive and remedial measures for the individual are pure air, sunlight and ample nourishment.

7th. The immediate needs in the crusade against consumption are to educate the people on the foregoing six points, and provide sanatoria for cases in earlier stages and hospitals for advanced cases.

The foregoing are the practical deductions drawn from the papers, addresses and discussions at the conference for the prevention of tuberculosis, on February 14th, in the Ottawa Normal School, to all of which we attentively listened. Exclusive of the Normal School students in the galleries, over one hundred persons were present, representing all the Provinces of Canada, though the bulk were from the Ottawa and Montreal districts, and mainly medical and professional men. To the Rev. Dr. Eby, formerly a well-known Methodist missionary, is chiefly due the credit of the conference, which one enthusiastic physician declared at its close to be the most important event in Canada since Confederation. At the inaugural session, His Excellency the Governor-General, Earl Minto, who has given it his cordial support, delivered the opening address, wishing the movement godspeed. Sir James A. Grant, M. D., Ottawa, ably discharged the duties of chairman. The various printed resolutions were introduced by papers or prearranged addresses. The lack of sufficient opportunity for questioning speakers on doubtful points was regrettable, though it saved time, but it would have been preferable to have covered fewer points and done it more thoroughly.

The first motion cited the magnitude of the disease, causing probably one-fifth of the deaths in the Dominion, or 8,000 per year, which, estimated, as some have coldly put it, said Dr. A. J. Richer, of Montreal, at \$1,000 each, means an annual aggregate loss of \$8,000,000. Hence the need and demand for individual and organized effort, and for aid from governments and municipalities. A great deal was said about how the microscopic germs are spread; sleeping-cars, in which so many consumptives travel, were especially denounced by several as a prolific source of disease. Consumptives occupying the same rooms with others; indiscriminate spitting in homes, on the street, in public halls, hotels, etc., and carelessness regarding the sputum, which should go into spittoons containing antiseptics or be burned; bank bills carried the germs, and the long trains ladies wear, and street-railway sweepers, whirl them about. There was unanimity that the disease was not hereditary, but contagious, and curable in the early stages. It was not confined to lungs, but appeared in bowels, liver, bones, and even on the lip. Nearly every man who spoke bore testimony to the remedial efficacy of pure air, sunlight and wholesome food, and one declared that the day of remedies like Scott's Emulsion had passed away.

Again and again the appalling fact was disclosed that practically every hospital in the country has shut its doors upon the tuberculous patient, so that the very first and most important work this new organization can do is to devise plans for sanatoria of moderate cost, and get individual, municipal and government machinery at work to provide for their erection.

Sir William Hingston, M. D., Senator, Montreal, pointed out that the disease was less prevalent in the country than in the cities, and discredited the idea of people sending their friends to Florida or other distant places to die.

Dr. Lofferty, of Calgary, said Alberta was being thronged in places with consumptives from other provinces, attracted by the superior climate. Hence the Dominion Government should aid in the erection and control of sanatoria there.

Hon. Dr. Guerin, of Quebec, said the autopsies made in a long hospital practice demonstrated to him that consumption was actually curable. The lungs of patients dying of other diseases showed that the former had been arrested and cured. Great corporations should be compelled to take better sanitary care of their employees, and insurance companies would benefit by helping the present movement.

James Stewart, M. D., Professor of Medicine in McGill University, declared his faith in the spread of knowledge in the press of the nature of the disease, but protested against the publication of quack advertisements. Sanatorium treatment was the best, and had proved wonderfully successful in Germany. Cures were effected in about three months, 75 per cent. of workers being able to resume their work. Insurance companies there treat their tuberculous insured in sanatoria.

Hon. Dr. Borden, Minister of Militia, favored

a campaign of educating the people, beginning with teachers who are to train the youth.

Hon. Sydney Fisher, Minister of Agriculture, suggested to the convention the wisdom of following the line of least resistance, by informing the public mind and creating a sound public opinion, in advance of which authorities could not safely proceed. It was also necessary to bear in mind that there were great interests at stake in the country which should not be needlessly antagonized by drastic legislation, but rather their co-operation secured. Furthermore, the Act of Confederation defined the respective duties of Federal and Provincial Governments, relegating the control of health matters mainly to the provinces, so that there was danger of conflicting interests. So far as the stock-keepers were concerned, he had, by means of bulletins, lectures, etc., diffused useful knowledge, and distributed to teachers, physicians, etc., 50,000 copies of the report on the Berlin Tuberculosis Conference, by the late Dr. Farrel, of Halifax, whom he had sent there. [NOTE.—Several speakers bore testimony to the immense value of this pamphlet, which should be still more widely circulated.] The duty of the Federal Government was to check disease coming into the country. When the Minister sat down, a delegate behind the writer observed that he considered his speech the best of the morning.

Dr. Dube supported the non-hereditary theory by saying that in 350 post-mortems of infants which he made in a Montreal founding hospital, only two were tuberculous, while very many of the mothers were; and in 150 autopsies of adults he found many cases of cures.

Dr. A. L. Smith proposed printing facts about the disease and its prevention, on cards, to be read once a month by teachers to pupils. Others proposed having the subject taught in the schools, and one speaker proposed that ministers take it up in the churches.

The second resolution dealt with compulsory notification, cleansing of public buildings, inspection of places where work-people assemble, danger from milk and meat, aid to sanatoria or "homes," and was aimed chiefly at provincial and municipal authorities. All were not in favor of compulsory notification, as that is liable to cause friction between the physician and patient's family. Some thought it might better be left with the medical profession.

Dr. Hamilton, of Montreal, proposed cards of instruction for the guidance of tuberculous patients.

Dr. T. G. Roddick, M. P., proposed the cremation of those who died from tuberculosis, the killing of cattle showing clinical evidence of bovine tuberculosis, with compensation to owners, and the examination of emigrants for the disease.

Dr. A. P. Reid, Halifax, "Make them pass the tuberculin test." (Laughter.)

Dr. McDonald pointed out the terrible danger of the present overcrowded condition of nearly all hospitals and asylums.

AN AWAKENING SPEECH.

Mr. David McCrae, of Guelph, Ont., the well-known farmer and breeder, and chairman of a local Board of Health, brought a lively ripple to the placid surface of the conference. A great deal had been said about the need of education. He said it ought to begin right in this convention. He was only a plain farmer, but would like to learn from the doctors why consumption was increasing in Canada, as they stated, but decreasing rapidly in the crowded localities of Great Britain and the United States, once hot-beds of it? Why do we hear nothing about the inspection of the dwellings where consumptives live and die? At what stage does a consumptive become dangerous to his fellows? (No answers.) A great hue and cry is raised about cattle, but one of the most eminent living authorities to-day asserts that the danger of infection from milk is a mere possibility, and from meat, practically no danger whatever. By this time the conference began to wake up, and demanded the name of the authority. "Who? Who? Who?" Mr. McCrae caught the enquiry, stopped, and quietly replied: "William Osler, of Johns Hopkins University." He was not checked again, and, as a farmer and breeder, assured the conference that that great fraternity is willing and anxious to take any intelligent steps necessary to promote the health of their animals, for it is in their interest to do so, but the cattle-breeding industry was being done infinite harm by unfair statements about the

alleged dangers from meat and milk. Men were being alarmed and driven out of business. Acts had been done under the pretence of eradicating tuberculosis which have occasioned a loss of thousands of dollars to breeders without doing a particle of good. Another thing: there was upon the statute books a law, that would be a disgrace to the dark ages, prohibiting the sale of hides of tuberculous animals and imposing a penalty of \$200.

[NOTE.—The Minister of Agriculture has since promised to wipe out this absurd statute.

It must further be admitted that while several speakers seemed to take it for granted that there was danger from meat and milk, no evidence in support of that notion was presented. It was also said that tuberculosis appeared in sheep, hogs, dogs, cats, rats, and hens, but no light was shed on the question as to whether the disease in animals corresponded to that in man.]

Dr. Fraser, Brandon, cited the fact that the Indians were a dying race from tuberculosis and a menace to the whites. The Federal Government should look after them. In his observation, about 95 per cent. of their sickness was due to tuberculosis. [NOTE.—As the Indians are not a cattle-keeping people, they have not contracted the disease from that source, and have doubtless died off largely for want of milk, meat and other wholesome foods.]

Dr. O'Reilly, of the Toronto General Hospital, complimented Mr. McCrae upon his speech, and suggested plans for building small hospitals that could be enlarged as needed for consumptives. Patients were coming to him every day with medical certificates that they had diabetes, Bright's disease, general debility, etc., but it was consumption, and he had to turn them away.

Dr. Powell, of Ottawa, condemned the monstrous Ontario law that prevented a hospital for in-

disease would they stop the emigrant—when the man was just about to die or in the very first stage? Would the child of the family be sent back and the parent admitted? If stopped at our seaports, they would come in through the States, and we would have to have officers and inspection at every steamboat landing, frontier railway crossing and wagon road from the Atlantic to the Pacific. We can't go much farther than the U. S. Canada is not an island. Personally, he looked forward to the time when something in the way of supervision might be done with emigrants at the port of departure, but he could not see his way clear to make any further recommendation than he had already done.

Despite what Dr. Montizambert pointed out, the conference passed *holus bolus* the cut-and-dried resolution.

Dr. McEachran, Dominion Veterinarian, held that there was a close relation between tuberculosis in animals and man, and bore testimony to the good health of Canadian cattle. The Dominion Minister of Agriculture provides free tuberculin testing on request of owners, and in three years out of over 41,000 tested in suspected herds only 1,200 reacted indicating a tuberculous condition. [NOTE.—As the Government does not require slaughter, we presume these cattle are still living, unless some of them have been sold for beef.] The Doctor still cherishes the idea that for a small outlay he could rid the country of bovine tuberculosis, and quoted several experts in favor of the tuberculin test, which, if properly used, was held to be reliable except in a small percentage of cases. He alleged that 50% of the pure-bred herds of Britain were tuberculous, but there were sound herds and breeders of integrity there who could guarantee their stock, and Canadians should buy from them instead of speculative agents. He favored having all imported cattle tuberculin-tested before leaving quarantine. In conclusion, he offered a resolution to further enforce the test, making its use illegal, with penalties, except in the hands of qualified veterinarians, and asking the Government to offer prizes for importations of pure-bred cattle. The propositions were not seconded nor put to the meeting.

Dr. H. H. Chown, Winnipeg, doubted the reliability of Dr. McEachran's figures; said the disease was very prevalent in Winnipeg and Manitoba Province, and increasing among farmers, whom, he thought, did not know about the Government testing. With the pure, germless air of prairies to start with, and their healthy settlers, he asked dramatically, where did the disease come from if not from cattle? It must have come from them, was his logic, though, unfortunately, the records do not sustain him. Our own observation is that cases of consumption among farmers are

very much more rare now than in former times. Mr. Calvin, M. P., representing the Kingston General Hospital, presented a resolution from the Medical and Surgical Society of that city, favoring a sanatoria in one of the high altitudes of Eastern Ontario.

THE EXPERIENCE OF MR. EDWARDS.

Mr. W. C. Edwards, M. P., by request of the chairman, gave his experience as a breeder with bovine tuberculosis. A good many years ago he began the establishment of a first-class herd of Shorthorn cattle. Three years ago tuberculosis was discovered among them. The opportunity was embraced to gain information that might prove not only of value to himself, but to the industry generally, and to the whole country. Through the Dominion Minister of Agriculture, he had the service of one of its staff of veterinarians, who tested the herd with the tuberculin test, and those diseased as indicated by the reaction he separated and isolated from the rest of the herd, which was a large and exceedingly valuable one. He had had all his cattle tested twice a year, and, during the three years had grown but one animal that responded to the test. Except in case of the healthy cows, the calves are raised on sterilized milk or sound nurse cows. The calves of the tuberculous cows are separated from their mothers at birth, according to the Bangs system, and fed as above. As a further experiment, he had allowed six calves to take the milk of tuberculous dams, but not to run with them, and of these but one became diseased. The udder of the cow did not appear involved, but may have been diseased. He



CLOTH OF GOLD 8962.

Clydesdale stallion, 4 years old. Owned by Alex. Galbraith, Janesville, Wisconsin.

fectious diseases being erected within 450 feet of any other structure.

The second resolution was adopted, with a clause demanding the creation of a new Dominion Department of Public Health.

The third resolution proposed the exclusion of tuberculous emigrants and cattle, Federal health statistics, experimental sanatoria, and annual grants of money from the Federal Government.

Prof. J. G. Adami, M. D., of McGill University, held that tuberculosis was communicable from man to man, from animal to animal, and from one species to another. As it was infectious and preventable, why not prevent it? Only one or two per cent. of cattle in Canada were tuberculous, and a small sum would practically stamp it out. Killing and compensation was not necessary unless of the obviously diseased. With the cheerful optimism of the scientist, he said all the farmers and stockmen had to do was to segregate and isolate infected animals. [NOTE.—This means separate stabling, yarding and pastures.] He took issue with Hon. Mr. Fisher regarding Federal powers, and laid down principles for the guidance of the minister, and wanted greater powers conferred on the officials of the live-stock inspection department.

Dr. Montizambert, Dominion Director of Public Health, said theory was easy, but rules and regulations difficult. If tuberculous emigrants were to be shut out, where would they draw the line? What would be the test? How could they hold the ship while its 800 emigrants were all subjected to an individual examination and microscopic examination of the sputa? At what degree of

was led to believe that a large proportion of the calves from that portion of the herd could be raised perfectly sound. He had gone to a very great expense in carrying out this experiment, but was disposed to differ with the scientists as to the absolute necessity for isolating the reacting animals. He believed that the stockman and farmer, where separation was not possible, could achieve successful results by thorough ventilation and ample sunlight in the stables and care as to the water supply and feeding. On another farm he had eradicated the disease without separation. Had used the tuberculin test on animals of various ages and at all stages and had noticed no bad results. He learned that there was a great diminution of tuberculosis among the dairy herds of Glasgow and elsewhere during recent years. With regard to the disease in man, he supposed the conditions would be about the same as with cattle. Regarding what Dr. Chown had said about Manitoba, he could not believe that consumption there was due to animals, but had spread from one person to another much the same as in other localities. Referring again to his own herd, he said that he had twenty-four head isolated.

Rev. Mr. Hannington asked if they were much worse than at first—were they much emaciated? Mr. Edwards replied that they were not. In the three years not one animal among them had broken down or become emaciated; in fact, if they would visit his herd they would probably conclude that these animals were the best conditioned and sleekest looking of the whole herd. He had had several of the reacting animals killed, but the traces of disease found were very slight indeed in some of them.

The above very frank statement by Mr. Edwards rather staggered some of the delegates, who were naturally expecting to hear of results among those presumably diseased animals corresponding to what occurs in cases of human tuberculosis. They could not but conclude that it was a very harmless brand of ailment. There is evidently much to be learned on this point yet. Mr. Edwards' efforts have been directed towards elucidating these problems. One old and learned physician remarked at the opening of the conference, if they wished to hear what he knew about the subject he could not tell them much, but if it was what he did *not* know, he could say a very great deal. If any stock-raiser does not feel disposed to put his trust in the tuberculin test, he can discard any animal that, by a careful physical examination, is diseased, and give the whole herd the incalculable benefits of fresh air, secured by a proper system of ventilation and an ample supply of germ-killing sunlight, coupled with plenty of good food, pure water, and all-round cleanliness. Under such conditions we are disposed to think that tuberculosis will trouble the Canadian stockmen even less in the future than it has in the past.

At the closing session a constitution was adopted and the organization was styled the "Canadian Association for the Prevention of Tuberculosis." Life patrons will be those who contribute \$100 to the fund, life members \$50, and ordinary members \$1.00 per year. The Governor-General was elected Honorary President; Sir James Grant, President; General Organizing Secretary, Rev. Dr. Eby; Secretary, Dr. Richer; Treasurer, Dr. Small; with a large representative executive committee. Ottawa will be its headquarters, and the next annual meeting will be held there during the next session of Parliament. The conference closed with "three cheers and a tiger" for the King.

#### Summer-fallow.

There is no doubt that persistence in the present method of cultivation will end in the land being run down, although the past season showed the wonderful recuperative power of the soil, an ample rainfall seemingly being the main thing necessary. Now is the time to decide on the land to be summer-fallowed. I try to begin plowing the fallow so that all of it will be turned over before any of the weeds can go to seed; then, ten or twelve days later, harrow it. Should any weeds show possibilities of ripening seed later on, the cultivator is used and the fallow is then ready for the spring crop.

**A Rotation Necessary.**—For farming to be profitably and properly conducted, a rotation is necessary, my plan being to divide the farm, say a quarter-section, into four parts. One is sown to oats and the following grass mixture: Alsike clover four pounds to one bushel of grass seed (Brome and Native Rye), this being cut the first year for hay and pastured the second year; plow that fall for wheat. All manure should be applied to the ground intended for roots, corn, etc., the manure being rotted, if possible, before being applied, it being, in my opinion, doubly worth manure direct from the stables. One obstacle to the above is the difficulty of fencing farms, due to the expense.

If starting on a new land, I would break about four inches deep and disk it; sow the next spring without backsetting. After the harvest the land is fall plowed, another crop is then taken off and the land summer-fallowed, when the rotation indicated above can be started.

Pipestone Municipality, Man.

#### Annual Meetings of Territorial Stockmen.

The annual meetings of the Pure-bred Cattle Breeders and the Horse Breeders of the N.-W. are called for March, at Calgary, and the Western Stock Growers' Association meet in Calgary on April 29th.

#### Convention Week.

The annual conventions of the live-stock breeders and dairymen are now looked forward to as one of the important events of the year by the up-to-date stockmen and dairymen. Being held in Winnipeg, during the middle of February, a slack time in farm work, and in conjunction with the bonspiel and numerous other annual "society" gatherings, together with half-fare rates prevailing over all lines of railway, the attendance was large and representative. Every progressive farmer recognizes the advantages to be gained by meeting the leading men of his own calling for the exchange of experiences and the discussion of the problems that confront him. It has been possible through these associations to secure the services of leading agricultural thinkers, whose addresses are full of instruction and suggestion, the benefits of which are incalculable. At some of the sessions discussion was very much curtailed owing to lack of time. It is in live, well-directed discussion that most practical benefit is derived; in fact, some speakers arrange their matter to encourage discussion, and leave many important points to be brought out in this way, which are entirely lost when the discussion is cut off.

Much valuable time was occupied in the reading of minutes and reports of past work, and in the election of officers, all of which could very well be greatly simplified without impairing the efficiency of the organizations in the least, while affording much more time for the really important work of the associations.

#### Sheep and Swine Breeders.

The seventh annual meeting of the above Association was held on Tuesday, Feb. 19th; president for the past year, And. Graham, in the chair. Some 25 members were present at the opening session. After the reading and adoption of the minutes, and the president and secretary's reports, the election of officers was proceeded with, and resulted as follows: President, J. A. McGill, Neepawa; Vice-President, F. W. Brown, Portage la Prairie; 2nd Vice-President, James Bray, Longburn. Directors: Representing sheep—William Wallace, Niverville; D. E. Corbett, Swan Lake; J. B. Jickling, Carman; and W. W. Fraser, Emerson. Representing swine—William Kitson, Burnside; W. G. Styles, Rosser; W. E. Baldwin, Manitou; and A. Graham, Pomeroy. The constitution having been amended so that the secretary-treasurer should be elected by the directors instead of at the open meeting as previously, the directors, at a meeting held immediately after the close of the session, elected George H. Greig secretary.

Representatives to agricultural societies were elected as follows: Winnipeg Industrial, S. J. Thompson, St. James; Brandon, A. D. Gamley; Portage la Prairie, James Bray, Longburn; Carberry, J. G. Barron; Neepawa, J. A. McGill; Carman, J. B. Jickling; Kildonan and St. Paul's, M. Oughton, Middlechurch; Woodlands, W. G. Styles, Rosser; Emerson, W. W. Fraser; Treherne, Holland and Swan Lake, D. E. Corbett, Swan Lake; Manitou, W. E. Baldwin, Manitou.

Resolutions were read from a number of agricultural societies and Farmers' Institutes, complaining of the unsatisfactory prices prevailing for hogs. This gave rise to an animated discussion. Mr. Cluff, representing the J. Y. Griffin Company, claimed that on account of the supply of Manitoba hogs not being regular or of sufficient quality to permit of proper selection, the packers in this country were not in a position to compete in the export market. He also pointed out that in some of our northern markets there was a demand for heavy fat pork, and this market furnished a dumping ground for the Chicago packer for pork made from old breeding hogs, on which they could afford to pay the 2% duty in order to get this inferior class of product off their hands. He maintained that if the duty on cured meats was increased to 4%, the packers could then afford to pay a price equal to the Ontario markets for the same quality of hogs. In the discussion which followed, one speaker pointed out the weakness in Mr. Cluff's argument, by reminding him that there must be an equal proportion of old breeding hogs to be disposed of in Ontario, and also that Mr. Cluff only touched one side of the difficulty. Large quantities of the highest grades of Chicago and Ontario cured meats found their way into our markets, and it looked as if the local packers were making an inferior class of products, and thus making the farmer suffer for their lack of skill and enterprise. One of the speakers considered that the spread of prices between 4 cents for live hogs at country points, and 11 cents for cured pork, was too great. Another complained that buyers made no discrimination as to the quality of hogs, giving the same prices for all kinds offered. It was suggested that this was a matter that should be looked after by the Dominion Live Stock Commissioner. A committee, consisting of Messrs. Graham, Brown, Benson, Thompson, and Bray, were appointed to take this matter up with the leading packers, and to draw attention to the fact that the low prices now being paid and the high prices of feed was likely to

result in a hog famine at no distant date, and if the packers desired a continual supply of hogs they should offer prices more in accordance with the present prices of feed, to encourage farmers to keep up their stock of breeding hogs.

The question of Dominion-Government-aided auction sales came up for discussion, but as it was understood that this subject was to be introduced at the Cattle Breeders' meeting, no action was taken.

#### AN AGRICULTURAL SCHOOL.

The following resolution, favoring the establishment of an agricultural school for the Province was introduced and carried, with but one or two dissenting votes:

Whereas the trend of education in this agricultural province is away from rather than towards the farm; and

Whereas, the continued prosperity of this province depends entirely upon the development of our agricultural resources; and

Whereas, farming can be permanently successful only by the more general introduction of live-stock breeding in conjunction with wheat-raising, thus rendering it possible to conserve the fertility of the soil, and, in spite of the long overland haul necessitated by our geographical position, place the products of the farm on the markets of the world at a profit to the producer; and

Whereas, competition in all live-stock products in the world's markets is ever becoming keener, only the highest-quality products can hope to return a profit to the producer; and

Whereas, the farmers appreciate the importance of education, as is evidenced by the large attendance of farmers' sons and daughters at our colleges and universities, who are now debarred from obtaining a practical education in advanced agriculture;

Therefore, we believe that the establishment of a school of agriculture along practical lines would meet this demand, conserve the interests of the province, and aid in inculcating a love for and knowledge of live stock, which is the basis of all successful agriculture.

Messrs. Benson, Ryan, and S. J. Thompson and several others spoke strongly in favor of the motion.

Mr. Johnston, foreman of the J. Y. Griffin packing house, read a short paper on the quality of hogs required by the packer, and illustrated his points with several dressed sides which were hung up in front of the audience. Prof. J. H. Grisdale, Agriculturist at the Experimental Farm, Ottawa, gave some interesting points from his experience. The side of pork that Mr. Johnston exhibited as a good average of the Manitoba product, Mr. Grisdale said would not grade more than No. 2 in Ontario, it being too short. He said in the east there was some danger now of too great length, but here we might safely aim to lengthen our hogs. He advocated the cross-bred—that is, the first cross of two pure breeds—as being more easily fed and more thrifty than any of the pure breeds. Good results had been obtained from crosses of the Yorkshire and Berkshire, and the Tamworth and Berkshire. He emphasized the importance of healthy, strong, prolific breeding stock, and intimated that careful discrimination on the part of the buyers would establish the desired type in the hogs of the Province quicker than anything else.

W. E. Baldwin, of Manitou, read an interesting paper on "The Care of the Brood Sow," which was discussed at some length. Mr. Kitson advocated the straw stack for winter shelter, and dry feed as giving more satisfactory results with breeding stock than any modern improved piggery that he had ever seen. Dr. S. J. Thompson also stated that he had better success with his brood sows when left to shift for themselves in the straw stack, giving dry feed and no water during the winter. He also stated that Brome grass had proven excellent pasture. W. G. Styles introduced the question of rape as the most satisfactory of green feed he had tried. Prof. Day spoke of the importance of exercise, and gave many valuable suggestions as to feeding and care of young stock, advocating the use of roots, and cooking some kinds of feed to make them more palatable rather than with the idea of making them more nutritious. Prof. Grisdale gave some valuable experiences of feeding rape, and considered it one of the very best hog pastures. Hogs pastured on rape, with milk and meal, had given the best results in a series of tests carried on at the Ottawa Farm. O. Bailey stated that he had found rape a most satisfactory adjunct in the feeding of sheep, sowed on summer-fallow in May at the rate of 2 lbs. of seed per acre, with a shoe drill, drills about 28 inches apart. He used the weeder with a few teeth taken out so as to skip the drills, and kept it going until the rape was about a foot high, then used a one-horse cultivator. At first the sheep should be allowed only an hour or two in the field at a time, and with this precaution he had no trouble with bloating. Sheep eat everything clean, stalks and all. He kept about 700 sheep on a half-section. Of course they were pastured off the farm during the summer, rape being used for fall pasture. Dwarf Essex was the variety used. Mr. Bedford pointed out that rape required rich, heavy, alluvial soil. When fresh and rank growing, there was some danger in turning stock onto it, but there is no danger after the leaves turn purple.

A. D. Gamley, Brandon, contributed a paper on "A Beginner's Management of a Flock of Sheep in Manitoba"; William Wallace, Niverville, a short paper on the "Wolf Hound," in which he stated

that his hounds had cleared the district of the coyotes, which had done considerable damage to the sheep flocks. This introduced the question of wolf bounty, and after some discussion, Messrs. Wallace, Fraser and Corbett were appointed a committee to interview the Government, to ask for an increase in the wolf bounty.

At the joint evening session, Prof. Day spoke on "Breeding and Feeding Swine," advocating persistency in the feeding of swine, culling all stock not up to highest standard when price was low, but holding over the best. To get a good bacon hog, one must breed from the right type. The bacon hog can be produced more cheaply than the short, fat hog. His experiments placed the breeds in the following order: Yorkshires, Tamworths, and Berkshires. Prof. Grisdale spoke on "Points on Beef Production."

**Pure-bred Cattle Breeders' Association.**

The annual meeting of the Cattle Breeders' Association was held on Wednesday, the 20th of February, with President Geo. Steele, M. P. P., in the chair. The President's address referred to the growth of the Association during the ten years of its existence, and to the work accomplished by the organization in the reduction of freight rates on pure-bred stock, the improvement in the cattle classes at all the leading shows, and other important features. The Secretary-Treasurer's report showed the Association to be in good standing financially, with a membership of ninety-eight, an increase of about 33 per cent. over the previous year. Two carloads of bulls had been shipped from Manitoba to the Territories under the auspices of the Association and the Territorial Government at a cost per head, for care and incidental expenses in transit, of only about \$3.

The representatives to the various fair boards reported satisfactory work during the past year.

The election of officers resulted as follows: President, A. Graham, Pomeroy; First Vice-President, F. W. Brown, Portage la Prairie; Second Vice-President, J. E. Marples, Deleau.

Directors—Shorthorns, J. G. Barron, Carberry; Herefords, J. A. Chaplain, Beresford; Polled Angus, J. Traquaire, Welwyn, Assa; Galloways, Wm. Martin, St. Jean; Ayrshires, Thos. McCartney, Longburn; Holsteins, Jas. Glennie, Longburn; Jerseys, H. R. Keyes; also J. G. Washington, Ninga; W. J. T. James and W. G. Styles, both of Rosser.

Representatives on Fair Boards—Winnipeg, Jas. Bray; Portage la Prairie, F. W. Brown; Brandon, W. Chalmers; Carberry, J. G. Barron; Neepawa, G. S. McGregor; Boissevain, Wm. Ryan; Deloraine, John Renton; Rockwood, W. J. T. James; Gladstone, H. R. Keyes; Carman, R. C. Henders; Killarney, R. C. McLennan; Cypress River, J. Connors; Argyle, T. A. Foster; McGregor, J. Muir; Manitou, J. S. Robson; Glenboro, Geo. Steel; Hamiota, Geo. Bankin; Souris, W. Sharman.

The following resolutions were presented and adopted, and also a resolution favoring the establishment of an agricultural college, similar to that passed by the Sheep and Swine Breeders' Association.

**THANKS TO RAILWAYS.**

That the pure-bred cattle breeders of Manitoba hereby acknowledge the prompt and courteous and satisfactory way in which the railway companies met the representatives of our last annual meeting regarding the freight rates and weight classification of pure-bred stock.

**GOVERNMENT AUCTION SALES.**

That the pure-bred cattle breeders of Manitoba believe the system of Dominion Government aiding live-stock auction sales, now being introduced into Ontario, an interference with the trade of the country, and conceived in the interests of a certain class of breeders in Ontario, but not in the interests of the small breeder or of the people as a whole; as we are of the opinion that the theory of giving the purchaser a cheap animal and the seller a high price will not work out in practice. We respectfully suggest that the Dominion Live Stock Commissioner do not interfere with private enterprise, there being many other matters in connection with the live-stock industry of the Dominion to which he could devote his energies, and we believe no more effectual scheme than these Government-aided auction sales could be devised for filling our ranching country with a class of sires that are not likely to improve the quality of their products.

At a joint session of the Breeders' Associations, the following resolution was adopted:

"We, the members of the Pure-bred Cattle Breeders' and the Sheep and Swine Breeders' Associations, in annual convention assembled, are of the unanimous opinion that the dates chosen for the Winnipeg Industrial for 1901, viz., July 20 to August 3, are altogether too late in the season, owing to it being in the middle of haying and so near the time at which harvest is likely to commence, which will not only affect the showing of stock, but will greatly reduce the number of visitors from among the farmers of this Province, as well as from the States to the south of us; and the members of these Associations would respectfully urge the board of directors to reconsider the question of dates, and, if possible, hold the show two weeks earlier."

"And we would also beg to suggest that the number of side shows be greatly reduced, and what shows are allowed should be selected with great care, as some exhibitions on the grounds last year were of a nature anything but refined."

At the evening session, Mr. T. G. Raynor, Rosehall, Ont., spoke briefly on the use of cement in farm buildings, which subject was proved by the discussion which ensued as one of live interest. It was conceded by every one present who had experience with cement floors in stables that they were the most satisfactory. Emphasis was laid on the importance of a good solid foundation under the cement, and the allowing of ample time for the cement to set before being used.

Mr. Dan Drummond, the noted Ayrshire breeder, of Myrtle, Ont., delivered an interesting address on the "Dairy Cow and How to Feed Her." This subject was also discussed at considerable length.

Prof. Day spoke on "Stock Feeds and Their Uses," his address being a most practical one and of great interest. We hope to reproduce the address, along with the diagram used in illustrating the points, in an early issue.

J. G. Washington, of Ninga, read a paper on "The Care and Management of a Pure-bred Herd."

At the joint evening session of the Live Stock Breeders' Associations, the Hon. Thomas Greenway introduced a resolution regarding the

**TUBERCULIN TEST**

as employed at the quarantine stations. He spoke at some length, explaining the position in which the matter stood and how seriously it affected the live-stock interests, particularly of this Western Province. The resolution, which read as follows, was carried without opposition except from Veterinarian Thompson, who, however, advanced no new argument:

"That the pure-bred cattle breeders of Manitoba are in favor of the enforcing by the Dominion and Provincial Governments of reasonable methods for preventing the introduction of contagious diseases of live stock into the country, but that we take strong exception to the use of tuberculin for such a purpose, it being very liable to serious errors and consequences in its results. We further contend that the continued imposition of this test at the quarantine stations will tend to prevent importations of first-class animals, on the use of which depends the maintenance of the present high standard of Canadian herds.

"We would respectfully draw the attention of the Minister of Agriculture to the glaring injustice now being shown to Western breeders by the stationing of one veterinarian at Buffalo to test pure-bred animals crossing the international boundary, no provision being made for the convenience of Western breeders; as a consequence it is not possible for a Western breeder to sell south of the boundary line.

"Therefore we earnestly request the Honorable the Minister of Agriculture to take steps to discontinue the use of tuberculin in connection with live-stock quarantine."

J. H. Grisdale spoke on the development of the dairy herd, illustrating his subject with diagrams of some of the dairy queens of the several breeds.

S. A. Bedford spoke briefly on "Grasses and Fodder Crop," and Prof. Day on "Agricultural Education."

**Dairymen Meet.**

Manitoba presents the anomaly of two aggregations supposed to be working in the interests of dairying. How far successful they will be yet remains to be seen. We are, however, reminded of the adage: "A house divided against itself cannot but fall."

The Manitoba Dairy Association and the Cheese and Butter Makers' Association held meetings during convention week, the attendance at the executive meeting being fair.

The officers of the M. D. A. for 1901 are: W. Champion, Reaburn, President; R. Waugh, 1st Vice-President; W. B. Gilroy, 2nd Vice-President; E. Cora Hind, Secretary-Treasurer. Directors: W. Grassick, Pilot Mound; Wm. Ryan, Ninga; Wm. Scott, Winnipeg; S. Benson, Neepawa; S. Larcombe, Birtle; S. A. Race, Brandon; W. D. McCuaig, Macdonald; J. T. Regehi, Hochstadt. S. Thorvaldson and G. Harcourt representatives to Fair Board.

Messrs. C. Marker, Alta.; S. A. Bedford, Brandon; C. A. Murray, Winnipeg; Prof. Robertson, Ottawa, addressed the Association on various topics. A resolution, expressing the opinion of the Association that R. R. rates, east and west, on dairy produce were too high, as were the cold-storage and commission rates, was passed, and it was moved that representations be made so that assistance similar to that given the dairy industry in the N.-W. T. would be given to Manitoba. Hon. R. P. Roblin, Minister of Agriculture, opened the evening meeting with a short talk on the importance of sending dairy products to market of high quality and in the right kind of package. The Minister criticised as unfair to this Province the Dominion Government's assistance to the creameries of the Territories.

W. Grassick pointed out some source of loss to patrons of creameries, and suggested methods to be followed in order to overcome such troubles. Prof. Ruddick gave an interesting address on butter and cheese making in Manitoba, emphasizing the need for proper care of the raw material, and for the need of skilled men in the manufacture of dairy products. Many defects in the manufacture of cheese were commented upon and the causes explained. Prof. Robertson gave some interesting figures, showing the development of the dairy industry in Canada; he also pointed out the value of agricultural education, citing several

cases to prove his argument. H. McKellar, Department of Agriculture, gave some interesting statistics regarding the dairy industry in Manitoba, and insisted that the past year showed conclusively the need for more dairy farming in this Province. J. W. Mitchell, Superintendent of Government Creameries, Assa, spoke briefly and to the point on the butter industry, stating that for the West cheesemaking was out of the question, owing to the sparseness of population, and that the cream-gathering plan was the only satisfactory one at the present time. Mr. Mitchell stated that the flavor of the butter depends on the patron, due to the cream being held by that person; as a result a very common fault was overripeness of the cream. The patron should endeavor to hold the cream at a low temperature (40° Fahr.), and thus leave the ripening entirely to the maker. Uniformity of the product is only possible by this method. In his experience, working under directions from Prof. Robertson, the oil test proved satisfactory enough for all practical purposes. A query re collecting cream elicited the answer that collecting by the pound was the best. The opinion was advanced from one of the audience that the drivers for the creamery routes were selected for their strong arms and weak brains.

**THE CHEESE AND BUTTER MAKERS' CONVENTION.**

This newly-organized body met in Maw's Hall, and discussed questions of interest to the trade. Prof. Ruddick gave an interesting address to the members, the discussion following being taken part in by Messrs. S. M. Barré, C. C. Macdonald, and Shunk. The address of the President of the Association was printed, and is an elaborate presentation of dairy educational progress. It also suggests methods to be followed to improve the conditions now existing, which, according to Mr. Barré, are very unsatisfactory. Mr. Marker, of Calgary, gave some valuable ideas on the manufacture of dairy products, the market side being presented by Mr. Black (F. J. Stewart & Co.), Vancouver. There was a good attendance of dairymen from the French communities, one day's session being conducted in French for the benefit of these members.

**Farm Siftings.**

Have you decided on the males you will use this spring to improve your horse, cattle and poultry stock? The breeding season is fast approaching, cattle and poultry first calling for attention. Where persons desire to improve the milking habit of cows, it is well to have them calve in the fall, other advantages being that the cows will thus be dry during fly time, hot weather and dry pastures; the spring pasture will seemingly freshen up the milk flow; harvest time will not mean milking time; cows can be given more attention during the winter months. If all these reasons carry weight, why not study the deficiencies of your cows, and look for a bull to wipe them out in the stock? Don't wait until breeding time and then use the first bull to be found. Watch the advertising columns of your agricultural paper for chances to buy "improved bulls." You ought soon to be mating a few hens for early and persistent-laying pullets. Get rid of the mongrel cock.

What about your seed grain? Have you decided on the kind of grass seed you will sow, and how much? If not, why not?

Your neighbors are probably interested in good horses. Talk over with them the question of suitable and available stallions. Agricultural societies have not yet generally adopted the hiring system in vogue in Scotland, so that each must look out for himself in this respect. If you have a good mare, breed her to a good horse and get a good colt.

Do you or your wife need any hired help for the coming season? If so, get your contracts in shape.

Are your implements and horses ready for the spring rush?

Might it not be well to test your seed wheat as to its germinating power, so that your fields will show an even covering of grain, instead of patches here and there. Chemistry is rather a dry study, especially elementary chemistry, but that is no reason why you should have smutty wheat and oats next harvest, when bluestone and formalin are to be had cheap. Oats this last season were very light and poor, and if one bought and sowed good Alberta, at about 40 to 45 cents a bushel, the investment would likely be gilt-edged.

Reader, what is your opinion of the farmer, whose last year's wheat is only fit for pig feed, who neglects an opportunity to purchase 1899 No. 1 hard wheat for seed, at 82 cents a bushel, as advertised by some of the local seedsmen?

**Manitoba Veterinary Association.**

The annual meeting of the Manitoba Veterinary Association was held in the City Hall, Winnipeg, Feb. 19th and 20th, for the election of officers and discussion of papers. W. A. Dunbar was elected president; S. A. Cox, vice-president; Dr. Torrance, secretary-treasurer. Interesting papers were contributed by Messrs. J. G. Rutherford, Elliott, and Dunbar. Dr. Torrance reported on the research work done with regard to swamp fever. The Association is in a flourishing condition, numbering about seventy members. The examiners for the license to practice in the Province are Drs. Dunbar, Martin and Torrance. The semi-annual meeting will be held at Brandon during the Summer Fair there.

### The Farm Garden.

To the Editor FARMER'S ADVOCATE:

This is the time for farmers to do a little thinking and lay out their plans for next season's work: and a few suggestions in the columns of your valuable paper may not come amiss to those of your readers who are planning to have a garden. A short list of the seeds most suitable to our climate, and also a few implements they should have, may be useful to many. I will take the implements first: A good steel rake twelve inches wide is indispensable if you expect to have success with a garden, to get the ground in order before sowing the seed, and afterwards to kill weeds and keep the surface mellow: in fact, the garden rake is the parent of the weeder so much lauded in grain-growing, but, like the weeder, it must be used *in time*: in fact, before you can see the weeds on the surface at all. A spade, or, better still, a good digging fork, a good steel hoe, a garden line the length of the garden (a piece of binder twine doubled will answer the purpose) and a twelve-foot measure marked to six inches is all that is required. If you can afford a good seed sower, all the better; but you can get on without one in a small garden. If the ground has been prepared last season, so much the better; but if not, get it plowed and harrowed as early as possible in the spring, or, better still, take a small piece of your summer-fallow for this year and get a garden in shape near the house during the coming summer. I prefer long, straight rows to beds, and lay out my ground in this way: Take the measuring pole and some small stakes about a foot long and put in a stake every two feet across each end of the garden for as many rows as wanted for onions, carrots, beets, radishes, lettuce, parsnips, and herbs, and three feet apart for cabbage, cauliflower, potatoes, peas, beans, turnips, and tomatoes, and five feet apart for citrons, cucumbers, and squash. Then, when sowing, commence at one side and stretch the line between the two outside stakes; mark out the drill for the seed, then move the line to the next two stakes, and the rows will be all even and straight, which adds greatly to the appearance, as well as making the work easier between the rows of plants.

I will just name one or two varieties of each of the vegetables that are most suitable for the farmer's garden: Golden Wax and Early Six Weeks beans; Eclipse and Edmund's turnip beet; Scarlet Nantes and Chantenay carrots; Black-seeded Simpson and Big Boston lettuce; White Lady's Finger and Rosy Gem radish; Yellow Danvers and Red Wethersfield onions (but the Dutch sets are the surest and easiest managed for the bulk of the crop); American Wonder, Strata-gem and Champion of England peas; Purple-top Swede turnips; Hollow Crown parsnips. Some parsley, sage and summer savory should also be sown. All these seeds may be sown as soon as the ground is in good condition, except the beans, which should not be sown before all danger of frost is over and the ground warm. Lettuce and radishes should be sown every two weeks to secure a succession, as they grow quickly and do not keep long fit for use. In sowing, open up one row at a time: sow the seeds and cover at once, the small seeds about an inch deep. It is better to sow pretty thick, and thin out when about two inches high. Sow the peas two or three inches deep. After covering the seeds, go along the row and firm down the soil with your feet. Don't forget this part of it, and don't be afraid to put your weight on: you will not hurt the seed.

If you want to grow tomatoes, the seed must be sown in a hotbed about the first of April, or in a box in the house and transplanted into a hotbed when two or three inches high, and into the garden the first week in June. If it is a favorable season, you may get quite a lot of ripe ones, but are sure of a good crop of green tomatoes for pickles. Early Atlantic or First of All are the earliest. Cabbage and cauliflower can be sown in a cold frame, made in this way: If you have no hotbed sash, take one or two storm sashes, and make a frame that they will just cover. Make it seven inches high at the front and nine at the back. About the first of April put this frame in some sheltered place in the garden, or beside the house, where the sun will shine on it; put on the sash and cover at night with an old horse blanket or anything of that kind, and in a day or two it will be ready to sow. If it is in the garden, dig up the soil inside the frame and rake it level and fine. Make rows across the bed four inches apart and  $\frac{1}{2}$  inch deep. Sow the seed thin, and cover, firming the soil well over the seed. Give a good watering and put on the sash, keeping it closed until the plants are up, which should be in a week. Once the plants are up, air must be given every day by pulling down the sash, and on very fine days taking it off altogether. On cold, stormy days, when the sun is not shining, do not open the sash, and always cover at night. Pull all weeds out and stir the soil between the rows often. Give a good watering once a week, and when the plants are three or four inches high set out in the garden, choosing a wet day, if possible; otherwise, you may have to water and shade the plants when set out. Early Summer, All Head and Succession are good cabbages, with a few Red Dutch and Early Snowball and White Head cauliflower.

For citrons, cucumbers and squash, in the row marked off for them, every four feet dig in a shovelful or two of old, well rotted manure. Mix it well with the soil, and sow six or eight seeds; cover and firm well. Do not sow before the 15th or 20th of

May, for if the soil is not warm, the seed will rot in the ground. Red Seed citron, White Spine and Long Green cucumber and Bush Marrow squash are as good as any.

Keep the rake going between the rows and the hoe among the cabbages and potatoes. Radish seed is cheap, and a few mixed with the onions, carrots and parsnips will show you where the rows are long before the others are up, and the first crop of weeds will not get a start. Rake the garden over the day after every good shower, and it will do twice as much good.

GEORGE LANG.

Assiniboia.

### Breeding and Care of Draft Horses.

[An address to the Horse Breeders' Association by Alex. Galbraith, Janesville, Wis.]

It may be broadly stated that for the average farmer the heavy draft horse is the most suitable to raise, for these reasons: It is a safer business, more money in them, more easily raised, more readily broken than are light horses. The injuries liable to occur in horses do not affect the value of a heavy draft horse to so great an extent as it does his relative of the lighter breeds. *To be successful, the breeder must study the market.* While the get, weighing 1,100 to 1,200 pounds, of a heavy draft stallion used to be classed as a draft horse, they are now classed as chunks, a weight of 1,000 pounds or up being necessary in order to qualify for the draft market classes.

Success in breeding draft stock will depend largely on the selection of the parent stock, the mare being of good family, 1,000 to 1,700 pounds in weight, and *sound*. Always choose animals with good hocks. Select a stallion that will nick well with your mare. This is very difficult with the average farmer, as mares differ. Stallions must be up to weight, and yet not overgrown. The extremely big horses, being accidents themselves, tend to breed accidentally. Have the stallion typical, about the size of his immediate ancestors, and of a good disposition. Points mentioned worthy of careful consideration: Have the head of fair size; do not buy a horse with a pony head. A wide forehead is a good indication in a colt, the poll being not so wide, as the ears tend to droop; such horses often being of a stubborn disposition. The eye prominent and the throat-latch clean, with a well-muscled neck; do not ask for a coach horse neck on a drafter. The shoulder should be somewhat sloping; upright shoulders tend to make the gait stilted. While good width in front is necessary, the legs should not be placed to the outside of the body; such horses lack the straight-away gait and tend to roll. The knees should be broad and the tendons at the backs of the legs well defined. The pasterns should be lengthy and set well back; the foot large, tough, with *no* sidebones. At the heart-girth the horse should be deep and full, with a short back and broad loin. A fault of the Clydesdale was a slackness of the shorttribs; horses having such a conformation going to pieces in the hands of poor feeders. The quarters should be long and level, with heavily muscled thighs. Especially important are the hocks, which should be clean, broad, and free from fleshiness, close together. No good draft horse goes wide at his hocks. A colt going wide will tend to go wider with age, consequently loses propelling power. The limb from heel to fetlock should be perpendicular—no curby hocks. The skin should be clean and the hair fine, of the model draft horse, who must not paddle, turn the toes either in or out, and should show the sole of the foot at each step. Horse judges should always have the animals sent straight away from them: the circling around of a class by a judge gives him little on which to base his awards.

It is advisable to work the mare right up to, but *not* after, foaling; feed reasonably well with nutritious food. Beware of blood poisoning through the navels of colts. Teach colts to eat oats early. Do not feed corn, as it does not build up muscle. Oats, bran and roots are a satisfactory diet. Give close attention to the feet of the colts. Water before feeding grain.

Two methods of weaning may be followed: separate gradually or at once, the latter preferred, when the colts are five to six months old. Put two or three together or else with an old horse, and thus avoid fretting. Colts are fed whole oats once a day; crushed oats, bran and cut hay once a day; boiled oats and barley, half and half, once daily. The use of roots is to be commended. Fall breeding is nice in theory, but not so satisfactory in practice.

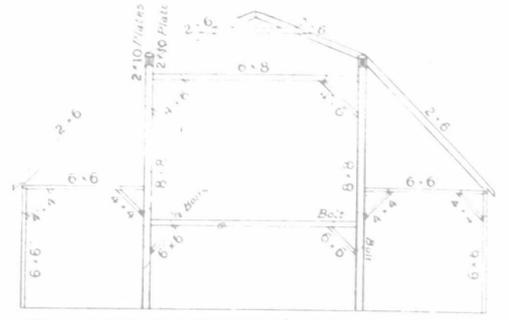
In the discussion, the following facts were elicited: Sugar beets and turnips keep well. Feed potatoes raw. Colts die from constipation when the mares run milk before foaling, owing to the lack of the purgative first milk, the colostrum, a condition common in brood mares not worked. Lack of exercise before foaling increases the tendency to difficult births. Boiled pigweed seed is as good as flax in its digestive effects.

### Obituary.

The death of Wm. Wagner occurred in Winnipeg on Feb. 25. Mr. Wagner was an enthusiast on dairying, and was one of the leading promoters of the Provincial Dairy Association, of which for several years prior to his death he held the position of honorary president. He represented Woodlands in the Manitoba Legislature from 1881 '86, and in his professional capacity as land surveyor he was well known throughout the Province.

### Frame of a Manitoba Barn.

The accompanying figure and description of a cross section of a barn built for John Renton, Deloraine, will give a helpful idea to many of our readers who intend to build a strong and, without, cheap barn. The barn in question is 81 by 51 feet, 14-foot posts, and has six bents, 20, 12, 20, 12, 20 feet apart, the 12-foot space being driveway. It is set on a stone basement, the walls of which are 10 to 11 feet high. There is a 10-foot driveway running lengthwise through the basement, allowing the owner to drive right through and thus load manure right into the wagon, the expenditure of labor thus being reduced to a minimum. The main outside wall posts are six by six inches, studding being of two-by-six-inch stuff, two-foot centers. Purline posts are eight by eight inches, the purline beams



CROSS SECTION OF JOHN RENTON'S (SRL) BARN, SHOWING END BENTS.

being six by eight inches, lower beams also being six by eight inches. The main braces below are six by six inches, the upper ones being four by six inches, other ones being four by four. The short beams from the purline posts to the outside walls are six by six inches. Two-by-six stuff is used for rafters, which are placed two feet apart, the deck rafters also being on two-foot centers. The purline plates are made of two-by-tens placed on edge, capped by a two-by-eight, spiked on, the space being used to receive the two-by-six plate braces. All braces are bolted to posts and beams with half-inch carriage bolts and washers.

J. RENTON, SR.

### No Farm Too Good for Mixed Farming.

To the Editor FARMER'S ADVOCATE:

After 15 to 20 years of continuous wheat growing, the question confronts us, are we to go on the same way or make a change? Wheat-growing as the only source of revenue is like a man trying to make 12 months' wages in 6 months, a thing impossible in any business, and equally so in farming. Rains do not do the older land as much good as formerly, as the soil is fiberless and bakes after a good soaking rain. I have seen the heaviest soil in the Province, in the Red River Valley, drifted as badly as the lightest sandy soil, all from the same cause, lack of fiber or humus. The best way of replacing this is by grass, and grass means more stock and manure. The kind of grass does not matter so much, as the main object is to get the land into sod. Brome grass is too dear for any large area. Native rye grass I like best, as it is not half the cost, and a good catch may be had along with the wheat, barley or oats. I prefer wheat on fallow. My plan is to cut our crop of hay, and graze the next summer up to middle of July, then manure and plow once. Land handled in this way has given a better crop of wheat than when first broken from prairie. Some men say that their land is too good for stock-raising. I do not think that any land in the country is too good for cattle or other stock. By fallowing early and sowing rape or oats, cattle can get splendid fall feed, and I have no doubt but that feeding it off the land must benefit the soil greatly.

Expensive buildings are not a necessity for cattle, as I have had them do very well in single board sheds, with mangers high so that the manure need not be cleaned out until near spring; the cattle dehorned and running loose. It is a disgrace to the farmers of this immense country that butchers in the towns have to feed cattle through the winter for their business during spring months. They buy the cattle from the farmer, and then buy the feed also from the farmer, and pay men to haul this feed, often considerable distances, and to feed the stock. Surely it would pay the farmer to finish the steers and keep all of this splendid manure on the farm. The only way most of the town butchers can get rid of their manure is by burning it in the summer.

I thought that the wind stacker on threshing machines would help the live-stock industry in the wheat districts, as the straw is nicely stacked without any extra expense to the farmer, but it has made little difference. He has depended on wheat so long that he hates to change, but I would earnestly urge farmers to make this change, drop the one-sided farming, and make a rotation that includes grass. Don't put it off another year, seed some down this year. There is no reason why our live-stock industry should not assume the same proportions as our wheat. Surely it is not right in a country of this size not to be able to support two pork packing houses in Winnipeg. The hog here is free of disease, and should pay well. The State of Iowa lost two million dollars worth of hogs in one

year. Do they go out of them on that account? Not by any means. They call them the great mortgage lifters, and whether the price is high or low, they stick to the hog. S. MARTIN.  
Oakland Municipality, Man.

**Would Use Rotted Manure.**

To the Editor FARMER'S ADVOCATE:

You desire an explanation of my statement in your last issue, that manure is injurious on some land in this neighborhood.

The land in this district is very rolling, and the soil is not by any means uniform on a quarter-section. On the higher ridges the black loam is pretty thin, while in the hollows it is very deep. If manure is put on this flat land it will cause a rank growth of soft straw and the crop will go down and be simply useless. The fact of the matter is, this land is rich enough without manure, and as there is generally enough high land and alkali spots to take all the manure that can be made on the farm, I would leave the low land alone. If, however, I had manure to spare after manuring the aforesaid lands, I would put on the low land, very thin, but as yet it is not needed. I have seen land here that has been cropped continuously for twenty years. It was summer-fallowed three years ago, and the crop all went down. In a good year, with plenty of rain, summer-fallow does not produce a paying crop, as it lodges badly. It generally does better the second and third year after. With a moderate rainfall, however, it will be all right the first year. In 1895 I manured a piece of fairly flat land, pretty heavy. The two following crops were useless, a rotten, tangled mess, but after that the crops were better, and even last year, after being manured five years ago, I could see exactly where the manure was put: the wheat was several inches higher than on the land alongside on which there had been no manure: a better crop altogether, and fully one week earlier. The way I handle it is to draw it from the stables and put it in a heap, taking care to mix the cow manure with the horse manure. The horse manure heats at once, while cow manure keeps it from firefanging and rots it. The heating process destroys all noxious weeds. I put my pile near a slough, and if the early summer months are dry I throw a few barrels of water on it; directly after seeding, when we begin to summer-fallow, I draw it out on the land, plowing it under immediately, taking particular care not to let it dry out before being turned under. I keep it in heaps and spread it just ahead of the plow. There is generally a little slack time between seeding and summer-fallowing. I might say the manure is generally pretty well rotten by this time, and five loads from the stable in winter will be reduced to one now. I have also had good results from putting manure on the top of land after being fallowed in July, and then disked in immediately. In 1899, I treated a piece of flat clay land that was almost white, and would not grow very good crops, by plowing it in July and spreading about twenty loads of well rotted manure to the acre, disked it in immediately. The result was, notwithstanding the drought, a yield of over forty bushels to the acre last year. I do not believe in drawing manure direct from the stables to the fields, although I am trying same for an experiment this winter. No doubt, on the face of it, it looks a great saving of labor to get rid of the manure in the slack season, but I doubt if it pays in the end. Scientific men tell us of the great waste, etc., but they are not always right. I believe in practice rather than theory, and I would say, if you want to get a dirty farm, draw the manure direct from the stable.

Beautiful Plains, Man. JESSE CURTIS.

**Farmers' Institute Meetings in the Territories.**

The Department of Agriculture at Regina arranged a series of Institute meetings, for the last week of February and March, as follows:

North Alberta series.—Addressed by Mr. C. Marker, Superintendent of Creameries, Calgary, accompanied by Messrs. D. Drummond and T. G. Raynor, B. S. A. The meetings were held as follows: Olds, February 25th; Innisfail, 26th; Red Deer, 27th; Tindastoll, 28th; Didsbury, March 2nd; Leduc, March 4th; Wetaskiwin, 5th; Ponoka, 6th; Lacombe, 7th; Calgary, 8th.

Southern Alberta series.—Addressed by Mr. J. H. Grisdale, Agriculturist of the Central Experimental Farm, Ottawa; George Lang, Indian Head; and T. N. Willing, Chief Inspector of Noxious Weeds for the Territories. The meetings were held as follows: Lethbridge, February 25th; Magrath, 26th; Cardston, 27th; Mountain View, 28th; Fishburn, March 1st; Pincher Creek, March 2nd.

East Assiniboia series.—Addressed by J. W. Mitchell, Superintendent of Creameries, Regina, and Messrs. Raynor and Drummond. The meetings will be held as follows: Moose Jaw, March 8th; Marlborough, 11th; Lumsden, March 12th; Waseana, March 12th, in the evening; Balgonie, 13th; David, 14th; Qu'Appelle Station, 15th; Fort Qu'Appelle, 16th; Abernathy, 18th; Indian Head, 19th; Sintaluta, 20th; Wolseley, 21st; Ellisboro, 22nd; Grenfell, 23rd; Broadview, 25th; Fitzmaurice, 26th, in the evening; Fairmede, 26th; Wapella, 27th; Hillburn, 28th; Forest Farm, 29th.

Two other series are being arranged, one along the line of the Manitoba and the Northwestern Railroad, and the other in South-eastern Assiniboia.

**Would Use Manure Direct from Stables.**

To the Editor FARMER'S ADVOCATE:

In using manure we have found that hauling it direct from the stables, and spreading it thick enough to plow in, has given us just as good results as any method that we have tried. In the first place, it is a great saving of labor, as we have only to handle it once.

When manure is drawn direct from the stable to the field that is to be manured, it is much easier to spread it evenly, and it catches considerable snow that would not otherwise lie on the fields. The melting of the snow in the spring must wash the substance of the manure pretty well into the land. Any piece we have manured in this way we have plowed for oats (the last sown), as we find that the weed seeds have made a good growth by that time. The straw is generally very coarse and strong, and if cut for green feed yields a good crop. Then, we have plowed the land so treated in the fall, and the following year we have had a nice clean crop, either oats or wheat. Our experience has been that if the land be then fallowed the good effect of the manure will then be seen, as the result will be a nice even crop, good strong straw, and well-filled heads.

Alkali land treated in this way soon becomes the best of land, and the crop ripens just as early as on soil free from alkali.

We have not had satisfactory results with piling up manure to rot: there is a difficulty in getting it properly heated, takes extra labor and is more troublesome to plow under. We have found when we have hauled out well-rotted manure and put it into heaps, that they would dry out before we would get them all spread. So, taking it on the whole, the most satisfactory way is to draw direct from the stable and spread, and so be done with it. No matter when it is put on, it always benefits the land.

The crop always shows where manure has been spread and where it has not: the grain is both taller and stronger, and it ripens earlier. If land has been cropped till it is run down and very dirty, it is best to fallow the year the manure is applied, as the coating of manure holds the moisture, which helps to start all the weed seeds, and then by the time it is ready to plow there is a good coat of green stuff to plow down, that will help to enrich the land. Then by keeping the weeds cultivated for the rest of the season, the land will be in shape for a good crop of wheat. W. P. MIDDLETON.  
Elton Municipality Man.

**Manitoba Horse Breeders' Association.**

The eleventh annual convention of the Manitoba Horse Breeders' Association was held in the City Hall, Winnipeg, Feb. 1st. The attendance and interest evinced, due doubtless to the improved aspect for horse breeders, was greater than ever before. President J. G. Rutherford was re-elected; J. E. Smith, Brandon, was elected First Vice-President, and Stephen Benson, Neepawa, Second Vice-President. The constitution was amended so that the Executive elect their own Secretary-Treasurer.

The breeds were represented by J. A. S. Macmillan, Brandon, Clydesdales; T. E. Kelly, Brandon, Standard-bred; N. Boyd, M. P., Carberry, Thoroughbreds; A. Muir, High Bluff, Coach; A. Moore, Swan Lake, Hackneys; A. Brown, Headingly, Percherons. Additional directors: W. W. Fraser, Emerson; R. I. M. Power, Carberry; S. J. Thompson, Winnipeg. Representatives to the various fair boards were named as follows: Winnipeg, R. I. M. Power; Brandon, Henry Nichol; Portage, J. Wishart; Neepawa, J. H. Irwin; Carberry, N. Boyd; Glenboro, Geo. Steele, M. P. P.; Treherne and Holland, Lipsett; Manitou, J. Robson; Carman, R. C. Hendry; Emerson, W. W. Fraser; Souris, Crisp; Cypress River, Connor; Virden and Elkhorn, Struthers; Oak River, Hamiota and Rapid City, Rankin; Norfolk, No. 2, F. Thompson; Kildonan and Springfield, A. Paterson; Boissevain, Knittle; Hartney, Forbes; Oak Lake, Ross; Minnedosa, S. Benson. W. W. Fraser, Geo. Harcourt, A. G. Hopkins, J. G. Rutherford and J. E. Smith were appointed a committee to wait on the railway company, along with committees from other associations, to rates on pure-bred horses. A motion was passed to revise the by-laws and bring them before the Association at their semi-annual meeting. J. E. Smith descanted on the amounts of money offered in the prize lists, and drew attention to the inadequacy of prize money in the horse classes. Mr. J. G. Rutherford stated Major Dent's views on purchase of Western horses. The remount officer could buy more cheaply in Ontario horses of the same type as offered in the West, the Eastern horses being more tractable and are unbranded. Mr. Peterson remarked the neglect of the N. W. T. in the purchase of remounts, and suggests the establishment of a remount station. Dr. Rutherford described the types of horses wanted for army purposes, namely: for the artillery, the vanner or express horse, price about \$200; for the cavalry, horses with saddle shoulders, standing 15.1 to 15.3 hands, price \$110 to \$150; cob ponies, 14.1 to 15.1 hands, preferred height 14.3 hands for infantry purposes, all types to have deep chests, strong backs and loins, and good legs. A

resolution was passed urging the Government to purchase such horses for the army, in Canada. Several interesting papers were read by Alex. Galbraith, Janesville, Wis.; Stephen Benson, Neepawa; D. Rutherford, Portage la Prairie, and W. W. Fraser, Emerson, being followed by very profitable discussions. It is very evident that the M. H. B. A. is destined to have a beneficial effect on the industry in the Province, although it seems strange that the representatives to the various fair boards were not instructed to insist on prizes being awarded *only* to sound breeding animals; in fact, but for some of the speakers, unsoundness seemed to be overlooked, it being a well-known fact that many pedigree stallions in the Province are inferior to some without a pedigree, by reason of unsoundness or faulty conformation. The Association might well lend its aid to the project of some of the agricultural societies re bonusing first-class stallions.

**Vegetables for the Farmer's Garden.**

In the first place, a piece of ground should be selected with a protection from the north and west winds, which can be easily made if there is no bush on those sides. I have used my next year's wood pile for this purpose, and a splendid protection it makes. A sod fence, which could be put up in a day, makes a splendid wind-break. I have heard of a number advocating to plow in fall. I have experimented with fall and spring plowing, and in every case the spring plowing gives the best results. Plow deep. Remove the wheel and coulter and put the plow to the beam. A good coat of thoroughly-rotted manure will make a wonderful difference. Plow as soon as possible in spring. Now is the time to secure the seeds. Get several seed catalogues: one seedsman will not have all the kinds needed. For instance, I can only get from one seed house the kind of celery I want, and from another one kind of cabbage that does best in the Northwest. Then I want a certain kind of tomato which is advertised by another, and so on. In securing seeds early, if any mistake has been made it can be corrected before it is too late. I was taught a lesson along this line some years ago. I ordered my garden seeds from one firm late in spring so they would only reach me in time to plant. What was my surprise to find a lot of flower seeds sent to me instead. Before I could have the mistake rectified it was too late, so I had to take what I could get at the store. Having secured your catalogue, you open the first pages and you read of wonderful novelties. Don't pin your faith on all that is said. A little experimenting with one or two might do no harm. Turn over to the general list of vegetable seeds. The first thing is asparagus, a grand vegetable if you or your family like it. The quickest way is to secure two-year-old roots. You should have a pound or two artichokes and plant them by themselves, near the pigpen. A package of Brussels sprouts. If you want a great variety, a package of broccoli and a package of kale. For beans I find nothing to beat the Yellow Wax. In beets, the Egyptian has given every satisfaction. They can be sown every month from April to August: the last for winter. We use them for greens; sown thick in the rows and then thinned out. In cabbage, my two favorites are the Early Winingstadt and Early Flat Dutch; the latter I have had weigh twenty-eight pounds. They can be used for both early and late. In cauliflower, I have found nothing to take the place of the Extra Early Erfurt. In garden carrots, I like the Chantenay—a good producer as well as rich in substance. For an excellent, crisp, nutty-flavored celery, give me the Giant White. I have tried a number of different kinds, but I have found none that will yield as large a crop of beautiful white celery as the Giant White. It is a good keeper. The White Plume is a splendid early kind, but a poor keeper. The only corn I have had success with every year is the "Squaw corn." I have always succeeded in getting some ripe ears. I like a small plot of peppergrass, but will have to be very careful, as it will soon become a nuisance. A few green cucumbers are very refreshing during the summer, and can be grown with success. I like the Early Long Green. For lettuce, the very best is Ferry's Prize-head, giving fine large, solid heads. I have had but poor success with melons, so will not recommend them. Citrons do well, and a nice plot of them will please any housewife. In onions, I find Extra Early Flat Red the surest, though the Danvers and Wethersfield do very well. The surest is the Dutch Sets. With pumpkins and squash I have had but indifferent success. In peas, let the main crop be McLean's Little Gem; American Wonder, second. For a farmer's garden the Long Scarlet radish is the very best. I sow it on the banks between the trenches of celery. For tomatoes, there is nothing to take the place of the Early Conqueror for this country. I have tried a large number of the early varieties of turnips, but do not fancy any of them. My two favorite varieties are the Swede and Yellow Aberdeen. Try a few rows of sugar beets for the table; you will be well pleased with them. Last, but not least, have a patch of early potatoes and an acre of potatoes for fall and winter use and to sell in spring.

Eastern Assa. J. B. POWELL.

### Horse Breeding in the Last Thirty Years.

[An address by Alex. Galbraith, Janesville, Wis., before the Manitoba Horse Breeders' Association.]

In considering the very wide topic of horse-breeding in the last thirty years, I cannot in the time at my disposal do more than treat the subject in a rather cursory manner, contrasting the tastes, methods and conditions existing at that now distant date with those prevailing now, and filling in reminiscences from my experience and observation during that period both in Great Britain and America.

The changes and advances made by breeders of domestic animals in the last twenty-five or thirty years are not greater in any class of stock than in horses. Within my own recollection, a distinct evolution in the tastes of breeders and demands of the market is clearly noticeable, and in no breed of horses does this apply with greater force than to the British draft breeds of Clydesdales and Shires. I can well remember, when a small boy on the farm, a rather noted Clydesdale mare which my father owned. She was named Old Jess, and was sired by a son of the celebrated Broomfield Champion (85). This mare was the dam of many fine colts, one of which, Johnnie Cope (416), won the Highland Society's first prize at Glasgow forty-four years ago, and that season sired the celebrated black horse, Campsie (119), the winner of many premiums in Scotland, and one of the earliest horses owned by the well-known David Riddell. The old mare, Jess, to which I refer, differed in every material point from the typical show Clydesdale mare of the present day: in fact, she resembled far more closely a characteristic Shire mare. She was large, approaching, if not quite, 17 hands high, very powerfully made all over, with immensely heavy bone, not of the flattest or cleanest kind, but such as would appear to good advantage when measured with a tape line. She had wonderfully heavy feather of a quality in keeping with her immensely heavy frame; in other words, rather coarse, hard, wiry hair. Old Jess had never been worked on the farm, although she lived to be over twenty years old. She had, I suppose, a mind far above ordinary farm work, being considered and looked up to as a model mother of stallions. Contrasting that animal with the typical Clydesdale mare of to-day, we find the difference very marked indeed: the *weight* of bone and frame has very materially *decreased*; the *quality* and the action have correspondingly *increased*. The dams of such horses as MacGregor or Baron's Pride were but small mares, compared with Old Jess or even with Keir Peggy, the dam of the famous Darnley. I well remember seeing Keir Peggy win first prize at the Highland Show in 1864, and I saw the same mare twenty-two years afterwards, and still think her one of the grandest animals the breed has ever produced. She had considerable scale, a fair amount of quality, was very symmetrically formed, with good action; but the most remarkable thing about this mare, and which has been a hard problem for Clydesdale breeders ever since, was that by far and away the best colt she ever produced, and she produced ten in all, was sired by an undersized and rather inferior stallion. This stallion's name was Conqueror (189), owned by Mr. Moffatt, of Shirva, and I well remember that when the horse was hired at the Glasgow Spring Show of 1871, by the Dunblane, Donne & Callander Farmers' Club, to travel their district for small terms, the wisecracks laughed at the incompetency of the committee for choosing such a horse. Sir Wm. Stirling Maxwell's Estate of Keir being in the district, the manager thought he might perform a generous act by sending one of their many mares to the district horse, and, I understand, the reason why Keir Peggy was the one chosen was because she had failed to get with foal to any of their own stud horses, and they had several of considerable note. At any rate, the result was that Keir Peggy got with foal by this obscure horse and in due time produced the world-famed Darnley, probably the greatest Clydesdale of the 19th century. It seems rather the irony of fate that such a wonderful product should be brought about in this haphazard manner. Keir Peggy was afterwards bred to many excellent horses, but never produced anything at all equal to Darnley either for individuality or breeding qualities, although two of them were good enough to win at the Highland Show. So much for this digression. Sally, the dam of MacGregor, was a decidedly undersized mare, but had nice quality and shape, and seemed to nick especially well with Darnley, as she afterwards produced the champion, Flashwood, a horse of abundant size and beautiful finish—the best show horse of his time. But although this mare and the dam of Baron's Pride were smaller in size and in bone than the old timers referred to, they were much superior in quality, much finer in hair, much better in feet, more elastic in pasterns, and superior in action, so much so, in fact, that the change wrought in the last thirty or forty years in the typical Clydesdale mare, possibly be regarded as otherwise than a decided advance and improvement.

#### REFINING PROCESS RUNNING TO EXCESS.

The same refining process has taken place and continues to-day in other breeds. It is based on experience and practical knowledge: is not a fad, but a felt want. The animal of better quality, whether in horses, cattle, sheep, or hogs, is preferred the world over to the heavier, coarser, more phlegmatic animal, and why? Because fineness of quality, as indicated by a bright eye, a dense bone, thin skin, and silky hair, is synonymous with wearing qualities, endurance, and early maturity. Such animals are apt to be easy keepers and good feeders, and they frequently have more ambition and more intelligence as well. Now, this question may be put: "Has the refinement of the Clydesdale and other draft horses been an immense good, or has it really been to the advantage of those breeds to attain this increase of quality at the expense of weight?" I am willing to admit that in many cases the tendency has been overdone. Some ten years ago I attended a dinner at the home of Prof. McColl, near Glasgow, and there met some twenty-five or thirty representative Clydesdale breeders. I was asked to give my views as to the standard of Clydesdale excellence then in vogue as exemplified in the showings. I told those breeders that they had been and were then making a very serious mistake in ignoring size and substance in their breeding operations: that they were giving entirely too much prominence to feet and pasterns, and not sufficient attention to the necessity of keeping up the bone and muscle and substance so essential in the ideal draft horse. I said further, that, in my judgment, they would suffer seriously within a few years from the importation and competition of American and Canadian grade draft horses. This was previous to the date of heavy importations from this country—horses not heavy enough, perhaps, to draw heavy lorries, but suitable for light lorries, vans, and omnibusses and I said that a large proportion of the horses which they themselves were then producing were of a similar class, and would consequently have to be sold at very low prices. A few of those present, including Prof. McColl and the editor of the *North British Agriculturist*, agreed with my statements, but the great majority did not like to be told that they were on the wrong track. I knew I was right, but they felt sure I was wrong. The matter was discussed at length in the papers both in Scotland and in America. Col. Holloway undertook to show the fallacy of my conclusions in two long and very ably-written letters to the *Breeders' Gazette*. He maintained that feet and pasterns were the one great essential in the draft horse, and that the body and weight would take care of themselves. Now, what was the result? During the years of depression in the horse business, American draft horses were poured into England and Scotland, and their home-bred, undersized Clydesdales could not be sold at anywhere near the price obtainable for animals of substance and weight, and even to-day in the Chicago market the price is largely determined by the weight, provided, of course, that the fundamentals, the legs, pasterns and feet are all right. My contention now, as always, is that any *crave* or *fad* is temporary, and therefore *dangerous* to follow, and *utility* must go hand in hand with fashion. Had Col. Holloway kept size in view as well as he did the underpinning, it would have placed many thousands of dollars in his pockets, and the country would also have been the richer by having much more valuable animals. During the last six or eight years the improvement in the weight of Clydesdale horses has been very marked, and, on the whole, we cannot possibly come to any other conclusion than that the breed has advanced very materially during the last twenty or thirty years. This fact is evidenced by the constant demand for breeding stock from foreign countries, such as Germany, Russia, Sweden, Australia, New Zealand, and the Argentine Republic, in addition to Canada and the United States.

#### SHIRES HAVE GONE FORWARD.

Now, as regards Shire horses, I think there has been quite as great an improvement in the last thirty years as in Clydesdales. The type of Shires that won at the London Show twenty years ago would have no chance now, the refining process being most marked in this breed. This improvement has been brought about partly by the organization of the Shire Horse Society and its annual shows, accompanied by *veterinary inspection*, principally through the efforts of a mere handful of progressive breeders, who, to tell the truth, took their cue from the Scotch breeders, and have been endeavoring all these years to remedy the defective limbs and feet and faulty hock action of the massive English horses. The average Shire breeder still maintains with remarkable persistency that the more bone and hair he can produce, the better the animal, but this claim is by no means confirmed either by the showings or the market, unless the animal possesses considerable quality and activity. It is frequently found that the extremely strong-boned, hairy-legged horse, whether Clydesdale or Shire, has a distinct element of softness in his composition, is pligmatic in temperament, and is neither so active nor so enduring as the horse with less hair and finer skin. How often have we seen big, rough, strong horses that when *three* years old looked like *sire*, and when *sire*, looked like *sister*, if they happened to be alive? Such horses *never* have been and never can be popular in the United States. The Americans always insist on having a certain amount of quality and cleanness in their

horses' legs, and as they are, for the most part, poor caretakers of heavy draft horses, a gummy-legged Shire going into a district ruins the reputation of the whole breed wherever that horse is known. But I think I hear someone ask very pertinently: "How are you going to raise these heavyweight geldings which all the markets demand, at good prices, unless by using very heavy sires?" The question is somewhat difficult to answer, but I would remark that it is not by any means the heaviest horses that prove the best breeders, and I could cite many cases to prove this.

#### MEDIUM SIZE, WITH QUALITY.

The medium-sized horses, of good bone and constitution, whose immediate ancestors on both sides were animals of high merit, are, in my opinion, safer animals to breed from than accidentally large horses whose parents were much smaller than themselves. Depend upon it, the most *unsatisfactory* sires are the *abnormally* large ones. They are *accidents* themselves, and they will breed *accidentally*. Another point in this connection: Good draft mares are quite as *essential* to the production of market geldings as are the stallions. The day has gone by when by coupling a 1,200-lb. mare with a 1,800-lb. or 2,000-lb. stallion you can expect a high-class draft gelding. The mares ought to weigh at *least* 1,500 lbs., and if 1,700 lbs., all the better, and it is a safe axiom in all countries, when once you find a good brood mare, *stick* to her as does the Arab.

#### THE LIGHTER BREEDS.

Passing now to the lighter breeds, I will take up the Cleveland Bay or Yorkshire Coach horse. This breed, as you doubtless all know, was extensively used in England during the days of the stage coach, but on the advent of the railways the breed became practically extinct, until some twenty-five years ago. The American craze for solid bay horses of rangy type, with flowing tails, resuscitated the breed and brought them into great prominence in the United States. The demand for these horses increased wonderfully, and all sorts and conditions of them were imported for a good number of years and freely distributed from the Atlantic to the Pacific. I am not here to advocate any breed, nor yet to disparage any, but the fact remains that the crossing of the Cleveland Bay horse with American mares has proved a most dismal *failure*. There is at present positively *no* demand whatever for the Cleveland Bay breed, and instead of being popular, as they once were, they have fallen into "innocuous desuetude." Probably some blame may be attachable to the farmers, who very foolishly insisted on crossing their grade draft mares with those Cleveland stallions, a very *unwise* cross.

(To be continued.)

#### Winnipeg Industrial Annual Meeting.

The annual meeting of the Winnipeg Industrial Exhibition Association was held on February 21st, when the following were elected directors for the ensuing year: J. T. Gordon, F. W. Thompson, G. J. Maulson, F. W. Drewry, G. F. Galt, Wm. Brydon, Robt. Barclay, A. J. Andrews, John Arbuthnot, I. M. Ross, D. E. Sprague, G. H. Greig, J. A. Mitchell, T. W. Taylor, D. Smith, A. A. Andrews, Dr. Torrance.

The following day the newly-elected board met and elected Mr. F. W. Thompson, President; J. T. Gordon, Vice-President, and the following Chairmen of Committees: Finance, A. J. Anderson; Gates and Tickets, D. E. Sprague; Attractions, F. W. Drewry; Grounds and Buildings, D. Smith; Printing and Advertising, G. J. Maulson; Prize List, Geo. H. Greig.

#### Seed Grain Competition.

Sir Wm. Macdonald's generous gift of \$10,000 has stirred an interest among Canadian boys and girls, in the matter of seed-grain selection. The competition showed the following competitors from Manitoba and the N.-W. T. to have been successful:

Manitoba—Hugh Thompson, Roden, \$25; Andrew Thompson, Roden, \$20; Berand Bescoby, Stone-wall, \$15; John D. Dickie, Minnedosa, \$12; R. C. Lamb, Cartwright, \$10; Peter Brann, Gretna, \$8; E. M. Sherris, Rapid City, \$5; Gwennydd Lumb, Cartwright, \$5; Clarence Scott, Marquette, \$5; John S. McBain, Portage la Prairie, \$5.

Northwest Territories—S. Kirkham, Saltcoats, \$25; Silas E. Wheeler, Penhold, \$20; Peter P. Abrams, Rosthern, \$15; Jos. Neumier, Langenburg, \$12; Josafa Neumeier, Langenburg, \$10; John Simm, Belle Prairie, \$8; Peter Keith, Fitzmaurice, \$5; Barber Fraser, Steep Creek, \$5; Geo. Sim, Grenfell, \$5; Violet E. McKell, Regina, \$5.

#### North-eastern Stock Growers' Association.

At a meeting recently held at Yorkton, a Stock Growers' Association, with objects similar to the Western Stock Growers' Association, was formed, and the following elected officers: President, Jas. Carson, Whitesand; 1st Vice-President, Thos. Fulton; 2nd Vice-President, E. A. Healy, Yorkton; Secretary-Treasurer, F. Hukins, Directors—Thos. McNutt, Saltcoats, and J. Salkeld, Redpath, for Saltcoats stock district; John Brown, Mulock, and Thos. Isbister, Fort Pelly, for Pelly stock district; Robt. Buchanan, Devil's Lake, and Walter Tullock, Sheho, for Devil's Lake stock district; Thos. H. Garry, Becksburg, and John A. Snell, for Yorkton stock district; Matthew Peace, Fishing Lake, and J. Hall, Wishart, for Touchwood stock district.

**The Horse Breeding Outlook.**

Horse-breeders who have growing or breeding stock are feeling well over the increasing prosperity of their business. While greater pains are being taken to fit horses for the market, buyers lament that first-rate animals are becoming more and more difficult to secure. These circumstances are having the effect of stiffening the price for such classes of horses as are especially in demand, which are confined to more definite types than the market demanded a few years ago. To be sure, the plug or the nondescript will sell for something if he can pull, but he is wanted only by the cheap buyer, so that he will not pay for raising. One commendable result of the passing of the horse car was the effect it had on removing the market for the cheap horse, and with that went the services of the scrub stallion, so that he should no longer be a menace to the trade. So surely is this felt by the horse-breeders, as was evidenced at the meetings in Toronto the second week in February, it was generally contended that the service fees for good horses should be raised in order to guard against excessive service, and also to warrant men in securing high-priced stallions. During the depression of the trade a few years ago, fees went deplorably low, and now the business has become prosperous the old charges for service should be reinstated. Besides that, it is felt by many horse-owners that for the benefit of the industry unsound or inferior stallions should not be allowed to serve mares, and to this end the inspection and licensing of stallions was strongly advocated by several members of the Horse Breeders' Association. It is not likely, however, that such an act will soon be passed, as it would be difficult to enforce, and is of doubtful necessity, since the produce of such horses is becoming less and less in demand.

Horse-breeding, from a farmer's standpoint, may be considered to have settled down to three main classes, the draft horse, the carriage horse, and the army remount. A high-class carriage horse, hunter or roadster will sell well, but their production is expensive and uncertain, while either the remount or draft horse can be raised with less skill, and therefore less risk of failure. The experience we have had in supplying remounts, and the reputation they have won in active service for the Canadian horse, should give us confidence in catering to that demand. The horses that stood the hardships of long marches on little food were built much on the pony pattern, with good middles and stout limbs, most of them coming from the farms of Ontario. They stood the task much better than the finer-bred English horses, but for mobility in an engagement, such horses are not sufficiently fleet and spirited to overtake the enemy, so that the remount horse is not confined to a steed that might be strictly termed a saddle horse. He should, however, according to Major Dent, who has purchased many remounts in Canada during the last year, have saddle-horse blood, and the more the better of the English or Irish Thoroughbred, if strong enough, as then he has the spirit, endurance and activity of a good soldier. Major Dent strongly condemns the Standard-bred sire and just as forcibly recommends the Thoroughbred for this purpose. Horses with long backs, weak back ribs, and small bones below the knee, are looked upon by him as entirely unfit for army purposes, and these weaknesses in many Canadian horses he attributes to the Standard-bred trotting sire. The Hackney, however, has a place in the army supply, as was shown at the last Canadian Horse Show, when both pure-bred and grade Hackneys won good premiums in the cavalry, infantry and artillery classes. It is probable that British remount purchase stations will be established in various parts of Canada before long, as it is known that we can produce the right class of horses that will be so much needed as time goes on. Since the commencement of the Boer war, Canada has supplied some 3,750 horses, and the United States 21,000, so that Canada could easily have supplied more to this trade had she been in a position to do so. Now, if purchasing centers are established, they will be supplied from those of our horse-breeders that produce the right class of stock, so it behooves our farmers with mares fit to be dams of remounts to consider well the sort of stallion chosen for the other parent of the offspring.

The high-class harness or carriage horse is, however, the money-maker of the present day, provided he comes up to a good standard of excellence in conformation and action. It needs few faults to take him out of the high-class trade, but with these he may make a useful animal in many lines of life. Having a clean-lined, active mare of handsome type and good size, it is quite safe to breed her with a carriage-horse offspring in view, for if she yields a good one, the price received for it may be more than two or three times that of an ordinary animal, even a remount. Mares with draft blood, or those inclined to pace, are not likely to turn out famous carriage offspring. Good results are being obtained from dams possessing English Coach, German Coach, Cleveland Bay, Standard-bred (if big enough), and Thoroughbred blood, when crossed with the Hackney especially, or any of these mentioned breeds, if good enough, in proper character. We have it on good authority that the offspring of the well-known Hackney stallion, Jubilee Chief, when sired fairly good carriage mares, invariably sell for high prices. The same is true of the gets of other good Hackneys, and occasionally a German Coach equally successful if possessed of the proper metal. The draft-horse men learned their lesson years

ago as to the proper sort of stock to raise. While size and weight is an essential for long prices, quality is equally necessary. Where the thick-legged, short-pasterned horse could find a field years ago, his trade has gone, and few of this class ever start out on a route. In fact, such horses are shunned by every experienced draft-horse man. The coming season promises well for the draft class of horses, and as many good ones have been imported into Canada from Great Britain during the past year, there is little excuse for coupling a good mare of draft pattern with anything but a suitable stallion of Clydesdale or Shire breeding. Viewing the industry from all standpoints, horse-breeders may feel assured that the outlook for their business is indeed propitious.

**The Test Again Condemned.**

At the recent annual meeting of the Canadian Ayrshire Breeders' Association, held in Montreal, an emphatic resolution was placed upon record pointing out that the cattle-breeding industry is seriously menaced by the tuberculin test as applied to animals purchased for importation or export; that it is misleading as a diagnostic agent, and of no real value. They therefore respectfully and reasonably asked that the Dominion Minister of Agriculture, so far as lies within his powers, order the discontinuance of its use. The proposition of the Ayrshire breeders is one that must commend itself to the judgment of fair-minded men who have given this grave question due consideration. They represent the interests of one of the most important and widely-distributed breeds of dairy cattle in this country—one that has deservedly gained high favor among dairy farmers from a thoroughly utilitarian point of view. Like the rest of our cattle, grades as well as pure-breeds, they present every appearance and possess all the tangible evidences of good health as do the herds of Great Britain, from whence they have largely sprung. That this unreliable and damaging test system should be fastened upon the industry by a little coterie of U. S. and Canadian officials passes comprehension. Those who own the cattle are most vitally interested in having healthy stock, and if they believed the test to be trustworthy and of any benefit, they would make use of it, but such is not the case. Even its exponent before the recent Ottawa Tuberculosis Conference quoted some authorities admitting a percentage of unreliability, and the results of the inquiry made by the British Board of Agriculture showed it to be unreliable to the extent of nearly 18 per cent. Hence, by no stretch of charity can it be called a scientific test, and, therefore, even five per cent. of error should rule it out of court. Think for a moment of the position of our breeders who, for the improvement of their herds, find it necessary to import fresh blood. They select the best they can find in Britain, for example, and pay, perhaps, \$1,000 for a single animal. It has every evidence of thrift and good health, but by these regulations it is subjected to the test and quarantined. After crossing the Atlantic, it is liable to another dose, and if its temperature happens to rise is condemned. Losses to the extent of thousands of dollars have already been inflicted upon our breeders, and as the Ayrshire men point out, the test stands as a serious menace to the industry.

That there is much to learn about the ailment in cattle would appear from the case of the reacting animals referred to at the Ottawa conference, reported elsewhere in this issue. None of them had failed nor become emaciated; in fact, they seemed to be just as sleek and good-conditioned as those that did not respond to the test. The casual observer could not but wonder: To what purpose, then, was all this vexatious and costly testing and segregating and isolating?

It is certainly of no benefit to the cattle, but, on the other hand, not a few cases of serious injury are recorded, and there is no pretence that it is a protection to human beings from consumption. Even at the recent tuberculosis conference in Ottawa it was not contended by the medical men and others present that bovine tuberculosis and human consumption were identical, nor that the latter was traceable to animals. The Dominion Veterinarian reported having tested several thousand suspected cattle, and only found that one or two per cent. gave reactions (rise in temperature) supposed to indicate tuberculosis. The 8,000 people who are annually dying from consumption, then, do not take it from cattle. The dying off of the Indian race from tuberculosis till now only a fragment remains, as referred to by Dr. Fraser, of Brandon, sheds light on this point also. They have not been a cattle-keeping people, and, therefore, did not contract the disease from that source. In fact, it would rather seem that they have been perishing from want of milk and other good nourishing foods. The alarmist crusade against cattle is not needed for the benefit of the animals themselves, and has no justification in so far as human beings are concerned.

From a U. S. quarter comes the suggestion of a Commission to investigate the test in all its bearings. It would doubtless be a good thing for the Commissioners, who would certainly learn something; but the immediate and pressing need is the suspension of the present regulations, which, while accomplishing no good purpose, are every day working damage, and to leave them in force, waiting indefinitely for the final verdict of a Royal Commission, would simply mean a form of lingering death to the cattle-rearing industry.

**Use Only Pure-bred Sires of Good Quality.**

The importance of using only high-class pure-bred sires in breeding all classes of farm stock has been so often and persistently advocated and urged in these columns that we realize the danger of its reiteration becoming wearisome to some of our readers; but, even at the risk of this result, we deem the subject of such vital interest to the success and upbuilding of the live stock of Canada—which is, by all odds, the leading industry of the country—that we venture a repetition of the injunction that mainly through the means of breeding from superior sires can our horses, cattle, sheep, swine and poultry take and hold a prominent and paying place in the markets—home and foreign—either as breeding stock or for consumption as meat; or, in the case of horses, as good sellers for the purpose of work or army remounts. There is not a doubt in our minds that the selling value of the great bulk of the live stock in the Dominion could be increased by fifty per cent. inside of three years were only pure-bred males of a good class used on all our farms for that period. The complaint comes constantly from buyers, dealers and shippers, that lack of good breeding and quality is the bane of the business, and that our people need to wake up to the fact that they are in large measure wasting food by feeding it to ill-bred, rough and scrawny stock.

There is now no reasonable excuse for this state of things, as there are plenty of pure-bred sires, of all the breeds and classes, held for sale or for service to supply all the needs of the country in this respect. It is only necessary to scan the advertising-columns of the ADVOCATE to see that there are large numbers of such stock in the hands of breeders waiting for buyers, most of them being young and which can be bought at very moderate prices by private contract or by competition at the bidder's own price at public sale, a number of which are announced in this issue, and which will be worth nearly if not quite as much after the usual term of service in a herd, stud or flock as the original cost, so that the improvement made by their use will be practically pure gain. We invite and urge farmers to read and study the advertisements in this paper, and to avail themselves—to some extent at least, and to as great an extent as their circumstances will allow—of the use of the best males whose services they can command either by purchase or the payment of a fee, and thus advance their own interests and help to build up the reputation of the country for a good class of stock.

**Evolution of the Southdown Breed of Sheep.**

To the Editor FARMER'S ADVOCATE:

SIR,—I was interested by an article in your Christmas number on Senator Drummond's Southdowns, also an article on Sir Tatton Sykes and his Times, and with regard to Southdowns, my interest was hereditary, being a descendant of, I may almost say, the originator of the breed. In 1753 (or just one hundred years before the writer's birth) was born John Ellman, at Hartfield, in the County of Sussex, England, who subsequently moved to Glynde, in the same county, with his father. On taking up the farm, he devoted himself to the improvement of the Southdown breed of sheep, and so well succeeded, that from a rough hill breed he evolved the fine-bred Southdown as we have it now, and obtained for this breed a world-wide reputation. This was in the latter years of the eighteenth century. He, with the Duke of Bedford and Mr. Astley, originated the Smithfield Cattle Show. A great friendship always existed between Lord Chichester and Mr. Ellman, while the Duke of Bedford was a constant visitor at Glynde, and in 1779 King George III. presented him with ten Merino ewes and two rams.

In 1829 he retired from active life, and was presented by the farmers of the county with a massive silver soup tureen, surmounted with a figure of a Southdown sheep, "as a token of regret and a tribute to his great merit, especially in improving and extending throughout the British Empire the breed of Southdown sheep." This piece of plate is in possession of Frederic Boys Ellman, of St. Leonard's-on-Sea, Sussex, who is a descendant in the fourth generation from the John Ellman, of Glynde, who died Nov. 22nd, 1882, and who was succeeded by his son, John Ellman, to whom in July, when about to retire from the Glynde farm to Sandport, near Lewis, an elegant silver candelabrum was presented as "a token of esteem and gratitude for public services, from his numerous friends," and in reply to the speech presenting the same, he says: "My father was the person who first brought the Southdown sheep into notice, and if I succeeded in carrying out his views and preserving for them at Glynde the reputation which he left them, I was perfectly satisfied." This John Ellman died on March 14th, 1867, and was the grandfather of the writer.

JOHN H. ELLMAN.

**Soda and Lard for Ringworm.**

W. J. P. Dromore, asks for a cure for ringworm on cattle. I use successfully equal quantity of baking soda and lard. Rub on part affected. One application is all that is needed on man or beast.

D. CAMPBELL.

### Care and Management of a Breeding Stud During Winter Months.

To have stock of any kind winter well, it is very important that they should go into their winter quarters in good condition. I do not mean that it is necessary for them to carry much flesh, but be healthy and vigorous.

Very frequently in going through the country, in the fall of the year, one may see many young horses and some brood mares that are not required for farm work running out all the time.

I do not find any fault with this, as long as the weather is dry and there is enough for them to eat, but when the fall rains set in, no animals should be left out all the time, but should have shelter from rain and chilling winds, at least at night, and on cold, wet days should not be left out long enough to become chilled.

Young horses are able to endure a great deal of cold without any injurious effect, as long as the air is clear and dry, but when they get their coats wet to the skin, and are exposed to the chilling winds, they often contract colds, which if not looked after at once are liable to lead to other complications, which weakens the constitution, and every time any epidemic, such as distemper, and many other ailments come their way they are victims, and frequently the veterinary has to be called in or you have a disordered lot all winter. A little care at the right time will prevent all this: and animals going into winter quarters in proper condition will thrive on less feed than the others that are merely living on. Let me say again, take good care of the youngsters in the fall.

The next important thing is that our stables be suitable; it is not necessary that they be costly, but they must be light and dry, and be well ventilated. As for temperature, horses will do well in most any temperature, but care must be taken not to have any drafts over them. However, we prefer a moderately warm stable, just warm enough to keep out frost.

If possible have loose boxes for all young horses and brood mares. If you cannot give a box to a brood mare, give as large a stall as you can.

*Stables should be kept clean.* Where horses are tied, stables should be cleaned every day, and twice a day will do no harm. Box stalls should not be left more than a week or ten days, and if not properly bedded, should be cleaned every day.

It is also very important that brood mares and young horses have plenty of outdoor exercise; it is immaterial how it is given, so long as they get enough and not overworked.

I cannot do better than give the system we have been following the past fifteen or twenty years. We do not always feed the same materials or the same quantities, but our general system of management has been the same all through.

We feed three times a day. First thing in the morning the work horses and brood mares are given a pail of water each, if they will take it, and they usually do: they are then given their morning feed: then at about eight or nine o'clock they are all turned out and go to water at a trough at a little distance from the stable; they are left out till noon in fine weather (in a large paddock and the farm lane giving them ample room for exercise), in cold stormy days they are put in as soon as they come back from water.

The past few years we have had from fifteen to twenty brood mares and young things running together; in this way the youngsters keep moving and also bother the mares and keep them from standing still, which in foal mares will frequently do: of course large yards should be provided so that they cannot well corner each other.

The noon feed is given at twelve o'clock, and when the weather is fine they are turned out again as soon as they have finished their dinner, or at about two o'clock, and all left till about five or six. When the weather is cold and wet, they are not let out till about five o'clock, when they are taken to the water, outside, and put in stable as soon as they come back of their own accord.

When a number are turned out together, it is very important that some reliable person go with them to the trough (especially in cold weather), as frequently some of the stronger ones will stand at the trough and keep others from getting a drink. It is very important that horses have water regularly, especially in foal mares; if they do not they are liable to take too much at one time. I believe this is sometimes the cause of the loss of a foal.

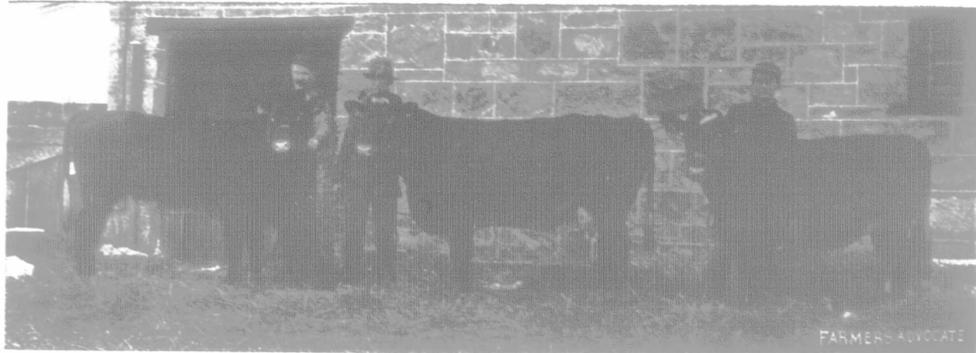
*Now a word about feeding.* I don't think that we in Canada should be bound to any system of feeding, or yet to any one kind of food, as we have a variety of suitable grains and fodders; the most suitable are oats, bran, clover hay, corn ensilage, and roots. We are feeding our brood mares this winter, in the morning at six o'clock, cutting hay, water, crushed oats, 1 1/2 pounds; bran, 1 pound; bran, 1

the brood mares. The young things are given from 2 to 3 pounds of oats and 1 pound of bran. Every feeder must, however, determine the quantity each animal requires to keep him growing nicely, and see that he gets enough to keep him growing. Along with this, they get all the well-cured mixed clover and timothy hay they will eat up clean. We prefer clover when we can get it. At noon we feed cut feed, composed of a mixture as follows: 80 pounds corn ensilage, 40 pounds cut straw, and 30 pounds crushed oats. In mixing, dampen straw, and salt a little: mix thoroughly and let stand a few hours.

This quantity is given to 21 head as follows: one matured stallion, nine brood mares, three two-year-olds, one two-year-old stallion, three yearling stallions, two weanlings, and two road colts, the roadsters and weanlings not getting quite as much as the others. To the mature stallion's feed is added about 2 pounds of bran, and to the young stallions and the weanlings about 1 pound of oats and 1 pound of bran is added to feed in manger. The night feed is same as morning, making in all a daily grain ration of 4 1/2 pounds oats and 2 pounds bran for brood mares, and the young fellows from 5 to 7 pounds of oats, with from 2 to 3 pounds of bran, with about 4 pounds of ensilage and 2 pounds of cut straw. We do not always weigh our feed, but in preparing this article I weighed all the material, and have given the quantities each animal gets, as near as possible.

I might say our horses are wintering well, and the youngsters are developing great bone and muscle.

While I have given the exact quantities of the different foods used, I do not think the same quantities suitable to all conditions. Our stables are very comfortable. If stables are cold more grain would be required. While this method may be safely followed, it is not perhaps suited to the different conditions that exist in all Canada, nor yet in all of our own Province. Thus every feeder must determine for himself what quantities his animals require, and also what materials are at his disposal.



MATTIE M., 2 YEARS. RUBY 2ND, 7 YEARS. MAID OF IVAN, 1 YEAR.  
THREE SHORTHORN FEMALES, THE PROPERTY OF D. A. GRAHAM, IVAN, ONT.

Our present stock horse, Grandeur II., is one of the largest of Clydesdales, weighing 2,200 pounds, but is a smooth, evenly-built horse, and a good disposition.

He is kept in a good roomy box stall with a clay bottom and a good large window, on the south-east side of the barn; he is always in sight of other horses when they are in the stable, and when they go out they pass by his window. I think it bad policy to have a stallion put in a stall away from all other horses. We have no yard in connection with stall, but give daily exercise, from two to four miles, when the weather is not too bad. We have been feeding altogether on dry feed so far this winter, about 4 pounds bran and 1 1/2 pounds of oats morning and evening, and at noon his cut feed, with the rest, making in all about 4 1/2 pounds oats and 10 pounds bran a day, and as much hay as he will eat up clean. We always water before feeding.

I think the important part of wintering a stallion is keeping him strong and healthy, and to keep him strong it is necessary to exercise freely in the open air. A horse wintered in this way will require very little extra fitting in the spring to prepare him for making a season. A little more feed, and a good long walk every day, say from four to six miles, will soon harden him for a reasonable season's work. We like to see our horses gain a little when they start on the road, and if properly wintered, they will usually do so, and come in at the close of the season as heavy as they left the stable, if they are well cared for during the season.

We work our brood mares during winter whenever there is any work to be done on the farm, such as drawing manure or wood, or any kind of slow work, but care should be taken not to overload or get them in deep snow or slippery places.

M. E. DEVITT.

### Word from Pennsylvania.

S. S. PRATT, Hvdetown, Penna.: "I have taken a good many farm papers, but like the FARMER'S ADVOCATE the best."

### Object Lessons in Stockers and Feeders in Chicago Stock Yards.

BY D. K. SMITH.

Nothing makes a more lasting impression on the mind than the ideas obtained by means of the sight. They are usually simple and instructive. So it is with all object-lesson teaching. This is emphasized when it is applied to the seeing of all classes of stock either on the market or in the showing, and comes still more forcibly to us when we have animals to exhibit or to buy or sell. Some of the lessons we thus learn tend to spur us on to better effort. In the few lines that I here write I hope that they may be the means of leading us all to make a strong effort in favor of breeding, rearing and feeding a better class of stock. In conversation with several of the largest and most successful dealers in stockers and feeders in Chicago, I frequently asked the question, "What are the most important points in selecting them?" And the answer I always received was quality. "Quality is everything." From observation and experience, I know this to be the case. In proof of this statement, I wish to give a few examples that came under my own observation during the past few weeks, and make comparisons in regard to price and quality.

In making these comparisons, I will begin at the lowest grade and then proceed to the medium and choice. The first bunch I wish to mention contained 16 yearling steers of very ordinary quality. These, from their appearance, evidently had very common or even hard treatment, as they were very thin, and a mean lot in every respect; yet they seemed to be healthy and strong. In referring to their quality, I cannot too strongly condemn the custom of haphazard breeding. These were inferior specimens of the dairy breeds, together with a few inferior grades of other breeds. To see them was to say you did not want them. Finally a purchaser was found, who gave \$2.35 a hundred for them. They weighed 400 pounds each. To anyone who has fed steers it is patent that it would require considerable food and time to get

them in condition fit for the feed lot, and after having consumed a large quantity of food, would only bring a low price at best, and when slaughtered would make a very common and mean carcass of beef. The next bunch that came under my observation contained 11 yearling steers of fair to good quality. These were smooth, of good color, and even in size. They averaged 810 pounds, and were in good condition. This lot showed considerable quality and breeding, and most of them were grades of the beef breeds. The demand for this class of stock was good, and they brought \$3.65 a hundred.

Next I would like to mention a fancy bunch of yearling grades. The 27 head that made up this bunch were all of one color, and the quality was choice. Their appearance showed that they were bred from the best quality of stock. They were in good condition and weighed 880 pounds on an average. They found ready sale at \$4.55 a hundred. The cost of production, feed and care and marketing of these three bunches was practically the same, but what about the price obtained? The first bunch brought \$11.51 a head, the second \$30.66 a head, and the third \$40.04 a head. The lessons to be learned from these three examples are self-evident, and similar examples may be seen almost any time on the Chicago market.

There is scarcely any doubt that the most important element in agricultural prosperity to-day is the live-stock industry, and those districts and States where first-class stock-raising and farming have been carried on together have shown the greatest progress in wealth, education and population. The stocker and feeder industry is undoubtedly the foundation of the beef trade, and therefore it is most important that it should receive the most careful consideration.

During 1900, the value of all cattle sold on the Chicago market was \$136,152,300. These all at one time were stockers or feeders. If all these had been of choice quality, the prices obtained and the value would have been very much greater. The improvement in prices during the past ten years has been largely due to improvement in quality, whilst there has been at the same time considerable progress made in feeding.

The careful selection of males is the first step to successful stock-raising and also to beef production. The bull is by far the most important animal in the herd. Systematic breeding up has been found to be inexpensive and quite satisfactory, but with it goes the careful weeding out of inferior breeding cows.

In place of raising stockers and feeders for sale, some prefer to fatten their stock and bring it to market as yearlings, and it seems to be a paying practice. Only the other day a bunch of 19 heifers

of excellent quality—and they certainly were ripe—were offered for sale here. They brought \$5.15 a hundred, and weighed 900 pounds, or an average of \$6.35 a head. These were high-bred grades. The tendency here in the West and out on the ranges has been towards an improvement in the quality of stock, and the result has been an increase in price.

**The Lambing Season.**

Owners of pure-bred flocks of sheep as a rule mate the ewes with the rams in the fall at a date which will bring the lambs due in March and April. Generally speaking, it is found that in well-fed flocks the early lambs come stronger and go on better than do those coming in the later spring months. This is probably in part due to the amount of exercise the mother gets in the late fall and early winter months, which tends to the healthy development of the fetus; while the ewes lambing late have been confined to the pen, perhaps necessarily, on account of the land being deeply covered with snow.

If the ewes have not been generously fed through the winter, they should have a little extra feed for the last month before parturition. A few turnips or other roots and a light ration of oats and bran once or twice a day will serve to give them strength and to provide milk for the lambs when they come. To this end, if a record of service has been kept and it is known which ewes are first due to lamb, it is a good plan, where the pen is roomy enough to be divided, to separate them, so that these may be fed more generously than the others. If this is not practicable, then give all a little better keep. It is well to provide a number of low short hurdles with which to make pens for single ewes when they lamb, for a few days, especially in the case of twins or a weak lamb not being able to follow its mother. We do not, however, advise keeping the ewe caged longer than is really necessary for herself and her lamb to become acquainted, which is generally a couple of days. There is always danger of over-feeding a single ewe and causing trouble in her udder, or her lamb getting too much milk for its good. The exercise which both ewe and lamb get in moving around in the flock is conducive to their health and thrift. After a few ewes have lambed, it is desirable to separate them from the flock and feed them liberally with roots and bran and oats, in addition to good clover hay if it is in store. When the lambs are two or three weeks old they will begin to pick a little feed, and to give them the best chance, a space in the pen should be enclosed with hurdles with a "creep" or gate, with spaces through which the lambs can go and the ewes cannot follow. In this a low rack and trough should be provided, in which the lambs may be fed hay, meal and bran, and later sliced roots also. With this provision, they will grow and thrive, and will not draw so heavily upon their dams as if always hungry.

As a preparation for the lambing season it is well to have the ewes trimmed with the shears, their tails being squared and any dirt-locks in the twist cut away, as well as some of the longest locks around the udder and flanks, as lambs are apt to gather wool into their mouths when seeking the teat, which finds its way into the stomach, forming wool balls, which cause indigestion and sometimes death.

Usually when ewes are in good thrifty condition, not too fat nor too poor, there is little difficulty attending the birth of the lambs, and if the presentation is normal there is seldom any need of assistance. A ewe may be uneasy for hours and give the signs of approaching labor, but generally it is best to give her good time, and she will work out her own deliverance. If the delay is abnormal, it is well to make an examination, and if the presentation is not as it should be, the oiled hand should be gently introduced and the fetus put into proper position, when the ewe may be given a little more time and, if necessary, some assistance in her delivery, but always with gentleness. Many ewes, we fear, are ruined by too much haste on the part of the attendant.

After the birth of the lamb, the ewe should be allowed to lick it dry, and in about half or three-quarters of an hour, if the lamb does not succeed in sucking, it should have assistance in getting its first meal, which had better not be a heavy one. Little and often is nature's plan, and there is no better way for the safety of the youngster. When once a lamb gets dried, and some mother's milk into it, it will stand a good deal of cold without suffering. In cases of false presentation and very severe labor, it is well after the birth of the lamb to pour a weak solution of carbolic acid into the vagina from a bottle, say one part of carbolic acid to fifty or sixty of warm water, and in the case of prolapsus of the uterus, the parts should be washed with warm water and afterwards with the carbolic solution and returned to place, and the locks of wool tied across the bearing to prevent the expulsion of the womb again. In this case, also, a dose of raw linseed oil with a little laudanum in it will prevent or allay inflammation and serve to keep the ewe quiet. A drink of bran tea and sloppy feed for a day or two, and bran, oats and roots, with hay for roughage, will be found the safest and best feeding after lambing, the quantity being increased as the lambs grow older and require more nourishment.

At the age of two to three weeks, the lambs' tails should be docked about two inches from the rump. This may be done with a sharp knife, cut-

ting upwards from the lower side of the tail at a joint, as the lamb stands, or the lamb may be held by an assistant with its back down, and the tail severed by a downward cut with the knife. Docking shears, such as are used for trimming sheep's hoofs, are sometimes used for *de-tailing* the lambs. If in any case bleeding continues too long, it may be stopped by tying a soft cord around the stump for a few hours. Castration of the ram lambs should be attended to at the same time, if they are not to be kept for breeding purposes. This operation should precede the docking, else the bleeding of the tail stump would make it disagreeable to the operator. Many United States shepherds practice clipping off the scrotum and its contents with the shears when the lambs are not more than two weeks old, and claim that it is perfectly safe. The general practice of English shepherds is to cut off the end of the scrotum and draw the testicles, one at a time, casings and all, with the teeth or with a pair of forceps, holding in either case one hand tightly upon the lamb's belly while drawing them out. There is very little risk attending the operation at this age, and it is very important in the case of grade lambs intended for the butcher that docking and castration be attended to without fail, as ram lambs are a nuisance in the fall, and have to be sold at a much lower price than wethers and ewe lambs on this account.

**Our Scottish Letter.**

Since I last wrote, but one event has filled the minds of the citizens of the British Empire. The death of Queen Victoria will bring many changes, and no doubt the interests which are paramount in the agricultural community will share in these. Her Majesty was a loyal and hearty supporter of agriculture in all its branches, and took a personal interest in the stock of her many farms. She knew all that went on, and encouraged her overseers and other servants in every possible way. No doubt the lively attachment to rural pursuits evinced by H. R. H. the Prince Consort had much to do with the prolonged and growing liking for agriculture which characterized the Queen's reign. The first exhibit was made from the Royal farms at the Royal Agricultural Society's Show in 1843, and there has been few years, if any, since in which Royal exhibits were not seen at all the principal shows. A very foolish jealousy sprang up about ten or twelve years ago on account of the notable successes of the Queen's exhibits, and with customary tact Her Majesty disarmed the antagonism by giving instructions that only animals bred in the Royal herds should be shown. The result was surprising. Most of the greatest victories of modern years were secured by such animals, and probably in no season did the Queen's exhibits prove more successful than in 1900. Alike at the Royal, the Highland and the Smithfield Club Shows, Her Majesty carried off a large share of the best prizes. She kept a Shorthorn herd at the Prince Consort's Shaw Farm, Windsor; Hereford and Devon herds at the Flemish Farm, Windsor; an Aberdeen-Angus herd at Aberfeldie Mains, in Aberdeenshire; and a small Clydesdale stud at Windsor, Osborne, and Aberfeldie Mains. She won the Clydesdale championship at the Royal, Warwick, in 1882, and at the Royal, Windsor, in 1889, she won the leading prize in the two-year-old class, although the championship went to Prince of Albion 6178. The best yearling filly of 1900, Pomona, owned by Lord Roseberry, was bred by the Queen, and in every way Her late Majesty showed her liking for Scotland and Scottish stock.

During the earlier sixties, when the late Mr. Henry Tait was farm manager at Windsor, he frequently purchased for the Queen a lot of good young cross bullocks out of which Smithfield winners might be got. A cattle dealer in Perthshire had a commission to look out for such, and on one occasion he purchased a lot of six from a breeder in Perth or Forfar. They were of a superior class, and the breeder was not prepared to sell except at a stiff price. The dealer's client was unknown to the seller, and to soften him a little the former said he would need to be as easy as possible as they (the cattle) "were for a widow." The bargain was eventually concluded and the cattle despatched, unknown to the seller, to Windsor. About eighteen months afterwards the Smithfield Show came round, and the dealer proposed to his friend the farmer that they might take a trip to London. As the farmer had never been there, he acquiesced, and in due course both arrived at the Show. Going the round of the stalls, the farmer came on certain prime bullocks which rather took his fancy, and he seemed to recognize them. Looking up his catalogue, he read: "Her Majesty the Queen, Prince Consort's Shaw Farm, Windsor," with the description of the animals and his own name as breeder. Turning to his dealer friend, he burst out: "You and your widow! If I had ken't she was your customer, you would hae paid different for them!"

The day of mourning, Saturday, 2nd February, would doubtless be faithfully observed throughout the Dominion, and in this country servants had an opportunity of showing their respect for the deceased Monarch by getting the idle day as well as the others. Fortunately, all the public houses were closed, and the day was spent in a more or less worthy fashion. Such a universal cessation from business was probably never before known in the civilized world.

**THE GLASGOW STALLION SHOW.**

The event of the week closing 9th February has been the Scottish Stallion Show, at Glasgow, on

Wednesday, 6th inst. This used to be one of the greatest days in the draft horse owners' calendar, but many changes have taken place in recent years, and there is neither the large entry nor the crowded attendance formerly associated with the Show. I have seen as many as 130 three-year-old horses alone, with, perhaps, 80 or 90 aged horses. This year there were only between 70 and 80 stallions in the field, upwards of 70 of the best known horses having been hired before the Show, and therefore not exhibited. In spite of this, however, there was on Wednesday a very good show of horses and a large attendance of the public, and the weather being favorable, the event proved quite successful. The best class was that for three-year-old stallions, in which two sons of the great Hiawatha 10067, which himself led the aged class and secured the championship, were first and second. These were, respectively, Marcellus (11110) and Labori (10791). The former is owned by Mr. Matthew Marshall, Stranraer, and the latter by Mr. A. B. Matthews, Newton-Stewart. Both were bred in the Rhins of Galloway, where Hiawatha was located in 1897, and the show of the old horse and his two sons when competing for the Cawdor cup was well worth going a long way to see. The sire was awarded the cup for the third time, viz., in 1898, 1899, and 1901, a very remarkable feat, and if he does not win it again, Marcellus may be trusted to maintain the family reputation. In some respects he is a better horse than his sire, and he is certainly a better horse at the age than ever Hiawatha was. He stands better on his fore legs and has better action. Fanciers of the grosser Shire breed cannot understand Hiawatha and his type at all, but if they would reflect on the quality of his limbs and the soundness of his feet, at nine years old, they would understand why Clydesdale men prefer quality any day, and are willing to wait for quantity. Labori is a horse of somewhat different type from his sire. He greatly resembles him in head and neck, but he is not so long in his quarters or so splendidly set up at the withers. He has rare quality of bone and good action, but although he won the Glasgow premium, his half-brother, Marcellus, rightly enough took precedence of him in the open class, which was well filled with a number of choice young horses, some of them up to great weight and substance, others not so heavy, but showing grand quality.

In the open class for aged horses, two sons of the famous Baron's Pride 9122 stood second and third after Hiawatha. The second was Mr. John Crawford's Casabianca 10523, a massive, weighty horse, which won in 1889 at both the February and the April shows, taking the championship at the latter. He is one of the heaviest horses got by his renowned sire, and has all the appearance of making what the experts call a "breeding horse." The third horse was Mr. Herbert Webster's Baron Kitchener 10490, which last year was first at Ayr and Glasgow and second at the Highland. He is a much gayer horse than Casabianca, carrying a magnificent head and neck, and moving very well. He lacks the substance of Mr. Crawford's horse, and although, we dare say, some would have approved his beating Casabianca, on the whole the judge's award has most to be said for it. Two very big horses followed in Mr. Renwick's Gartly Squire 10350 and Mr. Scott's Prince Murat 10027, respectively. These are great cart horses, and worth big seasons in districts where the cart gelding market is aimed at. A very sweet, typical Clydesdale horse, Mr. William Park's Prince of Brunstane 9977, was sixth, and another of the same class, Mr. W. S. Park's Clan Chattan 10527, was seventh. The third three-year-old horse was Mr. Wm. Dunlop's Sylvander 10333, a horse with rare quality of bone and uncommonly well bred. He was got by Montrave Mac 9358, out of the champion mare, Mary Kerr 13412, and it is worth observing that his dam and the dams of the first, second and third two-year-old colts were all got by the champion horse, Prince Alexander 8880. The first two-year-old was Mr. Kilpatrick's Lord Dundonald 11094, which last year was only once beaten. After him came Mr. St. Clair Cunningham's Alexander Everard, a very stylish colt, and the third was Mr. David Mitchell's Baronson 10881, a son of Baron's Pride, with great breadth and quality of bone. Mr. Wm. Clark had a thick-bodied colt named Golden Prince 11053 for fourth. "SCOTLAND YET."

Dairying and pork-production is proving a profitable combination for the farmer under winter conditions, with the prices prevailing for butter and bacon hogs. The cow and the sow constitute potent factors in keeping the farm accounts with a balance on the right side, and if there is a mortgage to be reduced, will wear it out as rapidly as any other influence that we know of. It is fortunate, when current prices for grain on the market are comparatively low, that the products can be sold to advantage when transformed into meat and milk, and at the same time the fertility of the farm kept up by the manure which is made from feeding stock. When to the product of the cow and the sow is added that of "the business hen," which also works in well with dairying, we have a trinity of powers which can hardly be excelled as a combination in the hands of men of moderate means, in not only "keeping the pot boiling" and holding what they have, but of making a little headway safely. And after all, it is perhaps better to be slow and sure than to take large risks, and by making haste to be rich, to run chances of overdoing the effort.

Abortion and Carbolic Acid Again.

To the Editor FARMER'S ADVOCATE:

Sir.—I am at a loss to know what your correspondent, "Semper Paratus," hopes to accomplish by his late tirade under the above head. Here I have letters from a number of breeders stating they have trouble from abortion with nearly all their cows, and they would be much more pleased to receive helpful information than to have this senseless criticism and baseless insinuations: for if S. P. does not happen to know that carbolic acid has given relief, there are many that do. Now, this Mr. Watson whose success I have quoted was well known to Western breeders and readers of the Breeder's Gazette, and he was so successful with stock, and especially in combating the dreaded abortion, that he was called to take charge of several different herds, and no less a paper than the Breeder's Gazette considered his communications of first importance, and this paper, upon his death, some time ago, honored him (and thereby itself too) by a fitting obituary recognizing his worth. I have myself received much help from his writing, consequently feel like giving honor to whom honor is due. It is from his teachings I first learned to give carbolic acid for retention of afterbirth, and found it efficacious as described in every case. One of my veterinary friends says he gives thirty-drop doses for this in his practice, with the best results. It does not take much intelligence to see, from referring to the original article, page 661, Dec. issue, that this critic's first quotation was not written by me at all, but by one of the staff of the F. A.

Next, he quotes me right as saying I have not had any great experience with abortion. Then he turns around and says that I say I have had no experience with abortion, which I have never said anywhere in my letters.

Mr. Watson had more experience; therefore, I gave his method. Mine has been comparatively small, but so far as it goes it substantiates the statements of Mr. Watson.

Now, I treated a cow that had aborted twice. First, before breeding I dosed her with carbolic, then after a time bred her, and she got with calf, and I gave that cow doses of carbolic acid every month, between her sixth and eighth month at intervals. I can't say for sure that it prevented abortion, but I do say that this cow, that had aborted twice, carried her calf full time and had a vigorous living calf, and has bred all right since. Take another case: A cow last winter discharged some blood when about five months gone with calf, and acted so unusual as to indicate something wrong. I feared abortion, and dosed her with carbolic several times. She went full time and had a strong calf, and is now carrying another calf. This cow may not have aborted; again, she may have done so if not "dosed," and hence I say, "Giving a cow a few drops of carbolic acid does no harm, and may do a world of good"; because, "It is a poor time to lock the stable door after the horse is stolen."

Now, if my critic had but made one more quotation from my letters, I would be better satisfied. He insinuates that I recommend carbolic for my neighbors' cattle, but do not give it to my own. When I said in the first letter that I had given every cow that had freshened a dose before and after calving, to prevent milk fever, I know from experience that no harm results from this treatment, because my herd to-day is in the best of health and fine condition. I do not propose to be run out of business by disease germs; and carbolic is an efficient germicide.

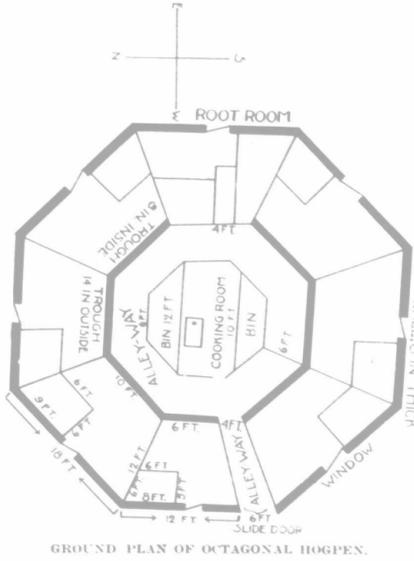
I presume everyone knows that carbolic is poison, same as aconite and laudanum, also given internally, but of different action. Carbolic acid has this characteristic, that when pure and undiluted it burns flesh, but when diluted it becomes harmless in this way, and is then a powerful antiseptic. I got the nail forced off my finger, and simply wrapped it up and put carbolic on it, diluted one to ten. Even this strong it did not injure the sensitive flesh, but acted as an antiseptic. It kept the sore free from germs, and nature did the rest. The finger was "able to be out" in a week. When carbolic is diluted 1 to 500 or 1,000, as directed for internal use, there is no danger whatever. I have found none in several years' use of it internally on cattle. But there is danger when an animal has aborted and nothing done to purify the system of these disease germs. This putrid stuff will destroy the procreative organs; hence, the sooner the animal is treated and the more thorough the treatment the better it will be. The parties with so many abortions in the herd have a difficult task, but they must face it, else cease operations. The germs of disease will continue to lurk around buildings, etc., and call for a free use of germicides. I stand by all I have written on this subject, and assure my enquirers that the treatment is perfectly safe.

Geo. Rice.

ROBERT WILSON, Wilstead. I think I am one of your first subscribers, and I have taken it every year. Not only taken it, but have read it carefully, and I have received much information from it. I may depend on me as a subscriber, and I will do all I can to get it for you.

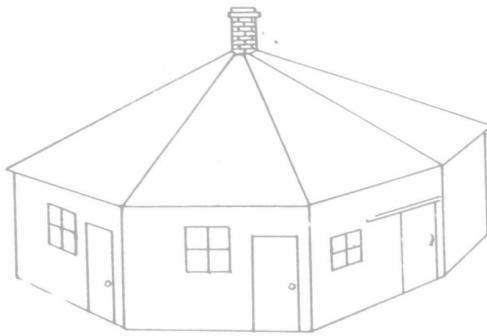
A Modern Hogpen.

One of the first things to take into consideration in building a hogpen is the cost, and when that is settled, one can form the plan easier. The pen which I describe below costs about \$350, providing that material can easily be procured, and the owner is a good worker. Below is the ground plan and outside view of this pen. The pen is built in octagon shape, and the walls are of cement, being nine feet high and eight inches thick. The entrance to the alleyway is at the west side, and the alleyway is six feet wide. I run a small car in the alleyway to carry the chop into the interior, where the bins are. These bins are on each side of the cooking room, and there are openings from the cooking room into the bins, so that the chop for cooking may easily be procured. I have a boiler in this cooking room, and I always cook my feed.



GROUND PLAN OF OCTAGONAL HOGPEN.

In the east end of the cooking room is a door which is opposite the door of the root room. This root room has a short alleyway and three bins. The roots are put in from the outside and the openings are then securely closed, so that in the room it never freezes in the coldest weather. Between the alleyway and root room on the south side are three pens, each 18 feet by 12 feet by 10 feet. On the north side are four pens, three of which are of the same area as those on the other side, and the other one is 12 feet on three sides and 6 feet at the trough. In each of these pens is a sleeping pen, which is made of wood and is raised about six inches above the cement floor. Pigs should not sleep on cement, as it is too cold. The area of sleeping pens is six feet on three sides and nine feet on the other, excepting the one in the small pen, which is eight feet by five feet, and two sides of six feet. In this small pen I usually keep my young pigs and their mother until they are old



ELEVATION VIEW OF OCTAGONAL HOGPEN.

enough to wean. Then they are placed into one of the other pens, which, of course, have small yards outside, and they are kept in this pen until they are ready for market. The troughs are made of cement, and are, therefore, indestructible.

The ventilation of a hogpen is one of its chief features, and hogs should have plenty of fresh air, as they vitiate more air than any other kind of farm stock. There is a ventilation pipe in each pen and four large pipes near the center to let out hot and foul air. This hogpen gives me seven good pens, besides a root room, cook room, and chop bins. It is the handiest pen any farmer can build, and it also costs less than a four-sided pen of the same inside area. Its handiness alone is worth much to the farmer, and anyone who builds one of this kind will never regret it. There are several more such pens in this vicinity, and their owners state that they would never build any other kind.

J. R. B.

Where Are We?

The following particulars of a tuberculin case are sent us this week by a large shipper of stock, well known to us, who asks us not to publish the names of the animals, but can vouch for the accuracy of the statements:

- 1. A pair of valuable young bulls were shipped by him to South America last year.
2. Both were accompanied by certificates showing that they had passed the test applied by well-known veterinaries here.
3. Both looked the picture of health at the time of shipment.
4. Both have (from intelligence received by last week's mail) been slaughtered by the authorities, as they are said to have reacted on the other side.
5. Both were fully insured, but this premium and the whole cost of the bulls and their transport will be lost, as they were slaughtered.
6. Learned professors say tuberculosis is not hereditary.

Query:—

- A. What was the use of the heavy expense of testing them in England?
B. If they were healthy when they left here, and if it is true that they were affected when they got there, where did they take it?—in quarantine?—or did testing bring on the complaint?—English Live Stock Journal.

Ventilation in Dairy Stable--Sub-earth Duct Recommended.

To the Editor FARMER'S ADVOCATE:

At your request, I take pleasure in submitting a few notes on the question of ventilation for dairy cow stables. I may say at the outset, that our stables at the College are not properly ventilated. This we hope to remedy in the dairy department during the coming season. The first thing when building a stable or overhauling a stable is to be sure and provide air space for each animal. Each animal should have from 500 to 800 cubic feet of air space. For 26 cows in single stalls, they would require a stable 32 ft. wide and 60 ft. long, inside measurement. This would also make allowance for two box stalls and a meal bin in the stable. The silo should be conveniently located at the end of the feeding passage, with a room of sufficient size in which to mix cut hay and silage, connecting the stable proper with the circular silo. The height of the ceiling should be about eight feet. A stable 32x60x8 would furnish about 600 cubic feet of air space per cow for 26 cows.

In ventilation the two points to aim at are: (1) to bring pure air into the stable at a temperature above freezing, and in such a manner that no draft is created upon the cows; (2) that the foul air be quickly removed from all parts of the stable—from the floor as well as from the ceiling. In order to bring fresh air into the stable, I would recommend the use of sub-earth duct, such as is used for cooling and ventilating curing rooms. I would build the duct out of two rows of ordinary tile (10 in.) placed at least six feet in the ground. The in take pipe should be above all surrounding trees and buildings, and have a cowl which would turn easily, so as to face the wind from all directions. The air should enter the stable near the ceiling, and for this purpose I would recommend two boxes about one foot square, connected with the duct. These boxes should run along the ceiling on each side of the stable, about eight feet from the side walls. They should have slides about every six feet on both sides, in order to allow a distribution of the fresh air into the warm air of the stable near the ceiling, and thus prevent a cold air upon the animals. In very cold weather these slides could be closed partially or altogether, if it were found that the temperature was likely to be too low; but with a proper sub-earth duct, the air coming in would be warm at all times, or at least be above freezing temperature.

For removing the foul air, I would suggest having, first, about three ventilators about one foot square in the ceiling at convenient distances above the center passage, these to be connected with a ventilator placed on the top of the stable or barn. These ventilators should be made in such a way that they could be closed in cold weather, otherwise they cause a draft to come down upon the animals. These ventilators would remove the warm air from the ceiling and from the center of the stable. For taking the foul air from the floor, I would suggest wooden or brick chimneys along each side of the stable, about six inches square inside, with a ventilator six inches from the stable floor. This would take the foul air from the lower parts of the stable. There should also be another opening near the ceiling, in each of these chimneys, to take warm foul air from the upper part of the stable and along the stable walls. If it was thought that chimneys would be too expensive, these ventilators along the side might be connected in the loft with the center ventilators. Thus the expense in connection with the chimneys would to a large extent be saved, although I do not think that this would give such good satisfaction as wooden or brick chimneys of such a height that there would be an upward draft at all times.

To sum up the whole question of ventilation, we need to give the cows fresh air without draft; and we should also remove the foul air as rapidly as possible from all parts of the stable.

I may further add that we have recently put in

a system of water troughs in our dairy stables made of heavy galvanized iron, placed at a convenient height above the manger, that the cows may reach the water whenever they wish; and they are so made that they may be cleaned as readily as any other part of the stable. The whole expense for thirty cows will not be over \$18. We have had this system in use since the 1st of February, and it is yet too soon to speak definitely of results, but I am satisfied that our cows will give more milk by supplying them with pure water whenever they wish it, and I think that we can also keep these water troughs clean. The difficulty of cleaning the water boxes is the chief objection to all the automatic systems now in use.

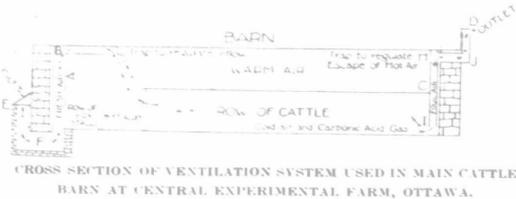
O. A. College, Guelph, Ont. H. H. DEAN.

**Ventilation for Stock Barns.**

To the Editor FARMER'S ADVOCATE:

SIR,—As is the case in too many other cattle barns built some years ago, the ventilation has been practically nil in our main cattle barn. After a careful consideration of the conditions here, what might be called a "force-draft system" was introduced last summer (1900), and is proving quite effective. The farm stable is similar in character with many other bank-barn stables in Canada, and the system working here could be cheaply introduced and would undoubtedly work well in any stable. The accompanying diagram will make clear to anyone interested the general features of the system, and might serve as a guide in the introduction of this or some similar method of effective ventilation, so necessary to the health of our farm animals.

That part of the basement used as a cattle stable is about 100x45 feet, with a 10-foot ceiling. It is at present occupied by 90 cattle, including calves. The air is always in good condition and the temperature is usually 50 F., or higher. The walls and ceiling are free from "sweat" or moisture, with one exception, which I shall mention later. The diagram is a cross-section of the stable at the point where the air passes under the walls. The whole volume of air admitted enters by one inlet (marked E on the left of the diagram); the air passes under



CROSS SECTION OF VENTILATION SYSTEM USED IN MAIN CATTLE BARN AT CENTRAL EXPERIMENTAL FARM, OTTAWA.

the wall at F and then ascends a shaft (F A B) inside the stable and is conducted along the ceiling by means of a tube extending in either direction from B almost the whole length of the stable. At intervals are short shafts (B G) extending inwards to a point over the middle of the aisle or alley indicated in the diagram. The openings at G are supplied with trapdoors which may be opened or closed at will, and are so hinged as to throw and scatter the current of air along the alley rather than over the cattle standing tied or towards those loose in the box stalls. The column of air in the tube E F A B G is in contact with the cold air at E, but that part of it from F to G is surrounded by warmer air (3/4-inch lumber was used in building this shaft for this purpose), and, of course, is rarified and driven up and out at G by the heavier external air; that is, by means of the shaft a column of fresh air is forced into the stable. The foul air (in cold weather, entirely; in warm weather, partly) is taken from the floor, where the same principle is applied as was used in securing an inflow. The tube I C H extends to within 8 inches of the floor, and so the coldest air in the stable is carried off. When the temperature rises too high, the traps at H may be opened and the warm air allowed to pass out. During the present severe winter this had to be done but seldom. The main inlet necessary for 100 cattle would be about 2 ft. by 3 ft. The number, position and size of the traps would depend upon the arrangement of the stable. The horizontal shaft extending along the ceiling may, of course, be reduced in size the further they extend from the main vertical shaft. These shafts, being constructed of thin material and filled with cold air, are covered with moisture, "sweat," and this is the one objectionable feature of the system. Where a new building was being put up, these shafts might be in the wall and this objection removed. The outlets for such a stable as mentioned above would need to be, say, 7 or 8 in number, and should be about 8 inches square. They should be provided with an upturned outlet, as J D, with a roof to exclude rain. Were the inlet E F situated some distance from the building, connected therewith by means of drain tile and provided with a cowl, or, if possible, even more effective circulation would be insured.

J. H. GRIDALE, Agriculturist.  
Central Experimental Farm, Ottawa.

**Agricultural Exhibitions, their Use and Abuse.**

From an able address recently delivered before the Gilmourton Mutual Improvement Association, by Mr. James Hamilton, of Uddington, and published in full in the *Scottish Farmer*, Glasgow, we make the following selections, which we think will be of interest to not a few of our readers:

In speaking first of the use of agricultural exhibitions, it is not to be forgotten that a goodly section of successful farmers will admit no good whatever arising from them. They will, in fact, tell you of farmer after farmer who have run amuck through their attempts to occupy leading positions in the prize list, and expatiate on how much better they would have been had they stayed at home and wrought their farm, etc.; and, while I grant there may be much truth in this, it is not that the blame lay with the shows, but with the lack of common sense on the part of the exhibitor. If it be a man is determined

**SIMPLY TO WIN PRIZES,**

and to do so, if he is willing to beg, borrow, or buy at prices he cannot afford to pay, all for the glory of the tickets, then his showing to him is an evil; but the blame rests with him and not with the society, for there is no gainsaying the fact that competition in this respect, duly exercised in a rational way, has been of enormous advantage to agriculture at large, and, what is more, a goodly number of exhibitors who have not prospered—who, in fact, have passed through the bankruptcy court, wholly owing to their mania for shows—have left a rich legacy to agriculture in the strain of stock they have left throughout the land; but like many an inventive genius in other lines, they have failed to reap the fruits of their own labors, and this even in the case of many of those whom their more prosperous neighbors point to as failures. While their share of the world's goods may have been a meager one, still they may have done more lasting good in their line than many others whose main object was simply the fattening of their bones and the feathering of their own nests. In thus endeavoring to prove that agricultural exhibitions are of real use, it naturally follows that I should point out the good purposes that, I hold, they serve, and in doing so I would first claim for them, if judiciously managed, that they are educative in a pre-eminent degree. To all enthusiastic and observant farmers anxious to learn, such exhibitions offer a threefold advantage. First, they show them what good stock really is; second, they afford them the best opportunity of learning how such has been produced; and third, they give them an impetus and also an insight as to how to still further improve the breed; and if these were the only purposes they did serve, they would amply justify the existence and encouragement of agricultural exhibitions. Regarding the first, however, I may be met with the statement that I have often heard, namely, that the farmer who has to attend shows to acquire his knowledge of what is really good stock can never be a judge, as many strongly maintain that it is a born gift, and unless natural it cannot be acquired. To this I can only reply that, while I admit that a certain natural idea of proportion is undoubtedly a necessity, still, in my humble opinion, nine-tenths of those born judges are neither more nor less than born idiots, so far as up-to-date ideas are, nor could it be otherwise. Your born judge has based his ideas on the lines and shapes of his father's or perhaps his grandfather's stock, and nowadays with the march of the times it would be necessary for him to be born again oftener than the most red-hot Baptist would think requisite for that higher order of things. No, the judge of the age is the man who keeps a shrewd eye on the showing, who bases his ideas on no unchangeable lines, but who can follow and if at all possible anticipate the demands of the times. True, it may seem a fickle thing to be swayed by fashions in matters agricultural, but if there is any line of life a short cut and a sure road to the poor-house door, it is by

**KICKING AGAINST THE PRICKS**

and striving to stand up in antagonism to the dictates of the fashions of the age. Therefore, I say to all young farmers, their place at all high-class shows is at the side of the judging-ring of the stock in which they are commercially interested. It is beyond question an education that will repay them even although they never put an animal into the ring, and what is more, it is an education that is an absolute necessity if they mean to keep to the fore-front with their stock, for it matters not how expert judges they may be, they will fall out of date unless they keep well posted up to the trend of the times, and that can nowhere be better done than by attendance at our leading agricultural exhibitions. However, when at the judging-ring, there is one important point I wish especially to put forward, namely, let them be particular about the company they keep and to whose opinion they are listening. It must be borne in mind that it is not the fluent speakers nor the loudest talkers who are safest guides; in fact, one is safe to assume that a large proportion of those around may be no more qualified to speak on the merits or demerits of the animals than himself; while another section—by

far the most unreliable—are those who are qualified to speak, but who are so biased for or against, according as the animals are of their own type or breeding, or otherwise, that they can either admit no faults or no good points, just as it best suits their book to do so. These are the men to avoid. Outside the ring, to novices they are dangerous as guides, and to experts they are an intolerable nuisance; while inside the ring to an exhibitor, when such men are appointed as judges, they are simply a delusion and a snare. My own opinion is, if a young farmer is prepared to spend his time during the judging mainly by himself with his catalogue, he will derive greater benefit and gain more knowledge than in any other way. With many the catalogue is only used to ascertain the exhibitors' names and to mark the prizes, but I am safe to say that in nine cases out of ten, with really successful exhibitors, the catalogue has played a very different part. I think you will mostly admit that showing for showing's sake is not a profitable thing, and buying noted winners to show again is a ruinous or at least an extravagant course to pursue; but if by yourself you can put your private mark against the number of an animal in your catalogue that you have spotted as not being in form, or not well brought out, and perhaps at some future period secure either it or some of its strain at a commercial figure, if your foresight has been sound there you will have a practical test, not only of the utility of shows, but also of the desirability of a quiet study of the animals and the catalogue by the side of the judging-ring. True, your marks to begin with may be all wrong, but even then they serve the purpose of proving to you that you are on mistaken lines, and by-and-by, as your catalogues accumulate, if you have studied the matter wisely and well, they will serve you the double purpose of warning you what to avoid as well as what to buy. Having said this much on the self-acquisition of knowledge of this kind, it is not to be supposed that I am against information to be had from men of experience. This I certainly am not, only as a stranger may walk the streets of London for weeks with a guide, and still be a stranger so far as his knowledge of that city is concerned, so a man may attend shows for a lifetime and be guided by others of far less natural ability than himself if only he had thought out his own course. In addition, however, to doing so, let him have all he can learn from others, still to begin with, let him see that he takes it from those whose views are broad and whose hearts are big enough to admit of them seeing faults in their own stock and qualities in that of their competitors, even although they have not been bred by themselves nor got by some of their stud animals or their descendants.

Coming now to the abuse in the competition, I will be brief. In showing there is a peculiar mania apt to develop in the competitor, namely, to secure tickets, and in this lies the danger with a farmer. Showing for showing sake is not a profitable thing, and while men with business outside of agriculture may be willing to squander money on this hobby, I do not see that a farmer can be justified in permitting a leakage of this kind in his legitimate business, unless he has an ulterior object in view, and here lies the secret of it. If he does enter the ring at all, let him see that it is in the section he is mainly interested in commercially, and, further, let him take heed that he runs it on the soundest of business lines with a view to secure a name for his stock or his produce, and thereby make best prices for same on the market. That, I hold, is competition on sound lines, but when it comes to be that a farmer sets himself to secure the honors in certain classes, and to do so has to purchase an animal or animals at prices beyond their commercial value, and stands to lose on putting them out even though he is successful, with no ulterior object to be gained, then I say that is an abuse of the system and ought not to be encouraged. True, some may say that a farmer has as much right as an outsider to spend some money on his hobby, but from this I beg to differ, for I hold that neither farmer nor any other should indulge in any hobby in their legitimate business that means a certain loss. The

**PRINCIPLE IS BAD,**

and it matters not what line a man may be engaged in, it ought always to be run on the soundest commercial principles, and if he wishes a spending hobby let him by all means make sure that it is outside his business. To be a successful exhibitor means time, attention, and money; and putting the whole thing in a nutshell, I would say if it is only a case of losing battles, gathering straws in the shape of red tickets and plated pots, then I say to the competitor, "stop it," but if it is a matter of throwing sprats to catch herrings in the shape of better prices all around for stock and produce, then I say, "go on and prosper." In conclusion, I am a strong advocate of agricultural exhibitions. As I have endeavored to prove, judiciously managed and taken advantage of, they have done and will continue to do great good to agriculture, and aside altogether from the practical purposes they serve, they are institutions richly deserving of encouragement from all interested in that great industry. Combining as they do amusement, entertainment and edification for all with the least objectionable element of almost any gathering in the land, it is not to be wondered at that they should be regarded as gala days by the agricultural world from the bare-footed herd laddie upwards to the lord of the manor.

**On the Amount of Water in Slop Fed Fattening Pigs.**

From time to time the question arises, "How thin or how thick should the slop for pigs be made?" Many persons think that ground feed should be moistened just enough to pour it well from the pail to trough, yet not be very watery, while others desire the slop to be quite liquid. No one, however, seems to have thus far published any facts of importance in this interesting field. With a view of studying this subject, the following experiment was begun at Purdue University, Indiana, on January 24, 1900, and continued till June 19, a period of 146 days. The animals used were sixteen in number, consisting of eight pure-bred Chester Whites and eight Berkshires. These were divided into four lots of four each, with two of each breed in each lot. The foods used were a mixture of equal parts of pure corn meal and shorts till the period beginning May 9th, after which hominy feed took the place of the corn meal, and they were fed under these conditions:

- Lot I was fed the food dry in the trough.
- Lot II was fed the grain mixed with its weight of water.
- Lot III was fed the grain mixed with twice its weight of water.
- Lot IV was fed the grain mixed with three times its weight of water.

Each lot of pigs was given all the water desired additional to that mixed with the grain, and a record was kept of the amount of water drunk daily. The pigs also had access to ashes and salt. The pigs were fed about 7 a. m. and 5.30 p. m., and were weighed once a week, about 11 in the morning. The pigs were fed in pens 7x8 feet in size, and occupied separate quarters for sleeping rooms. The animals were generally in first-class health during the experiment.

- Lot A gained 634 pounds in 146 days, or 4.35 lbs. per day.
- Lot B gained 644 1/2 pounds in 146 days, or 4.42 lbs. per day.
- Lot C gained 650 1/2 pounds in 146 days, or 4.45 lbs. per day.
- Lot D gained 614 pounds in 146 days, or 4.19 lbs. per day.

The amount of food consumed in relation to gain in weight is an important matter, as is also the amount of water drunk.

- Lot A ate 2,282 lbs. corn meal and shorts or hominy, half and half.
- Lot B ate 2,470 1/2 lbs. corn meal and shorts or hominy, half and half.
- Lot C ate 2,436 1/2 lbs. corn meal and shorts or hominy, half and half.
- Lot D ate 2,302 1/2 lbs. corn meal and shorts or hominy, half and half.

If these figures be compared with the gains in live weight, it will be seen that—

- To make one pound of gain, Lot A ate 3.59 lbs. of grain.
- To make one pound of gain, Lot B ate 3.50 lbs. of grain.
- To make one pound of gain, Lot C ate 3.34 lbs. of grain.
- To make one pound of gain, Lot D ate 3.57 lbs. of grain.

As the cost of the food fed averaged about 80 cents per hundred pounds:

- The cost per pound of gain was 2.85 cents in Lot A.
- The cost per pound of gain was 3.04 cents in Lot B.
- The cost per pound of gain was 2.99 cents in Lot C.
- The cost per pound of gain was 3 cents in Lot D.

The amount of water given the different lots is especially worthy of notice. No water was given with the grain in lot A, but such water as might be desired was weighed out and turned in the trough after the grain was eaten up clean. Neither did lot B receive sufficient water with its grain to meet natural demands, so that extra water was weighed to the pigs in this lot, while lots C and D required no more water than that in the grain.

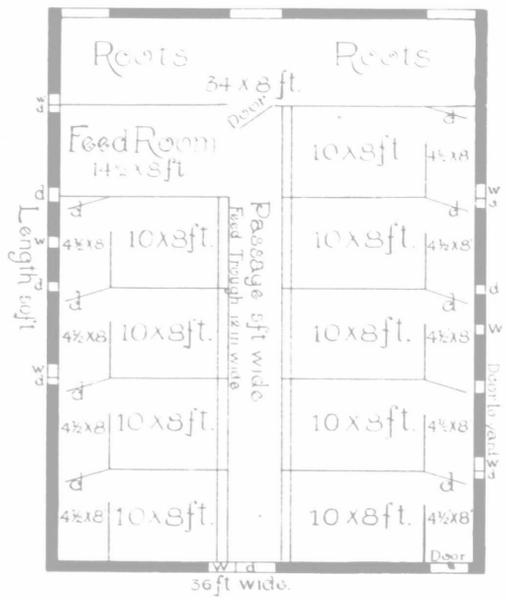
There was no material difference in the appearance of the pigs in either lot, so far as quality is concerned, and so far as this one experiment goes, the use of about two times the weight of water to grain indicates a satisfactory proportion. In view of the fact that the pigs fed dry grain made slightly the best gains, it would appear that there is really no gain in feeding the pigs a slop instead of a dry grain, excepting as a feeder may regard it a matter of convenience.

The Christmas number of the FARMER'S ADVOCATE is exceedingly creditable, profusely illustrated with half-tone cuts, and full of reading interesting to Canadians generally, and the farm farmers particularly.—*Pilot Magazine*.

The ADVOCATE is a valuable publication to the farmer, as it always contains a large stock of information in regard to stock raising, etc. 1730, Dominion City.

**A Well Planned Hogpen.**

SIR. In reply to Mr. Fuller, I also send plan of pigpen, roughly drawn up, 50 feet long and 36 wide, intended to stand with root-house end into bank to protect from frost and allow driving into loft. The door going into loft can be from end over roots or side over roots to give chance to put in roots and fill feed bins. The doors that separate pens are to shut pigs in 10x8 pens when cleaning out and when moving pigs from one pen to another. All underground walls should be made of stone and come from six to twelve inches above ground, remainder wood with dead-air space. Stone walls are very bad, as they draw too much frost and act like an ice house. Pen should be seven feet high, at least, from floor to ceiling; loft can be made to suit. Floor should be cement, also troughs; floor to slope two inches from trough to inside of back passage, and the entire pen slope six inches from root house to cleaning-out doors. Leave no raised step at the door, in order to clean out easy. The posts for the partition door to be cedar and put down three feet in ground, and holes filled with gravel or small stone well pounded



GROUND PLAN OF GEO. GIER'S HOGPEN, 50 FT. LONG BY 36 FT. WIDE.

down. Floor of sleeping and eating room to be covered with 1 1/2-inch lumber—tamarack cut green and dried. Windows to have four lights 12x14.

The cost of material will vary in different parts of the country, so the builder will have to use his own judgment.

If breeding pigs is Mr. S. E. Fuller's intention, and he has a bank along the north side, he had better make the pen longer and feed from one side and his little pigs will yard on the south side. Each pen will hold about six feeding hogs. Windows should be over partitions to do two pens. I hope this will meet with your approval.

GEO. GIER.

**Care of the Stallion During Fall and Winter Months.**

EXERCISE, CLEANLINESS, AND PROPER FEEDING.

SIR. The increased prices and improved trade in almost all breeds of horses during the last three years naturally raises many points in their breeding and rearing, and one very important point is the care of the stallion during fall and winter months. Horsemen differ very much in their methods, and amongst a great many there is a strong tendency to reduce the condition until one almost fails to recognize the flashy horse of the first of May, and then depending upon March and April to bring him into shape for the season's work. My own experience is somewhat limited, but having close business relations with the old and noted horseman, Joseph Thompson, during the close of his career as an active owner and groom of stallions, I had good opportunities of watching his methods, and became thoroughly convinced that his ways had much to recommend them.

Exercise he considered absolutely necessary—not simply box-stall exercise, but what can be obtained from a good roomy yard. Cleanliness of the feet and legs is equally necessary, and never should be overlooked or forgotten. Would prefer shoes on the front feet. There should be some letting up of feed after the season's work. Boiled feed can now be dispensed with, but the condition should be well maintained with hay, oats, bran, some roots and cut straw sparingly used. Salt should never be forgotten. Regularity of feeding is one of the qualities of a good groom, and a fairly roomy and warm stall, comfortably bedded, should always land a stallion into March in good condition and health. Then carefully fed and handled from March to the close of the season, and there should not be much or any anxiety about his progeny, either as to strength or numbers.

W. M. SMITH.

**The Hog Supply.**

Hog-raising has become a large and permanent industry in many portions of Ontario, especially in dairy districts, hog-raising making a very successful adjunct to dairying. In this country, however, the dairy industry not having attained so large proportions, hog-raising is dependent largely on other conditions, and as yet is not on what may be termed a permanent basis. When coarse grains are plentiful and low in price, or when from any cause wheat is of low grade or contains a large proportion of screenings and weed seeds, this cheap feed can be turned to account through the hog, but when wheat is all hard, and coarse grains scarce, there is nothing left to feed to hogs, and consequently the brood sows are sent to the slaughter-house, and a hog famine follows; and then the big pork-packing establishments have to close down or bring in dressed hogs from the East, and Chicago cured meats flood our markets. Complaints have recently been made that current market prices for hogs will not warrant farmers buying feed at present high prices, and that as a consequence brood sows are being sold, rather than kept for breeding, with the prospect of plentiful feed supply next year. We have heard farmers advance the argument that it would pay the packer to give higher prices, in order to encourage farmers to hold on to their hogs, so as to avoid another famine similar to that which occurred a year ago. Perhaps the packers may view such a proposition favorably, but it seems to us that the higher the price, the faster the farmer would unload his hogs breeding stock and all.

This, like any other branch of farming or stock-raising, to be permanently successful must be removed from the field of speculation—to be taken up spasmodically, and dropped the moment the profits apparently disappear. All branches of stock-raising must be intelligently and persistently followed, and those who undertake only what they can do properly, and stick to it year in and year out, are the ones who will reap ultimate success.

**Hints on Turkey Raising.**

BY THOS. F. SHORE.

Breeding and finishing turkeys for the English markets has become a profitable industry, our climate being particularly suitable, this country being the original home of the wild birds.

Prices have advanced each year, as more buyers have entered the field, proving that commission men are also sharing in the profits. Turkeys for the export trade are shipped early in December, and in order to obtain weights at this early date, only the best selection of breeding birds will produce turkeys of sufficient weight to give the most profitable results.

Of the six varieties named in the standard, the Bronze is the most suitable, and, therefore, is the most popular, not only because of its much greater size, but owing to this variety being more hardy and faster growing.

The turkey, it must be borne in mind, is of a semi-wild nature, and requires to be treated accordingly; and for this reason one should not expect to raise this breed to advantage where confined to as limited space as would be ample for any variety of chickens.

Although young turkeys are exceedingly delicate, the mature birds are particularly hardy, and I have found that, left to themselves to roost out of doors, entirely without shelter, they are not only more vigorous and healthy, but through this treatment the hen turkeys will lay earlier than those confined during the winter months. In this way there may be more trouble with the hens laying away from the buildings, but this may be guarded against by keeping watch on them when they first begin to seek for nests. The matings do not usually exceed five or six hens on one farm, although it is estimated that one male is sufficient for twelve or fifteen hens, but when breeding for commercial purposes is the object, and the latter number of hens kept, two male birds would be a safer allowance, these to be let out in their turn day about, thus insuring a larger percentage of fertile eggs.

As good turkey hens are valuable, the aim is to obtain as many eggs as possible from each hen; therefore, when she first becomes broody, by break-up the nest she generally begins to lay a second batch at an early date, and for this reason the first eggs are often set under a common hen, but when this is done, and there are a number of turkey hens, one of these should be also set at the same date, that she may take charge of the young poults when these are sufficiently old to go out to range the fields, as young turkeys raised with a common hen appear to lose the faculty of foraging for themselves, and, therefore, seldom attain anything like the size of those brought up by their natural mother. This, too, is the chief cause of much of the disease in partly-grown poults, as they mope about the buildings where the ground is saturated with disease germs, while those that forage far afield escape this difficulty, attain plenty of vigor, and grow accordingly.

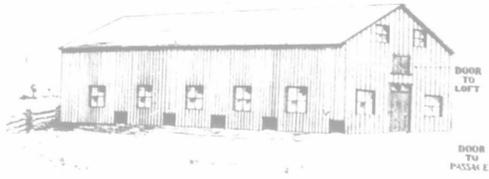
It will be found a great advantage to get the hen turkeys as tame and quiet as possible through the latter part of the winter and early spring, as by so doing they are much easier handled, both on the nest and while tending the young brood.

[TO BE CONTINUED.]

**Hundred Dollar Pen for One Hundred Pigs.**

To the Editor FARMER'S ADVOCATE:

SIR,—Re S. E. Fuller's request for plan for pig-pen: Location, a nice sloping ground, at least 2 feet lower at one end of the pen, the low end at the south side. Foundation, small stones, to within 3 inches of the level of the walls. Floor, cement, to be perfectly level with the top of outside foundation walls. Building, frame (2x4 scantling), 12 feet high (7 feet for pen, and 5 feet above for straw),



END AND SIDE VIEW OF \$100 HOGPEN, 50x20 FEET.

double boarded inside and out, with tar paper between. This makes both a warm and dry pen. The pen is 50 feet long by 20 feet wide. This gives ten pens, 8x10, and a passage 4 feet wide the whole length. There is a door out of each pen into the passage, and a swing door from each pen into the yard. I like V troughs the best, with a swinging door for each one for feeding. If plenty of bedding is used, the cement floor is as good as plank. It is a great convenience to have a supply of water in the pen. The cost will vary in different localities. One hundred dollars should be a fair figure, not counting board or teaming, hauling stone, etc. Three things absolutely necessary are plenty of light, plenty of room, and as free from damp as possible. This pen will hold from 70 to 100 pigs. FARMER.

[NOTE.—This pen would be much more convenient for feeding by having one or two of the pens set apart for storing chop, roots, etc., and preparing the food one or two meals ahead. We would also recommend elevated sleeping pens having board floors. They may be only a few inches or about 3 feet high, as desired; the latter gives more room in the pens, and are invariably kept drier by the pigs.—EDITOR F. A.]

**"Treatment of Sows Near Farrowing."**

During the whole period of pregnancy, sows should be moderately fed, so as not to produce much fatness, as this would be the means of reducing the number of the litter, or endanger them being smothered by their dam laying on them. As farrowing approaches, the food should be semi-liquid or somewhat laxative. Sufficient exercise is always beneficial to all pregnant animals, and for this reason the pen should be roomy or the sow turned out daily for exercise. It is best to keep the sow from other pigs, when near farrowing time. The pen should be airy and clean, and until the last day or two of pregnancy should be littered with straw. As the time approaches, or when uneasiness is shown, the pen should be comfortably littered with chaff only. This is necessary to prevent smothering, especially if the sow be large and fat. Remove the pigs till after the afterbirth has passed. In all cases remove the afterbirth at once, for if allowed to be devoured by the sow it will increase a desire to devour her offspring. Only swill and bran should be fed the sow for a few days. As soon as the secretion of milk is freely established, the diet should be increased gradually, till in ten days it should be abundant, soft and laxative. The pen should be kept clean. The litter of chaff should be of a limited amount for a week, until the pigs are better able to protect themselves.

CLAUDE W. BLAKE.

**Cheap at Any Price.**

EDWARD CAIN, Campbell's Bay, Que.—"Please find enclosed \$1.00, renewal subscription to the FARMER'S ADVOCATE for 1901. We cannot compliment you too highly. There is some very instructive reading in your paper. We think very highly of your valuable paper, which we have taken for four years, and would not be without it at any cost."

**As Necessary as Bread.**

R. L. WILLS, Goulais Bay, Ont.—"Enclosed please find the sum of one dollar (\$1.00). Continue sending the FARMER'S ADVOCATE. I believe your paper is the best farm journal in Canada. I wrote you two weeks ago to discontinue it, but find I cannot do without it."

**A Season's Experience With the Incubator.**

BY MRS. JOSEPH YCILL.

On the 5th of April I received a Cyprus Incubator with a capacity of 120 eggs. I raised the temperature to 102°, and filled it with eggs from our own flock, and they being large, it only held 112. The temperature went down to 90°; by the third day it was up to 102½°, where we kept it as near as possible until the eggs commenced to pip, then we raised it gradually to 105°. All the chickens that came out on the 20th day were strong and vigorous, those that had to be helped out on the 21st day did not appear to be so strong, and I supposed were from eggs laid by hens which had laid all winter.

I then prepared the brooder. Had the temperature at 90°, covered the bottom ½ an inch deep with sand, put in the chickens, and allowed them to remain for 12 hours without food; then steeped some bread in fresh milk, pressed out the milk, crumbled it down, and fed very sparingly for the first few days. Sometimes I mixed a little pinhead oatmeal with the bread. On the third day, I give ½ an ounce fresh ground meat to every forty chickens, and seeing they were so fond of it, I fed them meat every day, increasing the quantity until they were big enough to look for earthworms. When they were almost three weeks old, I set the brooder where a pile of wood stood the preceding year, and every morning dug up a small piece of earth to allow them to pick a breakfast of earthworms. When they were two weeks old, I mixed 1 part oatmeal, 1 part shorts, 2 parts corn meal, and a little salt, scald with boiling water, let stand to cool, then crumbled fine and fed. I had some mangels which had kept very well. I put a few through the meat-grinder every day and fed them. By the time they were six weeks old, I fed cracked corn for supper,

We sold 16 pullets and 1 cockerel to Mr. Cockburn, of Smith's Falls, for fifty dollars, and all the rest of the good pullets and cockerels at one dollar each, for breeding purposes, also all that were not desirable birds for breeding purposes we fattened and sent to Montreal. We dressed them the same as the ones we sent to the British market last year. The pullets which were hatched on the 20th of April commenced to lay in October, and the eggs we did not sell for hatching purposes we sent to Montreal. The cost of coal oil for incubator and brooder for last year was 9 gal. at 22c. per gal.

**Growing Early Potatoes.**

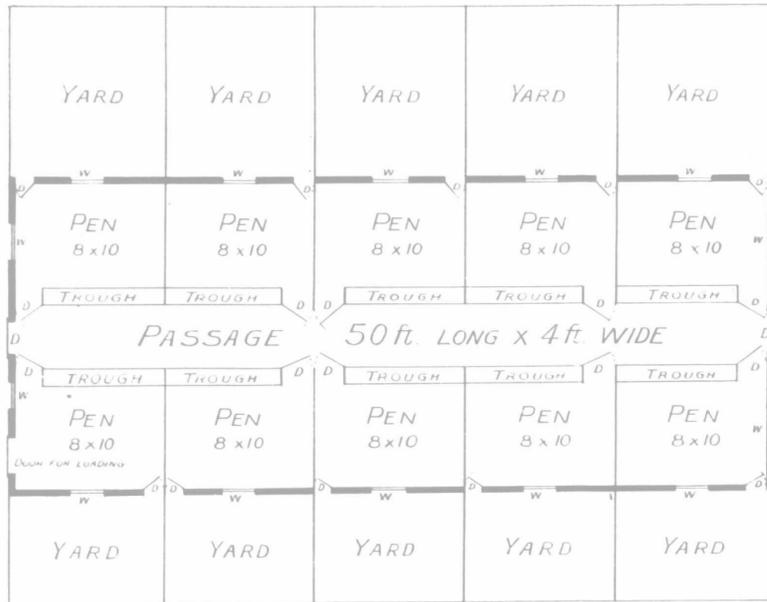
It is not worth while growing potatoes in small gardens unless they can be had early and a maximum crop produced. To obtain these advantages, the earliest and best-cropping varieties must be used and planted in rich, fairly free soil, and thorough cultivation given till the ground is covered with vines, and it is also necessary to have the potatoes sprouted before planting. To sprout potatoes, place the required quantity of sound, medium-sized tubers on end in a warm, light room for from four to six weeks, and by that time strong, vigorous shoots will have started, and a day before planting cut the potatoes so that there will be one or two shoots in each set. The ground, which should have been deeply dug and heavily manured the previous autumn, should again be carefully dug over. No earthing-up is necessary, only carefully cultivate the ground between the rows and frequently rake the soil to prevent it crusting and keep it entirely free from weeds is all that is necessary to produce a full crop of smooth, sound potatoes.

**Treatment for Smut in Oats.**

One of the most serious losses we have on the farm in Ontario is the loss from smut in oats, but, thanks to our Experimental Stations, we now have within our reach a remedy which can be applied without serious loss of time in the busy time of seeding. If the seed treated has been very smutty, there may be an occasional head of smut in the following crop, but the percentage will be so small that the loss will be scarcely worth considering. Take 4½ ounces of formalin, mix with 10 Imperial gallons of water. Stir the solution to thoroughly mix the formalin with the water. Immerse the seed in the solution for five to ten minutes. If the seed has been bad with smut and is good plump grain of good vitality, from eight to ten minutes will be about the right length of time to leave the seed in the solution, the seed to be entirely covered in the liquid. Perhaps the most convenient way will be to take a half barrel and put the mixture into it, then use open-fibered sacks (twine sacks will do) to put the seed into, just putting as much in them as the mixture will cover in the barrel. Set two broad boards with one end on the half barrel and the other end raised higher by block or stool. Set your treated grain in sacks on these boards for a minute or two, while the drainage runs into barrel; then empty to dry by spreading in the sun, with an occasional stirring. By this means, a man with three sacks, two draining while the other is in the liquid, can treat eight to ten bushels per hour. The seed should be treated just before sowing. If treated several days before sowing, it may be somewhat slow to germinate. One pound of formalin will treat sufficient seed for the average farmer. It would be convenient to have for a measure, say, a six-ounce bottle, with the upper side of the label even with the ½ ounces in the bottle. Buy the formula in pound bottles. Formalin is a liquid, and the fumes, if inhaled, irritate the respiratory organs. It sells for about 75 cents per pound. The grain treated may be fed in moderate quantities if not required for sowing. I have used this remedy with splendid results. ROBT. B. MCLEAN.

**The Battle with Bacilli.**

It is a fortunate thing for the American public that it has, to a certain extent, freed itself from the traditional magic of print, and no longer believe, absolutely in the truth of any and every thing which is reads in the newspapers. If we are to believe the yearly crop of "scare articles" concerning germs, microbes and infection, we must not hang on car- straps, we must not kiss, we must not drink milk, we must not be shaved, we must not eat pork, we must not wash in hotel lavatories, we must not write telegrams with the pencils in the telegraph offices, we must not lick stamps, we must not use opera glasses, we must not shake hands with people until we know that they have been "sterilized," we must not telephone, we must not lean our heads back upon the seats of railroad cars, we must not go into swimming baths, we must not—but the list is interminable. A faithful obedience to instructions would paralyze every branch of human industry and stop every effort for pleasure.



GROUND PLAN OF \$100 HOGPEN, 50x20 FEET, AND YARDS.

for breakfast 1 part barley to 3 parts oats. After they are eight weeks old, I fed them all the oats they would eat at night, and that is all the food they got.

It being my first experience with an incubator, I set three hens; should the incubator fail, I thought I would have these to depend on. The incubator hatched in one day less than the hens. The chickens were all fed the same kind of food. By the time they were two weeks old, we could notice that the incubator chickens were growing faster than the hen chickens; the reason, I think, must be the regularity of the heat in the brooder.

On the 10th of August we shipped twenty-eight chickens to the Canada Produce Co., Toronto. In selecting them we found that the incubator chickens weighed about 1 pound 2 ounces each more than the hen chickens. Letter from Canada Produce Co.:

"It gives us great pleasure to report upon your shipment of spring chickens last August 11th. Though so long ago, and we have had many thousands since, still we can remember the arrival of your crateful, for we had expected something good, but the chickens were well above our best hopes. There were twenty-eight well-barred Plymouth Rocks, every one well fed and in good condition, and weighed 101 pounds, which at that season of the year was very good weight, some of them going 5 pounds each. We might say that these are the ideal birds, and the ones we want for export, and, moreover, the only kind it pays to raise and sell, for, as you know, we paid you 11 cents per pound live weight, or about 80 cents per pair, etc.

"Yours sincerely, CANADA PRODUCE CO." We hatched another incubatorful in May, and were still more successful. Out of 112 eggs we had 96 live chicks. In June we hatched another lot, and out of 112 eggs had 102 chicks. The June lot that hatched so well were eggs from hens that did not lay any all winter until the month of April.

We have had good demand for our surplus stock.

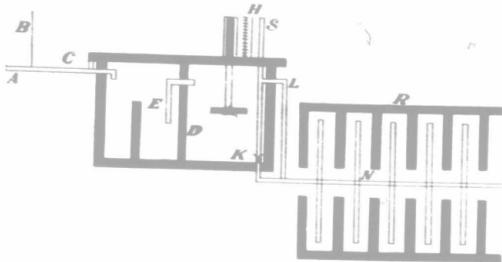
**Sub-surface Sewerage for Cheese Factories.**

To the Editor FARMER'S ADVOCATE:

Sir, — I would now like to direct your readers' attention to the sub-surface system of disposing of the sewerage at factories which was recommended to the Association by Dr. Bryce, of the Provincial Board of Health, and which has been in operation at the experimental station with satisfactory results. The question of disposing of the washings and sewerage at factories is one of the most important in connection with the Dairy Industry and deserves more attention than it receives. On the sanitation of the factory depends to a great extent the quality of the cheese and butter and the reputation of the factory and maker as well as the health of those living in the immediate vicinity. We are all well aware of the conditions existing at the average cheese factory and how easy it is to locate many of them before coming very close to them. These conditions need not and should not exist.

At some factories the washings are allowed to run into the whey tank. This lessens the feeding value of the whey, and injures the quality of the milk which has to be carried in the same cans. Others drain it into a creek or river. But this oftentimes makes the water unfit for cattle to drink. At other factories it is allowed to run away in open ditches which become breeding grounds for foul smells and injurious germs. I cannot understand how a factory man can expect to exercise an influence for good over his patrons, when the conditions surrounding his factory are not in accordance with his teaching, for "Example is better than precept."

The method of disposing of the sewerage by the sub-surface system is both effective and economical. It also enriches the soil through which it is drained and prevents any foul smell from developing. It enables the maker to keep the factory and surroundings in a good sanitary condition, which is absolutely essential if satisfactory results are to be obtained.



SEWERAGE BOX AND FILTER BED.

- |                              |                                |
|------------------------------|--------------------------------|
| A.—Pipe from factory to box. | H.—Indicator.                  |
| B.—Ventilator.               | K.—Plug.                       |
| C.—Goose-neck pipe.          | S.—Plug handle.                |
| D.—Partition.                | N.—Filter bed.                 |
| E.—Overflow pipe.            | L.—Ventilator from filter bed. |
| F.—Float.                    | R.—Underdrain.                 |

First a box is made with a partition through the centre, forming two boxes, one of which is large enough to hold the washings from a factory for a single day. It may be situated near the factory or at a distance away, as conditions permit. If the factory is elevated sufficiently the box may be sunk in the ground and covered with earth, but if it has to remain on top of the ground it is preferable to build it of brick and cover the top lightly to prevent the escape of noxious gases which form within it.

In laying the drain from the factory it is advisable to use sewer pipe, especially if it is situated near the well, or if there is any danger of injuring the water supply, otherwise ordinary field tile will do and will be somewhat cheaper. The drain must be provided with a trap to prevent gases or foul smells from returning to the factory. Then attach a vent pipe (2 in. galvanized) to the drain between the factory and the box, and allow it to extend above the "Building." This will carry off the gases formed in the box or drain; or, the box is provided with a small goose-neck pipe which admits fresh air and forms a draught for the ventilator. The box you will notice has a partition in the centre with a pipe through it near the top and extending down about the centre. When the first box becomes full the water is allowed to filter through into the second, and on account of its being taken from below the surface nothing but the liquid matter flows through. The solid matter is all retained in the first box, and is quickly decomposed or oxidized by the different forms of bacteria at work in it. A filter bed is then provided by laying a sufficient number of 4 in. tile to hold the amount of water contained in the second box from 10 in. to 12 in. beneath the surface of the ground they being perfectly level and having no outlet. The sewerage can be disposed of in a very small space of ground, if desired, by constructing one long drain and a number of branch drains about 10 ft. apart leading from it. When the second box becomes full the plug is removed and the water allowed to run into the filter bed. In any sediment there may be water, and it is distributed evenly throughout the filter bed. It is necessary to

have one or two ventilators in the filterbed to allow the air to escape while the water is running in. The outlet of the box is then closed tightly, and by the time the box is refilled the water in the tile has been absorbed by the soil and any solid matter left therein will be decomposed by the action of the bacteria. It is necessary that the outlet of the box be closed tightly, otherwise the filterbed will not work satisfactorily.

The soil around some factories may be of such a nature that it would not readily absorb all the water used. It would then be necessary to under-drain the filter bed, which would carry off the surplus moisture and give the filter bed greater capacity. Instead of putting the deep drains directly under the filter bed, I would advise putting a long drain along each side and then extending branch drains from those just half way between the branch drains of the filter bed. The water would then drain through 4 or 5 feet of ground to the under drain, which would render it free from solid matter, and it would then run off quite clear.

The system in operation at the illustration and experiment station consists of an ordinary tile drain leading from the factory to the box having a trap on the end and a vent pipe between the trap and the box. The box is 9 ft. long by 2 1/2 ft. deep by 3 ft. 5 in. wide and holding 500 gallons. It has a partition in the centre, making two boxes of 250 gallon capacity each. 250 gallons is supposed to be about the amount of water used at the average factory in a day. Then 500 4 inch tile which hold 250 gallons were laid perfectly level in the ground and having no outlet. This plan worked well for about eight weeks, when there came a few days of very wet weather. As the soil was a very heavy clay the water began to come to the top. We then put in two under drains which carried off the surplus water. Afterwards there was no further trouble, and the sewerage system worked satisfactorily. On opening the box at the end of the season we found that the first box was nearly half full of solid matter. The second box was fairly clean and there was a slight coating of greyish matter on the inside of the tile in the filter bed.

ARCH'D SMITH.

**QUESTIONS AND ANSWERS.**

**Veterinary.**

**IMPURE BLOOD.**

T. H. L., Crystal City:—"I would like to know, through the FARMER'S ADVOCATE, the cause of this disease? About a year ago my mare's left hind leg began to swell and get stiff. A lump came on about a foot above the knee joint. It was lanced and it healed up and broke again, and another broke just behind the hip bone. It healed up and broke again, and another has broken just above the knee joint. I am bathing it well with warm water and carbolic acid. It heals up every few weeks, but breaks again. It discharges a thick matter."

[The cause at this late date would be hard to determine; probably due to error in feeding. You might give the mare an aloetic pill, made as follows: Barbadoes aloes, six drams; calomel, one dram; powdered ginger, three drams; soap sufficient to make a ball. Prepare the mare for the physic by keeping away all roughage for sixteen hours, allowing only bran mashes. Follow the purgative with powders made as follows: hyposulphite of soda and nitrate of potash, each four ounces; arsenious acid, two drams. Make into eighteen powders and give one morning and night in the feed.]

**A CASE OF QUITTOR.**

SUBSCRIBER, Keyes, Man.:—"A year ago last September my mare came home very lame on off front foot. For six months she went on three feet. During that time and until the present I have poulticed, blistered and pared, and she is better, but not cured, as she is some lame yet. Her foot is badly contracted and has an enlargement just above the coronet in front, about two inches long. At one end of this enlargement it breaks periodically and discharges mostly black blood, with a little matter at first. As she is a valuable beast, should I continue to blister? Will it hurt to work her a little in the seeding? Should I still keep paring hoof, or not? Nothing in foot, as we have old hoof all off."

[Would advise you to call in a surgeon and have an operation performed. No permanent cure can be expected until such has been performed. There is probably some foreign substance in the foot or a piece of diseased bone.]

**CONTRACTED TENDONS.**

F. J. D., Assa:—"I have a nine-months-old colt, by a Shire horse, that has knuckled over on the right hind fetlock joint and appears to be going the same way on the other leg. There is no swelling and is not sore. I can rest the toe on my knee and put all the pressure I am able on the joint, but cannot straighten it. The cords appear to tighten and won't let it go any farther. The colt has been tied in the stable all winter, and has grown very fast; has to go about quarter-mile for water every day. Kindly advise treatment, or would it be better to leave it alone?"

[You might apply a blister of cantharides, one dram, and lard, one ounce, to the parts once every two weeks for a few times, giving the parts, in addition, a thorough hand rubbing. Call in a veterinary and let him see the colt.]

**SKIN DISEASES.**

CONSTANT READER, Emerson:—"A two-year-old filly is troubled with an apparent skin disease. When she shed her hair last spring it came in spots, the hair appearing to be brighter in spots, though she were going to be dappled. After a time the hair on these spots came out. These spots are along right flank and outside of the hind leg. She is also slightly lame on this leg. The spots have kept spreading all winter. When the hair happens to get rubbed off it does not grow on again. Skin looks quite healthy where the hair is off. The filly is in good health and moderate condition, but hair is dry. Any spots made sore by the other horses biting her are very slow to heal. Might say she had distemper last summer and got pretty badly run down, but has been better for months."

[See answer to T. H. L. Use, however, four drams of aloes and forty grains of calomel; follow with the powders as recommended. In addition, apply sulphur and coal oil, mixed to the consistency of cream, once or twice a week, to the spots. The trouble is probably some of the aftermath of distemper.]

**IMPACTION OF THE RUMEN IN COW.**

S. H. C., Colchester Co., N. S.:—"A fine cow, due to calve in May, took very sick last October. I was feeding her mangel-tops at the time. She was some swollen, had no passage for two days, and did not eat or drink for three or four days. I supposed she had indigestion, and gave her soda water and afterwards a dose of paint oil. She got better and was all right again, and doing nicely until the 15th of January, when she took sick again very much the same as before, went dry very suddenly. I have been feeding mangels and hay all winter. I gave her more oil, and in about three days she began to eat, but she did not seem very well, and February 2nd she was worse. I did not give her anything, and the third day some worms came from her, about twelve feet in three pieces, one of which was six feet long and as big around as my thumb. On the 5th she began to eat again, and still seems well and has a very good appetite."

"What was the matter with the cow? Is she likely to have a return of this sickness?"

"What treatment would you advise if she takes sick again?"

"What kind of worm was this? Was it tape-worm, and if so, was that six feet only one joint?"

[1. Your cow had impaction of the rumen (paunch, or first stomach), and she, of course, is liable to have a recurrence of the trouble. It is due to indigestible food, too much food, a change of food or water, etc., and in many cases to a weakness of the digestive organs.

2. The best treatment is to give a purgative of, say, 2 pounds Epsom salts, dissolved in a couple of quarts of warm water, and allow nothing to eat except a little bran mash until the purgative acts. If there be bloating, give a pint of raw linseed oil and 2 ounces oil of turpentine. Feed carefully for some time after an attack, and be very careful when making a change of food.

3. The worms you describe are peculiar: a tape-worm is thin and flat with fine segments or joints, several to the inch. You state that the six-foot-long worm was the size of your thumb. I have never seen nor heard of round worms of that length. Good treatment for either tape or round worms in cattle, is to starve the animal for about fifteen hours, then give, say, 3 ounces oil of turpentine in a pint of raw linseed oil, and in about twelve hours give a purgative. J. H. REED, V. S.]

**ENTERITIS IN MARE.**

FARMER, Bruce Co., Ont.:—"Mare 10 years old took suddenly sick. Would roll up on her back and throw herself violently down. I drenched her with soda and ginger with a little turpentine. This did not seem to relieve her. I sent for a vet.; he gave her a dose and left two more to be given in every half hour, but before the first half hour was up she was dead. In about three hours after I opened her and found her bowels in a bloody, fluid-like state, with the lining black in spots. She was in a good healthy state. Did no work all winter. She was getting oat straw, chopped oats night and morning, with roots for noon. When let out for water night and morning, she was left out about half an hour, when she had access to a pea-straw stack, as she had all winter. 1: What was the trouble? 2: What caused it, and what should I have done for her?"

[1st. Your mare died from enteritis (inflammation of the bowels).

2nd. Changes of food, indigestible food, exposure to cold, water of poor quality, etc., etc., will cause it, and it frequently occurs without any well-marked cause. In your case it may have been the pea straw.

3rd. You did the best you could, but probably not soon enough, viz., sent for a veterinarian. The soda, ginger and turpentine you gave is a fairly good drench for acute indigestion when there is bloating, but rather injurious in cases of enteritis. When you were going to give anything it should have been opium, say 2 drs. of powdered opium or 2 ozs. laudanum, repeated every hour. The difficulty in nonprofessional men treating acute diseases is, they are not able to discriminate between diseases, especially intestinal diseases, as the symptoms of so many simulate each other, and the treatment should be different, and in all acute diseases it is better to call in skilled assistance at once. Enteritis is often fatal under the most skillful treatment. J. H. REED, V. S.]

**CONTAGIOUS ABORTION IN COWS.**

J. A., Stormont Co., Ont.: "I have a stock of thirty-five cows, mostly all young, coming three years old. I have them tied around the neck with chains. They are beginning to drop their calves about two months before their time. I have had five of them already, some about as large as a cat, and the last two were quite large, with hair all on. Cows seem hearty before and after calving. They eat as if there was nothing wrong. I feed them ensilage and straw. They seem to milk well. I had two bulls with them last summer, and my stable is a new one, with a stone floor; but I keep plenty of straw under cows. These cows have never calved before, except one of them. What is the trouble, and what can I do to stop it?"

[You certainly have contagious abortion in your herd. This grave, annoying and costly trouble is due to a microbe, and it is a tedious and troublesome disease to deal with. Half-measures are of no use; a man must go about it with determination, and must be thorough in his methods. All aborted animals must be removed from the healthy, the fetuses and all discharges and excrement carefully removed and burned. The stalls in which the cows have stood must be thoroughly disinfected by washing very thoroughly with a solution of crude carbolic acid, say one part acid to forty parts water. Disinfection must be thorough. All cracks and crevices must be attended to in order to destroy all bacteria that may have gained lodgment there. It is good practice, after washing as above, to give the stable a good coat of lime wash (whitewash) applied hot. All stable utensils, pails, clothing, etc., that may have come in contact with the aborted animals or their excretions or discharges must also be disinfected. You will then need a solution of corrosive sublimate 1 part to 1,000 parts water. This solution in a case like yours will be used in large quantities, so it will be better to keep a good supply on hand. In cases of this kind I have usually had it by the barrelful. Add 1 1/2 drs. corrosive sublimate to a gallon of water, which will make about the proper strength. If any of the aborted cows have not expelled the afterbirth, it should be removed by hand if it has not decomposed by this time. This is a point that should be attended to. If the afterbirth be not expelled in 24 to 48 hours after abortion, it should be removed. The womb should be flushed out once daily with the solution, made lukewarm, until it (the womb) contracts so that the nozzle of the injection pump will not enter, after which a little of the solution should be injected into the vagina once daily and the lips of the vulva washed off with the same, until all discharge ceases. All aborted cows should also be given about twenty drops carbolic, shaken with a pint of water and given as a drench three times daily until all discharge ceases. The person who is attending the diseased animals should not come near the healthy, but if sufficient help be not on hand to allow of this, he must change his clothes and thoroughly disinfect his hands (by washing in the solution) after attending to the diseased, before going to the healthy. All pregnant animals that have in any way come in contact with the diseased should have a little of the solution injected into the vagina and the lips of the vulva bathed daily, in order to destroy any microbes that may be making their way into the genital organs to cause trouble. The aborted cows must not be allowed with the healthy ones until all discharges from vulva have ceased. Neither should an aborted cow be bred until nine to twelve months after abortion. The bull that has served these cows may be responsible for the trouble, as a cow will receive the infection from a bull, or vice versa; hence, the bulls you mention require attention. The sheath should be injected full of the solution already mentioned (of course, made lukewarm) about twice weekly for a couple of months, or longer, and not allowed to go to a cow in the meantime. As I stated at first, it is both troublesome and expensive to observe all these measures; but the disease is hard to eradicate from a herd, and if allowed to continue, a few calves may be reared, but comparatively very few. J. H. REED, V. S.]

**FATALITY IN YOUNG PIGS.**

E. McL.:—"We have a lot of pigs, about 2 months old, which have been fed well and have a good pen. Four of them have died very suddenly. They will eat all right at night and be dead in the morning. They seem to be all right. They have a terrible appetite, but look bad. They are not scoured. Their hair is very rough, and their ears lopped. They have been fed sweet milk and boiled potatoes, mixed with wheat and corn chop. For a while they were fed on oat chop. They have ashes, sulphur and salt all the time. They keep biting and eating the trough all the time and will soon have it eaten up."

[Not having given post-mortem appearances of the pigs that have died, and nothing definite as to ante-mortem symptoms, it is hard to arrive at the cause of death. I am of the opinion it is digestive trouble, and would advise a change of food, omitting, at all events, the potatoes for a time. Give each animal sufficient Epsom salts or raw linseed oil to cause purgation, say about 4 ozs. of either, and if in about 18 hours that has failed to act, repeat the dose. See that they get exercise, and a good clean, dry and warm place to sleep. After their bowels have been acted on as above, give a little of the following mixture daily in their food: Equal parts of Epsom salts, sulphur and powdered charcoal. The cause of them eating the troughs is probably due to a want of phosphates. This could be supplied by feeding cut or powdered bone or the phosphate of lime. J. H. REED, V. S.]

**FISTULA IN HORSE'S SHOULDER.**

SUBSCRIBER, Que.:—"Have a horse whose shoulder, in the line of the trace, was injured through heavy plowing the past season. It swelled up, broke out and became a running sore. All efforts I have made have failed to heal it. Have washed it regularly and applied creolin, but to no purpose. Am convinced the horse's blood requires treatment, as any scratch or bruise on any part of the body is very hard to heal. What treatment would you advise?"

[The continual discharge from your horse's shoulder is due to what is called a fistula (a fibrous tube running from the surface to a more or less deep-seated point and conveying the pus to the surface), and not to an altered condition of the blood. This fistula will have to be destroyed in order that the parts may heal. It will either have to be operated on by opening up with a knife to its bottom, dissecting the fibrous walls of pipe out, and then treating as an ordinary wound; or else by the use of caustics. A few grains (say 5 to 10, according to the depth of the fistula) of corrosive sublimate rolled up in tissue paper and inserted into the pipe will in a few days corrode the walls of the pipe, with a small amount of surrounding tissue, and you will be able to draw out with your fingers the corroded parts, probably about the thickness of your finger; then treat as an ordinary wound. You must, of course, be careful in using corrosive sublimate. It would probably be better to get a veterinarian to attend to it. J. H. REED, V. S.]

**WASHY HORSE.**

SUBSCRIBER, Bruce Co., Ont.:—"Have horse five years old; scours bad when driving; is in good health every way. Oblige by giving a remedy in next issue?"

[Your's is what is called a washy horse, one with congenitally weak digestive organs. He can be helped by careful feeding. Do not feed any roots or sloppy food. Avoid, as far as possible, driving soon after feeding or allowing large quantities of water shortly before or during a journey. Better to feed in small quantities and often, and allow a little water often. You will probably find benefit from feeding a little ginger, commencing with a teaspoonful and gradually increasing to a table-spoonful twice daily in his oats (may be fed in dry oats). This drug will not injure his constitution even though you feed it constantly, and it is an excellent stomachic; that is, it tones the digestive glands of the stomach. J. H. REED, V. S.]

**CORNS ON HORSE'S FOOT.**

WM. MAW, Ontario Co., Ont.:—"I have a horse which appears to have corns. Please let me know, through your paper, if there is any cure for it, and oblige?"

[Corns are bruises of the sensitive sole, caused usually by faulty shoeing, leaving shoes on too long, and bruises. Barefooted horses seldom have corns. The lameness increases as the animal is worked. If the shoe is removed, and the sole pared, the surface will be noticed to be reddened, and, in some cases, pus may be found, always a serious condition. Removal of the shoe, paring out of the seat of the corn, and a poultice to the foot, will invariably remove the lameness. Shoe carefully with a bar shoe, avoiding pressure on the afflicted parts. Pack the sole and space beneath the shoe with tow soaked with pine tar.]

**CANKER IN DOG'S EAR.**

F. H., Peel Co., Ont.:—"Will you please inform me what is the matter with my dog? About every month his ears break out and run matter which smells bad. I am afraid that he will have to be killed."

[Canker is most frequently seen in water-dogs, spaniels of all kinds, although most breeds of dogs have been under our care for this very troublesome affection. It is a low type of inflammation of the wax glands of the internal ear, the swollen skin blocking up the opening, which at last breaks through periodically. Patience, care, regular dressing, and keeping the parts clean, will ensure a cure. If not, deafness results and the animal becomes incurable. Treatment: The first object is to reduce the inflammation of the internal ear and prevent the dog flapping the external ears by shaking his head. Well foment the external ears and wash clean with a solution of creolin; afterwards, apply the following lotion: *Recipe*—Acetate of lead, 2 ounces; tincture of opium, 1/2 ounce; glycerine, 2 ounces; distilled water, 6 ounces. Place a small quantity into the palm of the hand before placing in the dog's ear, so as to take the chill from the lotion before dropping into the animal's internal ear. DR. WM. MOLE, M. R. C. V. S.]

**OBSTRUCTION OF TEAT IN COW.**

A. L. S., Grey Co., Ont.:—"I have a cow which dropped her calf yesterday. In milking her this morning, one teat was closed entirely by what seems to be a growth about half-way up the teat in the passage. She was all right when dried up last fall. What is the cause and remedy?"

G. R. M., Renfrew Co., Ont.:—"Could you please let me know through your valuable paper the cause of those lumps which come in the passage of a cow's udder? I have two cows troubled in this way. They have one or more teats useless."

[The obstruction is caused by a little fibrous growth in the milk duct, and the only way in which a satisfactory cure can be effected is by an operation with an instrument called a concealed bistoury, in

the hands of an expert. The milk can be drawn off with a teat siphon for a few days in order to prevent inflammation of the gland from engorgement with milk. This can be done until the quarter becomes inactive. I always consider it better to fit an animal with a blind quarter for the butcher, as, if bred, at the next calving the quarter will again trouble, and probably another teat become affected. J. H. REED, V. S.]

**Miscellaneous.**

**STANDARD OF PERFECTION IN BARRED PLYMOUTH ROCKS.**

OLD SUBSCRIBER, Souris:—"Please give standard of perfection of Barred Plymouth Rocks."

[*Standard Weights*.—Cock, 9 1/2 lbs.; hen, 7 1/2 lbs.; cockerel, 8 lbs.; pullet, 6 1/2 lbs.]

*Male*.—Head—Of medium size and carried well up. Beak—Short, stout, regularly curved, yellow. Eyes—Large, clear, bright, bay. Face—Bright red.

Comb—Single, medium in size, in proportion to the specimen; perfectly straight and upright, free from side sprigs, with five or six even and well-defined serrations, those in front and rear smaller than those in the center; fine in texture, bright red.

Wattles—Of medium size, equal length, moderately rounded, bright red.

Ear Lobes—Of medium size, bright red.

Neck—Of medium length, well arched, tapering, with abundant hackle.

Back—Broad, of medium length, flat at the shoulders and rising with a slight concave sweep to the tail.

Saddle Feathers—Long and abundant.

Breast—Broad, deep and full.

Body—Broad, deep, full, compact.

Fluff—Moderately full.

Wings—Of medium size, well folded, the wing bows and points well covered by the breast and saddle feathers.

Tail—Of medium length, spread at the base, carried moderately upright; sickles fairly developed, spreading laterally beyond the tail proper; lesser sickles and tail coverts well developed and well curved.

Legs and Toes—Thighs large, strong, well covered with soft feathers; shanks of medium length, stout in bone, well apart, yellow; toes straight, strong, well spread, of medium length, yellow.

Color of Plumage—Body color, grayish-white; each feather regularly crossed with parallel bars of blue-black, the barring also shown in the down or under-color of the feathers; the barring of neck and saddle hackle narrower and closer, and running the entire length of the feather.

*Female*.—Head—Of medium size and carried well up.

Beak—Short, stout, regularly curved, yellow.

Eyes—Large, clear, bright, bay.

Face—Bright red.

Comb—Single, small, perfectly straight and upright, free from side sprigs, with five or six even and well-defined serrations, those in front and rear smaller than those in the center; fine in texture, bright red.

Wattles—Of medium size, equal length, well rounded, bright red.

Ear Lobes—Of medium size, bright red.

Neck—Of medium length, comparatively small at the head, nicely curved, with hackle flowing well over the shoulders.

Back—Broad, of medium length, with slight incline from the base of the neck to the tail, or slightly cushioned.

Breast—Broad, full, round.

Body and Fluff—Body broad, deep, full, compact; fluff moderately full.

Wings—Of medium size, well folded.

Tail—Of medium length, spread at base, carried moderately upright; tail coverts fairly developed.

Legs and Toes—Thighs of medium size, and well covered with soft feathers; shanks of medium length, fine in bone, well apart, yellow, which, in hens, may shade to light straw color; toes straight, well spread, of medium length, and in color the same as the shanks.

Color of Plumage—The same as described for the male.

**DOES BLUESTONE INJURE GERMINATION.**

B. E., Oak River:—"It would be a great saving of time if I could bluestone my wheat some time before seeding commenced. Do you think this would injure the germination of the seed?"

[From our experience here, the effects of bluestoning wheat some time in advance of seeding is uncertain. I have known cases where the seed has been treated for months in advance without any injurious results to the germination, and in one other instance I have known the germination to be seriously injured when the wheat has been treated even a few weeks in advance of the seeding. For this reason I always advise that the seed be sown a short time after bluestoning. S. A. BEDFORD.]

**CURING PORK.**

X. Y. Z., Sinaluta, Assa.:—"Kindly let me know, in your next issue, the best method of packing cured pork for summer use. Have been advised to pack in oats, also salt. Is either of these methods good?"

[See answer to "Subscriber," page 90, Feb. 5th issue. Packing for a long period in salt tends to make the meat too salt and hard.]

## STARTER IN FARM BUTTERMAKING.

**BUTTERMAKER:**—"I have seen a good deal from time to time in the *ADVOCATE* and many other dairy papers about 'Starters for Cream,' but have never seen anything which I thought of practical use in a small dairy. Now we use a cream separator, and make about 40 lbs. of butter per week, and in cold weather often experience considerable difficulty in getting the cream ripe for churning without allowing it to stand too long and thus impair the flavor of the butter. If a starter could be used in so small a quantity, I would like you to inform me through your columns how I can procure the material and how it should be used, or would it be safe and practical?"

[A starter may consist of some sour cream, sour milk or buttermilk. The main point is, that it be of a clean, pleasant acid taste and smell. By sending ten cents to Prof. Harrison, Bacteriologist, O. A. C. Guelph, a small bottle of pure culture will be forwarded with directions how to use. A good starter is often made by filling a sterilized gem jar with clean, good milk (from a cow fresh in milk preferred) and holding at about 70° until perfect coagulation takes place. Skim off the top, stir well, and add to the sweet cream. If you are making fine-flavored butter, it is a good plan, and one I would recommend for general use, to take a pint of your sour cream, put it into the empty, well-cleaned cream can, and add to it your first skimming. In winter it is safe to add the separator cream so as to slightly raise the temperature, thus hastening the ripening process. Stir the cream well each time fresh is added. Without the aid of a starter a bitter flavor is apt to be found in butter made from cream held for a length of time at a low temperature. This is caused by the growth of a yeast plant. A starter may be successfully used in the farm dairy, and is of great benefit in assisting ripening and controlling flavors.]

O. A. C. Dairy School. LAURA ROSE.]

## PROBABLY ROUP.

**NOVA SCOTIAN:**—"My hens are troubled with sore eyes; they seem to close and the hens can hardly open them. Would you please answer through your paper the cause and cure of this disease?"

**E. MCINTYRE, Elgin Co., Ont.:**—"We would like to know, through your valuable paper, what is the matter with our hens. They are in nice condition, have a good pen, but they swell up around the eyes, generally one eye; the eye keeps frothing all the time, and later on closes up. Some of them have a lump on their nostril below the eye. We had some at a barn; they have died with the same thing. We have a turkey with the same thing. Is it unsafe to handle them?"

[From your mere description I cannot positively say what is the trouble, but it has one of the symptoms of roup. In any case, it would be well for you to isolate the affected birds, and to feed them mostly on soft food, in which there is at least 15 per cent. of raw onion that has been previously cut into small pieces. A little coal oil put up the nostril is usually a fair treatment. I would suggest that you get a package of Conkey's Roup Cure and use as per directions. If you cannot get this in your Province, it may be had from C. J. Daniels, 221 River St., Toronto. I think it would also be advisable to bathe the eyes of the affected birds with lukewarm salted water. If there are only one or two birds affected, your best plan is to kill them at once and burn the bodies. This would avoid any spread of the disease, in all probability.]

O. A. C., Guelph. W. R. GRAHAM.]

## DRAIN FROM BATHROOM—LICE ON CATTLE.

**Z., Simcoe Co., Ont.:**—"We were thinking of putting bathroom and water closet in house, about 110 feet higher than creek and about one-half mile from it. There is a gradual slope to it. Would the ordinary tile do for carrying away the sewage, and would you recommend putting it all the way to the creek, or would you advise digging a cess-pool? A number of cattle get water from the creek. Would the sewage affect the flowing water to a very great extent?"

"2. Is tying a woollen string saturated with blue ointment around the neck of a cow an effectual way of killing lice? A number of my neighbors have adopted it, and, they claim, with good success."

[1. We have used bath and water closet in our house for eight years with entire satisfaction. Sewage is carried 300 yards in four-inch tile. One-third is sewer-pipe tile, and balance is common field tile, laid three feet deep in the ground, with thirty feet of fall. Sewage is deposited on the land 150 yards from creek. We find no bad effects from sewage, which from an ordinary farmhouse is not much. We are careful in not allowing too much paper used in the closet, and well flush out drain occasionally. One-half mile is too far to carry sewage, unless you have an abundant supply of water to keep the drain flushed out continuously, for in dry, warm weather the liquid would be absorbed before it reached half a mile, and the solid matter would dry up and clog the tile. If the soil is open or gravelly, the tile should be laid in cement, especially close to the house, to prevent water in wells from being contaminated.]

M. RICHARDSON & SON.

2. We have little faith in the anointed string-treatment for lice. We have heard that the blue-ointment catches the big lice on their way to the nose of the animal for a drink. It is a field for the economic entomologist. For lice on cattle we would recommend thoroughly washing the skin with Parisian Insect Powder, or any other of the an-

imals well with one or other of the dips advertised in our columns. They are reliable if applied as the manufacturers direct.]

## PROBABLY HEAVES—ABORTION IN COWS.

**A. J. M., Victoria Co., Ont.:**—"Would you kindly advise me, through your valuable paper: 1. What is the matter with and what would be the proper treatment of a horse? He commenced last summer to breathe heavy if driven fast or after going up a hill with a load, as if his collar was short. But he seems to get worse and frequently coughs, and even after drinking he is very likely to cough; and now if driving fast for any distance he may be heard breathing several rods away."

"2. We had two cows last spring that lost their calves, or, rather, they had to be taken from them dead. We heard of two others in the neighborhood, and also two or three the year before. They seem to be noticeably large for some time before, as though they were going to have twins, and, perhaps, on going into the stable in the morning, one would think by their looks they had calved, and look all round for the calf, but, on examination, would find that they had passed an unusual quantity of liquid—enough to flood the gutter—and that still the calf had not come, and in some of these cases the cow would seem quite contented for a while, and in others would strain hard all the time until the calf would be taken away. In most cases the calf would be wrong-end first and look as if deformed or crooked and out of shape. Some of the cows referred to were in first-class condition. If you could tell us the cause of this trouble, or some prevention, you would very much oblige."

[1. From symptoms given, I would say that your horse has heaves, and little can be done except careful feeding. Good, clean wheat straw is in such cases preferable to hay. If feeding hay, be sure it is of good quality and feed in limited quantities. Do not allow him to overload the stomach. Dampen all his food with lime water mixed with about 1/2 its bulk of raw linseed oil. Do not allow much water after feeding if he be going to work. Such treatment as this will relieve the symptoms, but the disease can not be cured.]

2. Abortion in cows is caused in many diverse ways. Sometimes it is infectious. Improper feeding or food of poor quality predispose to the accident. So, also, does poorly-ventilated stables, sudden changes from heat to cold, slips, fighting each other, injuries of any kind, etc., etc. The extra large appearance of the abdomen referred to is caused by an abnormal quantity of fluid in the uterus. In some cows this occurs and cannot be controlled. It may in some cases also be caused by food of poor quality, or by a diseased condition of the genital organs. Cows with tubercular disease of these organs are predisposed to abort. Some cows acquire the habit of aborting at a certain period of gestation. If a cow shows symptoms of the accident, place her in a comfortable, darkened box stall, where everything is quiet, and give her about 3 ozs. laudanum mixed with a pint of water; repeat the dose if you think it necessary in about 4 hours, and keep her quiet until the symptoms disappear. If abortion should take place, remove her from other pregnant animals, remove the after-birth if it has not already been expelled, inject the womb with 1 part carbolic acid to 100 parts warm water, and give her 20 drops carbolic acid in 1 pint cold water three times daily until all discharge ceases. Cleanse and thoroughly disinfect the stall in which abortion has taken place by thoroughly washing with a strong solution of crude carbolic acid, and whitewashing. Be sure to remove all escaped matter from other pregnant animals, and wash off the vulva of the aborted cow and inject into the vagina, once daily, a little of a solution of bichloride of mercury, 1 part to 1,000 of water; wash the vulva with the same. It is also good practice to treat all pregnant cows that may have come in contact with the aborted one in the same way for a couple of weeks. These precautions are necessary in many cases to prevent the accident becoming common. As to the malpresentation mentioned and the deformity of the calf, these are conditions that cannot be controlled.]

## QUERIES IN POULTRY AND GRAIN.

**E. H., Cashel, N. Dakota:**—"Would some of the *ADVOCATE* readers give a plan of house or temporary pen for raising several broods of chickens with the mother hens?"

"What do you consider the best method of treating seed oats for smut?"

"What breed of poultry is best for egg production only? What breed is best for table use only? What breed combines both qualities? Which is the most profitable?"

"What is the comparative feeding value of spelt to oats and barley, pound for pound?"

[Our columns are open for answers to this query.

2. See article on "Smut" in this issue.

3. Leghorns, White and Brown Minorcas and Houdans for eggs; Brahmas, Game crosses, Plymouth Rocks and Wyandottes for table use; the latter two probably for general purpose. Your market and the care given would influence the profit of any special variety.

4. No feeding experiments have been conducted, as far as we know, to furnish data on this point.]

## PLANTING TREES.

**R. B., Wawanese:**—"I planted out a large number of maple avenue trees last year, and I had a very poor success with them, losing nearly every tree. I wish to replant this year. Will you kindly give me some instructions?"

[The most important thing in connection with tree-planting is to select nursery-grown trees with a lot of fibrous roots. Take them up carefully, leaving as many roots on as possible, then dig holes a foot deeper than required and somewhat wider, cover the bottom of the hole with surface black loam, and plant the trees six inches deeper than they were formerly. Tramp the soil in a little at a time. Do not use any manure in the hole, as it keeps the tree too dry. Fill up level with soil and then place a little loose manure on the surface and keep thoroughly cultivated all summer. By this plan we save ninety-five per cent. of our trees here. The same rule applies to fruit bushes.]

Experimental Farm. S. A. BEDFORD.]

## Chatty Stock Letter from Chicago.

FROM OUR OWN CORRESPONDENT.

Top prices for various grades of stock, with comparisons were:

Cattle.	Past Week.	Previous Week.	Year Ago.
1500 lbs. up.....	\$ 5.65	\$ 5.95	\$ 5.75
1350 to 1500 lbs.....	5.80	5.90	5.75
1200 to 1350 lbs.....	5.30	6.00	5.75
1050 to 1200 lbs.....	4.75	6.00	5.30
900 to 1050 lbs.....	4.65	5.50	4.90
Feeders.....	4.50	4.65	4.90
Bulls.....	4.50	4.50	4.90
Calves.....	6.50	6.50	8.00
Hogs—			
Mixed and butchers.....	5.55	5.45	5.10
Heavy.....	5.60	5.50	5.10
Light.....	5.55	5.45	4.95
Sheep—			
Fat wethers.....	5.00	4.50	5.80
Ewes.....	4.05	4.00	5.30
Yearlings.....	5.00	5.15	6.40
Native lambs.....	5.25	5.30	7.25
Western lambs.....	5.20	5.30	7.10

The situation in the cattle market is a very peculiar one. There are not enough good cattle to fill the demand. There have been orders here for two weeks for prime cattle, with buyers more than willing to pay up to \$6, and no cattle good enough. At the same time the market has been flooded with the half-fat and low-grade cattle, that were of little value as marketers. Many of these cattle, however, would be very valuable in the feed lots.

The feeling is that a good many unfinished cattle are being needlessly sacrificed, and that there will be a period in a few weeks after the dumping is pretty well over when the dumpers will feel like hiring a kicking machine.

The general impression seems to be that corn is too high to feed, and yet experienced men say that the most money they ever made in feeding was when corn was worth a good deal more.

Corn is not high enough to justify the present slaughter of short-fed cattle.

The hog market is very strong, and now that prices have broken over the \$5.50 point the bulls feel stronger than ever.

The argument is advanced that the holders who wanted \$5 in the country have mostly let go and that a majority of those who are left have higher ideas. The fact that late receipts, the largest of the year, were taken at the highest average price since last April, \$5.40, together with the fact that the Eastern shipping demand is materially increasing, were among the bullish arguments.

The sheep market is the least satisfactory.

Sheep are selling at a little better price, and so are lambs, but as compared with a year ago there is a great decline. This, in the face of light feeding, except in Colorado, and the great export demand, is a little puzzling to the trade.

A man sold some 66 lb. lambs at \$5.15, and had some 81 lb. lambs that he thought ought to have been worth 25c more, that were harder to sell at the same price.

Exporters are buying a good many sheep at \$4.40 to \$4.60, lambs at \$5 and yearlings at \$4.50 to \$4.75. They are having delivered to them, on contracts made some time ago, sheep at \$4.75 to \$5.00, and yearlings lately contracted at \$4.75.

## A New Binder Twine Factory.

At a largely-attended meeting, called at Chatham, Ont., by Mayor Sulman, the promoters of our proposed binder twine factory fully explained their position, intentions, etc. It was decided to start a factory at once, under the name of "The Chatham Binder Twine Co., Ltd." The provisional directors of the company are: President, W. J. Wilson, ex-Rex of Harwich; Vice-Pres., D. Hutchison, a retired farmer; Sec. Treas., A. Smith; Directors—A. McKay, Sam'l Bullis, and L. Howard. They are all men of good business ability. The capital stock is to be \$125,000, divided into 12,500 shares of \$10 each. When \$25,000 has been subscribed, the company will apply for a charter and make a call of 25 per cent. upon the shareholders for incidental expenses and part payment upon the machinery. When \$40,000 has been subscribed, a payment of \$5,000 will be made upon the machinery, upon which there will be no more payments made until the plant is finished and found satisfactory by the Board of Directors. As soon as the necessary capital is subscribed, building operations will begin at once, and the building will be ready for machinery by 15th May and completed by June 15th. The capacity of the factory will be 3 tons per day of 10 hours, with this machinery heavy enough to increase the output to 5 tons per day. Canadian firms have the contract for all machinery except the breakers, rollers and spinners. The factory will employ about fifty hands in the beginning, mostly boys and girls. The \$25,000 required to obtain the charter has been subscribed in Chatham and a small radius of surrounding country, and as the charter is for Essex, Kent and Lambton counties, there is no doubt that the balance, \$100,000, will be easily obtained in that much territory. It is to be sincerely hoped that the new industry will prove a success, as the three counties named above are heavy users of twine, and by owning their own factory, farmers should be able to get twine at bottom prices.

W. A. McGRACHY.

## Dressed Beef for England.

On Monday, Feb. 25th, Messrs. Wm. Harris & Co., of Toronto, sent off their initial shipment of Canadian dressed beef to England, consisting of four carloads, representing 64 head of cattle, and was consigned to W. R. Fletcher & Co., one of the largest dealers of meat in Britain. The shipment went over the G. T. R. to St. John, N. B., where it will be placed in the cold-air compartment on the steamer, Manchester City. Mr. Thos. Hays, who has been here representing Messrs. Fletcher, was delighted with the quality of the beef, which he pronounced superior to Argentine meat and equal to Western States beef. He thinks 10,000 quarters per week could be sold if produced.



THE BRAKEMAN AT CHURCH.

The Burlington *Hawkeye* gets off the following good thing on "The Brakeman at Church":  
On the road once more, with Lebanon fading away in the distance, the fat passenger drumming idly on the window-pane, the cross passenger sound asleep, and the tall, thin passenger reading "Gen. Grant's Tour Around the World." To me comes the brakeman, and seating himself on the arm of the seat, says:

"I went to church yesterday."  
"Yes?" I said, with that interested inflection that asks for more. "And what church did you attend?"  
"Which do you guess?" he asked.  
"Some union mission church," I hazarded.  
"No," he said, "I don't like to run on these branch roads very much. I don't often go to church, and when I do, I want to run on the main line, where your run is regular and you go on schedule time, and don't have to wait on connections. I don't like to run on a branch. Good enough, but I don't like it."  
"Episcopal?" I guessed.  
"Limited express," he said, "all palace cars, and two dollars extra for a seat, fast time, and only stop at the big stations. Nice line, but too exhaustive for a brakeman. All trainmen in uniform, conductor's punch and lantern silver plated, and no train boys allowed. Then, the passengers are allowed to talk back to the conductor, and it makes them too free and easy. No, I couldn't stand the palace cars. Rich road, though. Don't often hear of a receiver being appointed for that line. Some mighty nice people travel on it, too."  
"Universalist?" I suggested.  
"Broad gauge," said the brakeman, "does too much complimentary business. Everybody travels on a pass. Conductor doesn't get a fare once in fifty miles. Stops at all flag stations, and won't run into anything but a union depot. No smoking car on the train. Train orders are rather vague, though, and the trainmen don't get along well with the passengers. No, I don't go to the Universalist, though I know some awfully good men who run on that road."  
"Presbyterian?" I asked.

"Narrow gauge, eh?" said the brakeman, "pretty track, straight as a rule; tunnel right through a mountain rather than go around it; spirit-level grade; passengers have to show their tickets before they get on the train. Mighty strict road, but the cars are a little narrow; have to sit one in a seat and no room in the aisle to dance. Then there is no stop-over tickets allowed; got to go straight through to the station you're ticketed for, or you can't get off at all. When the car's full, no extra coaches; cars are built at the shops to hold just so many, and nobody else allowed on. But you don't often hear of an accident on that road. It's run right up to the rules."  
"Maybe you joined the Free-Thinkers?" I said.

"Scrub road," said the brakeman, "dirt road-bed and no ballast, no time-card and no train despatcher. All trains run wild, and every engineer makes his own time, just as he pleases. Smoke if you want to; kind of a go-as-you-please road. Too many side tracks, and every switch wide open all the time, with the switchman sound asleep and the target-lamp dead out. Get on as you please and off when you want to. Don't have to show your tickets and the conductor isn't expected to do anything but amuse the passengers. No, sir, I was offered a pass, but I don't like the line. I don't like to travel on a road that has no terminus. Do you know, sir, I asked a division superintendent when that road run to, and he said he hoped to die if he knew. I asked him if the general superintendent could tell me, and he said he didn't believe they had a general superintendent, and if they had, he didn't know anything more about the road than the passengers. I asked him who he reported to, and he said, 'Nobody.' I asked a conductor who he got his orders from, and he said he 'didn't take orders from any living man or dead ghost.' And when I asked the engineer who he got his orders from, he said, 'he'd like to see anybody give him orders; he'd run that train to suit himself, or he'd run her in the ditch. Now you see, sir, I'm a railroad man, and I don't care to run on a road that has no time, nor makes no connections, runs next to a road that has no time, nor makes no connections, but I've railroaded too long to understand it."

"Maybe you went to the Congregational Church?" I said.  
"Popular road," said the brakeman, "an old road, too; one of the very oldest in this country. Good road-bed and comfortable cars. Well-managed road, too; directors don't interfere with division superintendents and train orders. Roads mighty popular, but it's pretty independent, too. Yes, didn't one of the division superintendents down East discontinue one of the oldest stations on this line two or three years ago? But it's a mighty pleasant road to travel on. Always has such a splendid class of passengers."  
"Did you try the Methodist?" I said.

"Now you're shouting!" he said with some enthusiasm.  
"Nice road, eh? Fast time and plenty of passengers. Engines carry a power of steam, and don't you forget it; steam gauge shows a hundred and enough all the time. Lively road; when the conductor shouts 'all aboard,' you can hear him to the next station. Every train-light shines like a headlight. Stop-over checks are given on all through tickets; passenger can drop off the train as often as he likes; do the station two or three times and hop on the next revival train that comes thundering along. Good, whole-souled, companionable conductors; ain't a road in the country where the passengers feel more at home. No passes; every passenger pays full traffic rates for his ticket. Wesleyan air-brakes on all trains, too; pretty safe road, but I didn't ride over it yesterday."  
"Perhaps you tried the Baptist?" I guessed once more.

"Ah! ah!" said the brakeman, "she's a daisy, ain't she? River road, beautiful curves; sweeps around anything to keep close to the river, but it's all steel rail and rock ballast, single track all the way and not a side track from the roundhouse to the terminus. It takes a heap of water to run it through; double tanks at every station, and there isn't an engine in the shops that can pull a pound or run a mile with less than two gauges. But it runs through a lovely country; these river roads always do; river on one side and hills on the other, and it's a steady climb up the grade all the way till the run ends where the fountainhead of the river begins. Yes, sir, I'll take the river road every time for a lovely trip—sure connections and good time, and no prairie dust blowing in at the windows. And yesterday, when the conductor came around for the tickets with a little basket punch, I didn't ask him to pass me; but I paid my fare like a little man; twenty-five cents for an hour's run and a little concert by the passengers assembled. I tell you, Pilgrim, you take the river and when you want —"  
But just here the loud whistle from the engine announced a station and the brakeman hurried to the door shouting:—

"Zionsville! This train makes no stops between here and Indianapolis!" Robert J. Bourdette.

A Scottish farmer one morning, while crossing the farmyard, called out to the cowboys: "Jock, come awa in for your parritch; the fleas are a' drownin' in the milk." "Nae fear o' that," says Jock, "they'll a' wade through." "What! Dae ye mean tae say ye dinna get enough milk?" "Oh, ay, plenty for the parritch."

A Woman's Answer.

Do you know you have asked for the costliest thing  
Ever made by Hand above—  
A woman's heart, and a woman's life,  
And a woman's wonderful love!  
Do you know you have asked for this priceless thing  
As a child might have asked for a toy—  
Demanding what others died to win,  
With the reckless dash of a boy?

You have written my lessons of duty out,  
Man-like you have questioned me;  
Now stand at the bar of my woman's soul  
Until I have questioned thee!  
You require your bread shall be always good,  
Your socks and your shirts should be whole;  
I require your heart shall be as true as God's stars,  
And pure as heaven your soul!

You require a cook for your mutton and beef—  
I require a far better thing;  
A seamstress you're wanting for stockings and shirt—  
I want a man and a king!  
A king for the beautiful realm called home,  
And a man that the Maker, God,  
Shall look upon as he did the first,  
And say, it is very good!

I am fair and young, but the rose will fade  
From the soft young cheek one day;  
Will you love me then 'mid the falling leaves  
As you did 'mid the bloom of May?  
Is your heart an ocean so strong and deep  
I may launch my all on its tide!  
A loving woman finds heaven or hell  
On the day she is made a bride!

I require all things that are good and true,  
All things that a man should be;  
If you give this all, I would stake my life  
To be all your demand of me.  
If you cannot do this—a laundress, or cook,  
You can hire with little to pay;  
But a woman's heart and a woman's life  
Are not to be won that way.

—E. B. Browing.

THE CHILDREN'S CORNER.

A Mute Appeal.



Photographed by Mr. W. M. Donnelly, Port Credit.

This picture has been sent to us—  
A snap-shot true to life—  
For cats and dogs, as we may see,  
Too often find they can't agree.  
Except in aimless strife.

But pussy gets the best of it,  
Nine cases out of ten,  
For she can scratch and growl and swear,  
'Till no poor dog would ever dare  
To rouse her wrath again.

Pathetic is this mute appeal,  
Yet it is wasted quite.  
The beggar with uplifted paws  
Can never change the feline laws  
Which claim that "Might is right."

C. D.

PRIZE STORY—CLASS IV.

Two Little Rogues.

The best place to go for a good time, is Grandma's. Robby and Helen went to their grandma's last summer. She lives on a farm, so they tumbled on the hay, gathered apples and cracked butternuts. Sometimes they got into mischief, and came into the house covered with bruises and scratches. One day they were in the orchard, and Robby saw the girl bring out the churn and set it up to dry against the side of the house. Up jumped Robby. "Oh, I've thought of such fun, Helen," said he. "Let's put kitty in the churn, and roll her down that little hill at the side of the house. You wait here while I get my little pig grandma gave me."

They put the pig and kitten into the churn. Kitty tried to climb up the side and had to be pushed down three times before they could get the cover on. They tipped the churn over, and began to roll it down the hill.

Poor little kitty! Poor little piggy! How they did squeal and mew as they were rolled over and over, shut up in that churn! But just as they got to the bottom of the hill the cover came off. Kitty flew away with a bound, and piggy ran off with a little squeal. Robby and Helen laughed till their little faces were red. Then they carried up the churn to roll again. But kitty and piggy could

not be coaxed back, and it was no fun to roll the churn with nothing in it. What was to be done?

Then Helen said, "Oh, Wobby, oo det in and me'll woll oo down!"

Robby said that would be "heaps of fun!" So he crept into the churn, feet first, with his head out so as to see the fun. Alas, for Robby! he had enough fun for that day. It was very nice until he got to the hill and began to roll down. Jolt and bump! Jolt and bump! He thought he never would stop, but at last he got to the bottom. He crawled out, but was too dizzy to stand. Everything seemed to go round and round, and his face turned so very white that little Helen ran for grandma. Poor Robby! He had to stay in bed all the rest of the day. When he got better he tried to tell kitty and piggy how sorry he was for being so cruel to them, but they wouldn't listen to him or let him come near them. ADA GRAHAM (aged 8 years).

The Lookout Regiment.

Our old friend Jemmie Matchet writes:

DEAR GENERAL,—  
I am sending the names of two more recruits, and stamps for badges. They are Eva Violet Stephens and Ruth Gibbens. How would an essay on Her Majesty Victoria the Good do for the next contest—the competitors to be divided into three classes as before? Here is a kind act a little girl did. She gave her brother a little silk handkerchief she had given her for a birthday present, because he wanted it.  
With best wishes, (that tiresome)  
JEMMIE MATCHET.

P. S.—Please let me know if I take up too much of your time with my letters!—J. M.

Your letters are very welcome, Jemmie, and so are the two new recruits. As for the next competition, you will have already discovered that "great minds think alike," as the very subject you suggest was in print when your letter arrived. I hope you got my dispatch containing your commission and enclosing the three badges. I am glad to announce that Captain Matchet is now in command of "B" Company, Saltoun, Assa., N.-W. T.  
COUSIN DOROTHY.

Look Out for the Wolves.

You never need fear, little children, to meet  
A wolf in the garden, the wood, or the street;  
Red Riding Hood's story is only a fable;  
I'll bad you its moral as well as I'm able.  
"Bad Temper" 's a wolf we meet everywhere;  
Beware of that wolf, little children, beware!

I know of a boy, neither gentle nor wise;  
If you tell him a fault he gives saucy replies;  
If not having his way, in a fury he flies.  
Ah! "Passion" 's the wolf with the very large eyes.  
So ready to snap, to trample, and tear;  
Beware of this wolf, little children, beware!

I know of a girl always trying to learn  
About things of which she should have no concern;  
Such mean Curiosity really appears  
To me like the wolf with very large ears.  
All pricked up to listen, each secret to share;  
Beware of this wolf, little children, beware!

My Angel.

If I were to take my pencil  
As I sit in the dim firelight,  
And draw for you here the picture  
That I see in the flames to-night,  
'Twould not be a stately angel,  
With form that is full of grace,  
But a bent and toilworn woman  
With a grave and tender face.

No rosy wings should enfold her,  
Nor golden her locks and fair;  
But the face of my Angel of Pity  
Is framed in snowy hair.  
Her hands are not white and slender,  
But withered by work and woe;  
By carrying others' burdens,  
And soothing the tears that flow.

No halo of light surrounds her,  
No wondrous power she hath;  
Yet many and many a blessing  
Is spoken about her path.  
And you may portray your angels  
With faces and forms of grace,  
But my gentle Angel of Pity  
Has my mother's careworn face.

—Nora Holland.

It is Well to Remember That

Too small a figure in wall paper destroys the effect.

A bread cloth should always be sweet and clean, and never used for any other purpose.

Spots and dirt may be removed from paintings and chromos by using a cup of warm water to which a few drops of ammonia has been added.

It pays well to do the mending before the article goes into the wash, since the processes to which it is there subjected materially enlarge the holes, and it is better and more agreeable to wear if the washing follows the mending.

An Address to the Queen.

On page 123 of our last issue, the attention of our readers was called to the proposed Royal address of the women of Canada to Her Majesty Queen Alexandra. Single signatures or groups of signatures, with two cents each to assist in the necessary expenses, can be sent direct to Miss Wilson, 71 Brunswick Ave., Toronto, Ont., who will have them transcribed for binding in the handsome and appropriate volume which will at an early date be presented to the Queen Consort. The small fees can be remitted in postage. Volunteers are asked to receive and forward names to Miss Wilson at as early a date as possible.

## THE QUIET HOUR.

## Ideals.

"Of all the myriad moods of mind  
That through the soul come thronging,  
Which one was e'er so dear, so kind,  
So beautiful, as longing?  
The thing we long for, that we are,  
For one transcendent moment,  
Before the present, poor and bare,  
Can make its sneering comment.  
Longing is God's fresh, heavenward will,  
With our poor earthward striving,  
We quench it, that we may be still  
Content with merely living.  
But would we learn that heart's full scope,  
Which we are hourly wronging,  
Our lives must climb from hope to hope,  
And realize our longing."

"One of the fads of fashionable people just now is having ideals; every person who is rich enough sets up an ideal." I read these words in the paper the other day, and they rather mystified me. If it is fashionable to have an ideal, do let us be fashionable! But what have riches to do with the question? I thought an ideal was a luxury—or shall we say a necessity?—within the reach of the poorest. We all fret and chafe at the tedium of a commonplace existence; we all, in youth at least, would like to live an ideal life. Do we always go the right way about it? It is not necessary to change our surroundings, or even our work; an ideal life may be lived anywhere. The ideal life, the life that has been the light of the world for nearly two thousand years, blossomed into perfect beauty in the shop of a poor village carpenter. Poverty, terrible poverty of soul, may be found in the grandest palace; and riches, the only riches that can buy real happiness, are within the reach of all.

"Wasted and all in rags his starved soul went,  
And opulently paupered,  
he grew old,  
And stood with loaded hands and heart fore-spent,  
A beggar, with a million bits of gold."

We have no right to be "content with merely living." We have no right even to fix our minds so intently on the next life as to miss the true beauty of this. St. Paul's ideal was contained in four words, "To live is Christ," and they transformed his whole life. He did not think anything too insignificant to be brought under this rule. Even such a commonplace matter as eating or drinking should be done to the glory of God. Even slaves, who were bought and sold like cattle, were encouraged to make their enforced labor a voluntary service, and so to idealize it—"with good will doing service, as to the Lord, and not to men." If the life of a slave could be made an ideal life, surely none of us need submit tamely to a commonplace existence. We all know, in theory at least, that doing things for God "makes drudgery divine"; but it is quite another thing to bring this theory into everyday practice. This is the inner sunlight that can brighten the most dismal surroundings; this is the magic touch that can turn everything to gold. Try it, and see! Drummond tells of a young girl whose beauty of character was the wonder of all who knew her. She always wore a gold locket, which no one was permitted to open. One day, as a special favor, a companion was allowed to look inside. The locket contained nothing but these words: "Whom having not seen, I love." This was her ideal, and, like a mirror, her life reflected the perfect beauty on which she constantly gazed.

Does your actual life lag far behind your ideal? That sounds discouraging, so we will reverse the question. Is your ideal far higher and grander than your actual? Then, be very thankful. One great mistake of the Pharisee in the parable was that he had realized his ideal. He aimed too low, and was quite satisfied with his attainments. Of course, he stopped short there, because he didn't want to go any higher. God lures us on by holding before our eager eyes the great prize of holiness. The garment of perfect righteousness is intended to fit us; if our souls are too small for it yet, there is no need to be discouraged.

"As one who walks with  
Because of garments laid  
To walk by spirit through  
With a cap round"

"God must have known the expanding spirit's need  
When He life's vesture on me lay,  
A mother makes too large the garments of her child,  
That he may grow to them some day."

"Then onward I will press with patient feet,  
Nearing each day the spirit's goal,  
Somewhere life's folded garment I may find  
Was made to fit a full-grown soul."

It has been said that the record of some lives is simply the date of a birth, the date of a death, with an awfully significant blank between. Those are lives lived only for self. They are not entirely without high ideals, for man is made in the image of God, and must have within him some tokens of his divine lineage; but the ideals have been theory only, and have grown faint and powerless from want of practice.

Under the most humdrum, commonplace exterior God sees the infinite thirst which only He can satisfy. Don't let us crush our ideals, nor let them die for want of encouragement. It is almost worse to cherish them as idle dreams of a possible future. Make your life beautiful now—to-day and to-morrow and the day after. You can do this if you will take the trouble.

"There were strange soul-depths, restless, vast and broad,  
Unfathomed as the sea;  
An infinite craving for some infinite stilling;  
But now Thy perfect love is perfect filling!  
Lord Jesus Christ, my Lord, my God,  
Thou, Thou art enough for me!"

HOPE.

may hit it. Meanwhile, the time lost by the seekers is well compensated by the fun they are having at the expense of their awkward friend.

Signor Moradei has given us a thoroughly characteristic scene. The good-natured railler, on the countenances of the girls and the serio-comic look of the man are rendered with rare truth and spirit.

## Ingle Nook Chats.

MY DEAR GUESTS,—

"Gather ye roses while ye may,  
Old time is still a flying,  
And this same flower that blooms to-day,  
To-morrow may be dying."

So sang the poet, Robt. Herrick, and, while it is not bad advice, I think it would be better were "scatter" substituted for "gather," as the surest way to achieve that by-all-desired end, happiness, is to help others to be happy. This may be accomplished in many ways, but a certain "open sesame" which leads to the treasure is kindness. It is kindness that prompts us to lend a hand to our overburdened neighbor; kindness suggests that we try to cheer up a friend who is shut-in by illness; and many other such acts, all of them easy of accomplishment, are we reminded of by this gentle monitor. The truest form of kindness, and also the hardest to attain, is kind words. I do not mean the kind words that naturally spring to our lips when all goes pleasantly with us, but the

speaking kindly when the tide is against us and every touch seems but to ruffle us more. It is said that clever people find it harder to speak kindly than do their less-favored brothers, because the temptation to say clever things (which are very seldom kind things) is too much for the average mortal.

But there! I am off moralizing again, while I am sure you would prefer something less sombre; but what shall we talk about? That is for the Guests to decide, for the Nook has been established for them. Our aim is mutual interest, and our motto: "All for each and each for all." It is not necessary to compete in any contest in order to enter our circle—if the Nook interests you, if you have any comments to make upon the articles that appear therein, or suggestions to offer, write and tell us about it. Many good public institutions are said to have failed more from want of approbation than from lack of pecuniary aid, so if you have a kind word to say for us, it will cheer us much to hear it; if a criticism to offer, we shall accept

and try to profit by it. In order to cater to the tastes of our readers we require to know what those tastes are.

MARGARETA.—I am so glad to hear from you again. Do take your big brother's advice and enter the competitions. "Opposition is the life of trade," you know.

By the way, "GREAT SCOTT!" "Why don't you speak for yourself, John?" Many thanks to you and "POSS" for kind remembrances. I think "Infelice" the best of Mrs. Wilson's works—at least, of those I have read.

EUREKA.—You are the right sort of boy, not to stop after paying us one visit. One cannot win every time, but each one's presence gives encouragement to others. I am glad your prize pleased you; some of the winners forget to acknowledge theirs. Contest VIII., announced last issue, will be along the line you wish for.

JENNIE M.—I like to get letters from the competitors, and thank you for yours. I hope the Regiment will be successful in all its aims.

## OUR COMPETITIONS.

The time limit for Contests VI. and VII. will have expired ere this issue reaches many of you, but do not forget Contest VIII., which is something new in our column. See Feb. 20th number for full particulars. Do not forget to state in which class you compete, and write on one side only of paper; that is, as far as work for competition is concerned. Anything not meant for publication may be written on both sides if desired.

THE HOSTESS,  
Ingle Nook Chats, Pakenham, Ont.



"A DIFFICULT TASK."

## "A Difficult Task."

By a common instinct, persons who excel in any work or accomplishment are prone to make light of those who are awkward in the same. A sort of professional pride pervades the whole range of arts, fine and common, and the professionals always have a superior feeling toward the untrained laity. Life itself is a great art and success—therein is a strong temptation to arrogance and superciliousness. But this all-embracing art is divided into numberless tributary arts; every industry or trade or regular employment becomes an art. Thus, housekeeping is an art, as new beginners often find out at serious cost. Sewing also is an art, and an essential feature of this art is needle-threading. If the latter is not in itself an art, most assuredly there is considerable art in it. Now, the great majority of the gentle sex have training enough in this delicate task to be more or less skilled in it; but men, for the most part, are, for want of practice, sufficiently awkward to excite the derision of the feminine expert.

The good-natured man in our picture has rashly allowed himself to be drawn into the service of threading a needle for one of this pair of mischievous girls; or perhaps he recklessly accepted their challenge to essay the task. In any case, we behold him in the midst of the trying ordeal. The girls give him such encouragement as may be derived from tantalizing comments and mocking applause at his painstaking failures. But he keeps his temper and is apparently resolved to succeed at all hazards. He is now drawing a most careful, though rather long-ranged, sight upon the needle's eye, and seems to feel hopeful that this time he

A True Bear Story.

During the fall of '88 my grandfather brought his young wife to Westmoreland's fair lands, where they decided to build their log cabin and make a start in life. In a few years Grandpa had made a large clearing, and also had several sturdy youngsters around him, and among them was a small fellow whom I call father now. One evening an event happened which caused a big commotion in the cabin. They had all retired as usual, with Jumbo, the faithful old dog, sleeping in the kitchen; when about ten o'clock grandpa was awakened by the dog barking furiously; and feeling that something unusual was taking place downstairs, got up and in his excitement forgot to dress. He rushed down the steps, and finding nothing in the kitchen, unbarred the outside door and stepped out into the darkness. What he then saw made his hair stand on end, for before him, not three feet away, stood a large black bear. The good old dog rushed to the attack. This relieved Grandpa for a moment, who seized a club and went out to aid the dog in driving away the uninvited guest. By this time Grandma was roused from her slumbers by the noise, and now she came downstairs, holding the candle over her head. She stood amazed in the doorway and did her best to hold the light so its rays would fall on the queer-looking trio. From time to time she called out, "John, John! Do be careful—don't let him bite you!" While John answered in an encouraging tone, "I hit him, Kate. The dog is giving it to him! My gracious, he almost nabbed me!" By this time the bear had gone round the house several times, in the kitchen door and out of the woodhouse once, Grandma was speechless with terror for fear he would take a notion in his head to go up-stairs, where her darlings were resting sweetly, all unconscious of the danger. But the bear passed on. All this time John had been vigorously using the club and shouting as loud as his lungs would allow, while Jumbo was worrying bruin's heels in an unmerciful manner. After a great deal of shouting and threatening, the bear retreated into the darkness of the night. Grandpa called Jumbo off, and at last entered the house again, to retire after a prayer of praise and a song of thanksgiving for their spared lives and property. You may rest assured that Grandpa and the family were up early the next morning, and great was the surprise and consternation of the children when they learned that dear papa might have been eaten up alive. After an early breakfast Grandpa started in pursuit of the bear; this time armed with a double-barrelled gun. As he went along he called for the neighbors, and soon he had enough men of the forest to tackle old bruin. There was light snow on the ground, and Mr. Bear was soon traced to his lair. It was under the branches of a tree in the graveyard. One bullet from Grandpa's gun put the bear in his death agony. Judging from what transpired, bruin must have thought it was the tree that had hurt him, for he seized it in his dying-struggle and tore it up by the roots. The tree was seven inches in diameter and was strong and thrifty. The men now dragged the bear up to the schoolhouse nearby, and persuaded the schoolmistress to have a short recess in order that the children might look at it. At first they were very much frightened when one of the men told them he (the bear) would bite, but they soon discovered the truth, and Grandpa was the man of the day. While the exhibition of the bear was going on, someone had gone home after a horse and sled. They now arrived, and in due time the bear was taken to Grandpa's barn and skinned. In the evening there was a large social gathering at John Fawcett's, and a roast out of the bear's hind quarters was sliced liberally around, and everybody pronounced it prime. The skin, which measured nine feet from end to end, was stretched on the wall. The poor bear's body showed evident signs of the beating and biting he had received the night before. After some time Grandpa got the skin made into a coat, and he can assure you it keeps him warm nowadays in his old age. Grandpa now has a dozen or so of grandchildren, and nothing pleases him more than to have all around him, their smiling faces showing evident pleasure in the true bear-story he is telling as only grandfathers can. C. F. F.

Grandma's Glasses.

"Freddie, dear, have you seen my spectacles anywhere?" asks the old lady. "Your gold-rimmed glasses, grandma?" "Yes." "What you wear on your nose and see through, grandma?" "Yes; where are they?" "The glasses that grandpa gave you?" "Yes." "For a Christmas present?" "Yes; tell me where they are." "Are they the glasses that you read the Bible with, grandma?" "Yes, yes! I'm getting impatient, Freddie. Get them for me." "The glasses that you read about David and Geriah with, and the three children in the fiery furnace?" "Yes, yes; the same glasses. Tell me where they are at once, Freddie, and quit asking so many questions." "And do you want to read with them now, grandma?" "No; I want to sew." "What are you going to sew, grandma?" "I want to hem a few handkerchiefs." "For me?" "No; for grandpa. Where are those glasses, you little torment?" "You can't sew with the glasses, can you, grandma?" "Why, of course I can. I can't sew without them." "I thought you sewed with a sewing-machine, grandma." "Oh, you aggravating boy! Look right at me! Now tell me where those glasses are?" "Dunno!" "Haven't you seen them lately?" "No'm."

The End of the Whole Matter.

When the Earth's last picture is painted, when the tubes are twisted and dried, When the oldest colors have vanished, and the youngest critic has died, We shall rest (and, faith, we shall need it), lie down for an hour or two, Till the Master of all good workmen shall set us to work anew, And those that are good shall be happy; they shall sit in a golden chair, And splash at a ten league canvas with brushes of camel's hair; They shall have real saints to draw from, Magdalene, Peter and Paul; They shall work for a year at a sitting and never get tired at all, And only the Master shall praise us, and only the Master shall blame, And no one shall work for money, and no one shall work for fame, But all for the joy of the working, and each in his separate star, Shall paint the thing as he sees it for the God of Things as they are. Rudyard Kipling.

A few days ago a sawyer happened to get one of his hands cut, and was taken to the nearest doctor to get it dressed, the doctor found it necessary to put in a few stitches in the cut. In the course of the operation the patient said to the doctor, "My goodness, but you are a rough tailor." "Yes," replied the doctor, "but you are a rougher cutter."

Somebody's Baby.

BY WALDRON W. ANDERSON. I see each morning as I pass A tiny house that's on my way A picture through the glass, A face that haunts me through the day. 'Tis someone's baby there who crows And stretches out his hands to me; He thinks I'm someone that he knows, I'm not, but I should like to be. I'm not the only man who goes Along that street and glances in, But I'm the only one he shows The very slightest interest in. He's taught me one thing that I'd missed, His winning ways a seed have sown, I'd give my freedom to be kissed By such a baby of my own.

A Little Dutch Garden.

I passed by a garden, a little Dutch garden, Where useful and pretty things grew— Heart-sease and tomatoes And early bluish roses, And lilies and onions and rue. I saw in that garden, that little Dutch garden, A chubby Dutch man with a spade, And a rosy Dutch frau With a shoe like a scow, And a flaxen-haired little Dutch maid. There grew in that garden, that little Dutch garden, Blue flag flowers, lovely and tall, And little pink posies— But Gretchen was fairer than all. My heart's in that garden, that little Dutch garden: It tumbled right in as I passed, Mid' wildering mazes Of spinach and daisies, And Gretchen is holding it fast! Hattie Whitney.

Our Daughter's Salary.

Acting upon a suggestion made to me recently, I write this paragraph for the benefit of those parents who, being quite able to afford the expense of a servant, prefer to do without—the bulk of the household duties being performed by their daughter. This is to be commended under certain circumstances, and while certain conditions are observed. But it is scarcely just to expect your daughter to do all the work—both menial and fine duties—without adequate remuneration. A few shillings are given occasionally, or money for a new dress, when absolutely necessary, is handed over, perhaps at an inconvenient time, or when paterfamilias is not in a genial mood; and it is only natural that the hard-working daughter gets a wee bit disheartened and envies those of her companions who, being employed at office or shop, are in receipt of a regular salary—even if small. My idea, encouraged by my friend's remarks, is that the daughter, if willing to do the work which a servant would otherwise perform, is entitled to the same wage or salary. It should be arranged as a matter of business, and the salary paid with the same punctuality as it would be in the case of the servant's wages. The advantages of this plan are manifold. The girl will work with greater zest, and taking more interest in domestic matters, will make a well-managing housewife in the future. She will be able to keep herself neatly and appropriately dressed for her work, and will have, if she be a careful girl, a little sum in hand. It will teach her, also, to value each article she purchases, and to lay out her income to the best advantage—a matter of no small moment in the future, when she has the welfare of husband and children to consider.

True Rest.

Rest is not quitting The busy career; Rest is the flitting Of self to one's sphere. 'Tis the brook's motion, Clear, without strife, Fleeing to ocean After this life. 'Tis loving and serving The highest and best; 'Tis onward, unswerving, And this is true rest.

Don't growl

About the weather, For easier 'tis you'll find To make your mind to weather Than weather to your mind.

Don't growl

About the sermon, And show your lack of wit, For, like a boot, a sermon hurts The closer it doth fit.

Don't growl

About your neighbor, For in your neighbor's view His neighbor is not faultless That neighbor being you.

Good Manners.

Good manners are a social obligation, and young men take note, if you would be popular with the gentler sex, to never make light of them nor pass them over as unworthy of notice. To be good-mannered generally means to have consideration for women of every rank, and that is a quality which young men cannot possess too strongly. Of course, I do not mean the extreme manners of the fop, which I think both silly and unnecessary, and which every sensible girl would resent.

The Sense of Proportion as Applied to Housework.

Once in conversation with a fellow-worker, we spoke of a third—a woman who had accomplished much that was of merit along the lines of literary and club work, but had been obliged to give it all up or break down entirely. She had given of her time and strength in this work to such an extent that there was no alternative. Expressing my regret that the public should lose so intelligent a worker, my companion responded by saying, "The trouble with Mrs. — was that she had no sense of proportion. She would expend as much thought and nervous force over the most trifling thing which she had to do as she would over the most important. With such demands upon her, no wonder she broke down."

I have often applied this idea to the women I have seen wearing themselves out over trifling things, leaving themselves no reserve with which to meet those of greater importance.

Of course there is a grand standard, an heroic standpoint, from which we can argue in a general way, that whatever is worth doing at all is worth doing well, and that no duty, however small or insignificant it may be, should be slighted in its performance. But I know that from the depths of their hearts many women will agree that if they had their lives to live over again, there would be many things relegated to the background that in their younger days they considered of the greatest importance. When work and cares have multiplied, as the family grew larger, absolute inability to find time to do some things has shown that they were not necessary.

I have seen a woman stand at an ironing-table on a hot summer day and iron ruffled dresses for her little girls when I knew every bone in her body ached, and every nerve was at its highest tension, when just outside the door the little girls swung in lazy, shady comfort in a hammock. If this mother had even a rudimentary sense of proportion, those dresses would have been made without tuck or ruffle, and she would have been using her time, wasted in ironing, out with the children giving herself a restful hour, which was only her just due.

Other women will refuse to use a harmless washing fluid, and fairly rub the clothes to rags, because they say such things make the clothes wear out sooner, never seeming to take into consideration their own inevitable wearing out. No importance is attached to this until too late, when used up tissues can never be replaced, and the lines graven in the countenance by overtaxing the strength can never be effaced.

Has a woman who does her own work, with never any time for recreation, any sense of proportion who will load her sideboard with plated ware, and then spend hours polishing it, or bewail its tarnished appearance, when china or glass can be washed to a point of brilliancy in a quarter the time, and also fill the bill in every respect of beauty and daintiness?

Has she any discrimination as to "values" when she will buy some dust-catching, useless ornament, when the tea-kettle leaks, and her array of cooking utensils, by their appearance, easily betray their ancient origin?

The woman with a sense of justice, which is only another way of putting it, rightly argues that what is best for her—for her comfort and strength—is best for her family, and that if she cheats herself of the one and wears out the other, she is doing a wrong to others, that no so-called self-sacrifice on her part can offset.

Impatient words, the offspring of irritated, overstrained nerves, can never be counteracted by an extra fine lot of pastry—neither can harshness begot of utter weariness be antidoted by the most immaculate order in the house.

Let the girls do with one less feather in their hats, using the money for stockings, allowing mother the time spent in darning and re-darning those very useful but too-much-worn articles, for a little trip to town, or walk afield, where she may "consider the lilies," etc., and follow their example in toiling not, for a brief restful space. MARY SARGENT HOPKINS.

The Bostonian's Revenge.

A gentleman in Boston received a telegram, the other day, from a friend who had, some time before, gone to California on business. Expecting it to contain important news, he paid the charges—for it came "collect"—and hastily tore it open, to read the words "I am quite well," with his friend's signature. Annoyed at the trick that had been played upon him, he secured a good-sized block of granite, packed it in a case, and sent it by express to the traveller's address in San Francisco—charges not prepaid. The latter, never doubting that the heavy package contained something of value, paid several dollars to have it delivered at his office. When he opened it he read, upon a label attached to the stone: "This is the load of which my mind was relieved when I received the news you sent me as to the condition of your health."

Humorous.

Two countrymen who had not seen each other for a long time met at a fair. They had a lot to tell each other. "Sure, it's married I am," said O'Brien. "You don't tell me so!" said Blake. "Faith, yes," said O'Brien, "an' I've got a fine healthy boy, who the neighbors say is the very picture of me." Blake looked for a moment at O'Brien, who was not, to say the least, remarkable for his good looks, and then said "Och, well what's the harm so long as the child's healthy?" One day a county gentleman, being late for the train, took a near cut across a turnip field, where the farmer was working. The gentleman was accosted by the farmer, who, none too politely, told him "to git out o' his neeps." "How dare you talk to me like that, sir?" replied the gentleman, haughtily. "Are you aware that I am one of the Foulds (pronounce Fall-s) of Cargill?" "I'm no carin' tho' yer the Falls o' Niagara; git out o' my neeps."

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THE PRICE OF THE POST IS **\$3.00**. IT CANNOT BE PURCHASED UNDER THIS PRICE ANYWHERE.

The patentee has a hard-and-fast agreement with the trade and agents that \$3 shall be the lowest retail price. By a special agreement we are in a position to make

**A Great Offer:** We will send one of these pens to anyone who sends us three new subscribers, accompanied by \$3.00 in cash.



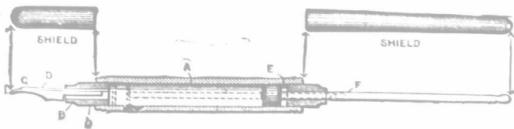
General Lew Wallace, the author of the greatest book of the age, "Ben Hur," also "Prince of India," "Commodus," etc., says in a letter in his own handwriting: "The fountain pen, Post, was received, and I have taken the liberty of trying it thoroughly. Please accept the excuse for failure to acknowledge sooner. "I have tried every pen of the kind on the market, and now unhesitatingly give the preference to the Post. It not only feeds itself with less care, but has the immeasurable advantage of re-supply without inking the fingers. I do all my work with it."

*Lew Wallace.*

TO show our confidence in this pen, we will send you one on trial for a week upon receipt of \$1.00, which, if not entirely satisfactory, you can return to us and we will refund you the \$1.00 paid us. If satisfactory, you must send us the names and addresses of the three new subscribers and \$2.00 additional cash.



THE only self-inking and self-cleaning pen manufactured in the world. To fill the pen, put the nib in ink and draw the piston rod up. To clean, put the nib in water and draw the piston rod backwards and forwards a few times.



A, Barrel; B, Nozzle; C, Pen; D, Feed; E, Plunger; F, Rod.



The world's greatest singing evangelist, who has thrilled thousands and tens of thousands, now raises his voice in praise of the Post Fountain Pen.

Mr. Sankey sends the following characteristic letter: "I have used the Post pen for some time, and have had great satisfaction with its use. It never fails or gets cranky. One can at least have clean hands by using the Post, whatever the heart may be."

*Ira D. Sankey.*

The Wm. Weld Co., Ltd., Winnipeg.

## Want a Good Watch?

WE have succeeded in procuring from one of the most reliable jewelers in Canada a complete list of Gents' and Ladies' Watches of sufficient variety to suit every one, and have no hesitation in recommending them to our readers as premiums worthy of an effort to secure. These are not by any means the same class of goods as are hawked around fair grounds, but first-class in every particular, and we assure you that you will be pleased with whatever of the above premiums you may obtain. Let us hear from you at an early date with a good list of new subscribers accompanied by the cash, and take your choice.

### Gents' Watches.

No.	Description	New Subscribers.
No. 1.	Yankee Nickel Watch.....	2
No. 2.	Trump Nickel Watch.....	4
No. 3.	Trump Gun Metal Watch....	5
No. 4.	No. 14 Silver Watch.....	8
No. 5.	7 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	10
No. 6.	7 Jeweled Gent's Elgin in Gun Metal Case.....	11
No. 7.	7 Jeweled Gent's Elgin in Sterling Silver Case.....	14
No. 8.	7 Jeweled Gent's Elgin in 20-year Filled Case.....	18
No. 9.	7 Jeweled Gent's Elgin in 25-year Filled Case.....	21
No. 10.	15 Jeweled Gent's Elgin in 3 oz. Nickel Case.....	15
No. 11.	15 Jeweled Gent's Elgin in Gun Metal Case.....	15
No. 12.	15 Jeweled Gent's Elgin in Sterling Silver Case.....	18
No. 13.	15 Jeweled Gent's Elgin in 20-year Filled Case.....	21
No. 14.	15 Jeweled Gent's Elgin in 25-year Filled Case.....	25

### Ladies' Watches.

No.	Description	New Subscribers.
No. 15.	Gun Metal Swiss Chatelaine.....	4
No. 16.	Sterling Silver Swiss Chatelaine.....	5
No. 17.	Nickel American O. F., large size.....	5
No. 18.	Gun Metal American O. F., large size.....	5
No. 19.	Nickel, small size.....	9
No. 20.	Gun Metal, small size.....	10
No. 21.	Sterling Silver, small size.....	10
No. 22.	7 Jeweled Elgin in 20-year Filled Hunting Case.....	20
No. 23.	7 Jeweled Elgin in 25-year Filled Hunting Case.....	22
No. 24.	15 Jeweled Elgin in 20-year Filled Hunting Case.....	23
No. 25.	15 Jeweled Elgin in 25-year Filled Hunting Case.....	25

### Description of Watches.

The accompanying cuts fairly well represent all the Ladies' and Gents' Watches, and a description of each as numbered is as follows:

No. 1. American Nickel Key-wind Boy's Watch that is absolutely guaranteed to keep good time and give satisfaction.

No. 2. Gent's Nickel American O. F. Watch; stem wind, and push-in stem and turn to set hands. This is a very strong, reliable Watch.

No. 3. Same as No. 2, excepting that it has Gun Metal case instead of Nickel case.

No. 4. Is a smaller-sized Gent's Watch, has sterling silver case, O. F. Screw Back and Bezel; stem wind, and push-in stem and turn to set hands. This is the lowest-priced and most reliable Boy's or small Gent's Silver Watch that is on the market.



No. 5. Is fitted with 7-Jeweled Nickel, first-quality Elgin movement. The case is a 3-oz. O. F. Nickel case; stem wind and set; screw back and bezel case.

No. 6. Same movement in Gun Metal or Black Steel screw back and bezel case.

No. 7. Same movement with Sterling Silver O. F. screw back and bezel case.

No. 8. Same movement in 20-year guaranteed Gold Filled O. F. screw back and bezel case.

No. 9. Same movement in 25-year guaranteed Gold Filled O. F. screw back and bezel case.

Nos. 10, 11, 12, 13 and 14 are fitted in the same style of cases as Nos. 5, 6, 7, 8 and 9; the difference is in the movement, and the movement is 15-Jeweled Nickel, first-quality Elgin movement.

No. 15. Is a small-sized Swiss O. F. Gun Metal Chatelaine Watch.

No. 16. Is the same, only with Sterling Silver case, which can be had nicely engraved.

Nos. 17 and 18 are a good-quality American Watch, O. F. stem wind, and push-in stem and turn to set hands. These are a little larger than the usual Ladies' Watches, and are smaller than the usual Boys' Watches, though can be used for either Boys, Girls or Young Ladies.

Nos. 19, 20 and 21 are small sized; in fact, are the exact size of cut. These are American Watches, O. F. stem wind, and push-in stem and turn to set hands, and are first-class timekeepers. Will give perfect satisfaction.

If a nice leather wrist case is desired with these watches, send two extra subscribers.

Nos. 22, 23, 24 and 25 are similar to the accompanying cut. These are regular Ladies' Hunting Watches. Nos. 22 and 24 are fitted in 20-year guaranteed Gold Filled cases, nicely ornamented, or to be had in plain or plain engine turned, and the same applies to Nos. 23 and 25, excepting that they are fitted in 25-year guaranteed Gold Filled cases, and 14k Gold Filled; 22 and 23 are fitted with 7-Jeweled Nickel, first-quality Elgin movements. Nos. 24 and 25 are fitted with 15-Jeweled Nickel, first-quality Elgin movements.

When making your choice of Watch as premium, be sure to mention its number as given in premium list, also whether Lady's or Gent's.

THE WILLIAM WELD CO., LTD., WINNIPEG, MAN.



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GOSSIP.

The Shire stallion, Indiana, has been sold by H. Byers, Macgregor, to Wm. Crothers of Pipe stone.

J. G. Barron has added to his stock four Shorthorns from the herd of Jas. Douglas, Caledonia, Ont.

Brown Bros., Portage la Prairie, have bought the noted prizewinning Clydesdale stallion, Prince of Edengrove, by Patricia, from Alex. Galbraith, Janesville, Wis. We shall have something to say of this horse later.

Mr. George Hanby, for years a large breeder of Light Brahma fowls in Winnipeg, advertises prizewinning stock and eggs this issue. Mr. Hanby informs us that he won first prize on breeding pen at last Winnipeg Industrial Exhibition in strong company, and has a very large stock of this fowl on hand now. The foundation stock of these pens were imported from prominent breeders in the United States.

A recent visit to the Marchmont Stock Farm, by one of our staff, showed that that noted nursery of pure-bred stock is still to the fore. Veterans of the showring, matrons whose names are household words in Shorthorn circles, are there in numbers, bred to type, and capable of getting the heavily-fleshed, blocky, early maturing Scotch type of heifers so much desired for the market. Mr. Lister has several likely young bulls of serviceable age for sale now, and will have something to say, shortly, of interest to our readers, regarding the recent purchases of high-class imported stock at John Isaac's recent sale.

H. O. Aycarst's Shorthorns were found to be in a thrifty condition at a late visit. The Shorthorns are being made to earn their keep, as we noticed a U. S. separator in position at the homestead to take care of the milk. One day's recent production by one of the herd was 33 lbs. milk, testing 4.2 per cent. fat. Sales have been made recently to parties in the N. W. T. A span heifer attracted our attention by reason of her evenness of covering, wide back, well-sprung rib, good handling, and femininity, and we should not be surprised if the Crimson Flower heifer by President (imp.) is heard from at the fairs.

Alex. Galbraith, who delivered addresses at the Horse Breeders' Convention in Winnipeg, gave us the following notes of his stud at Janesville, Wis.: "Horses are all wintering splendidly. I have 18 stallions on hand at this date, two-thirds Clydesdales, balance Shires, Suffolks, Percherons and Hackneys. Have both imported and home-bred animals, all ages from 2 to 7 years old. Extra good demand from the Western States, and also from Manitoba and N. W. T., this winter. Sold the great prizewinning Clyde stallion, Laminated Steel, that took first prize at the International Show at Chicago, but still have many others equally good, including Cloth of Gold and Premier Prince. Catalogue sent on application."

Mr. Wm. Martin, proprietor of the Hope Farm, St. Jean Baptiste, Man., makes an announcement in this issue in his advertisement which it would be well for all intending purchasers of Galloway cattle to read. Mr. Martin informed us that his recent importation, comprising 21 head, are as good a lot of Galloways as he ever imported, among them being the two-year-old bull, Mogul, first-prize yearling at Chicago last year, and first at Iowa and Minnesota. The yearling bull, Ensign, was third prize at Chicago International Exhibition in 1900. Three yearling bulls, which Mr. Martin considers the best representatives of this breed ever brought into this Province, are sired by the celebrated Galloway bull, Speculator, champion bull of any age at Chicago. This bull also headed the first-prize herd at the World's Fair, and holds the record for taking more championship prizes than any one bull in the United States. All the importation were tested with tuberculin by a U. S. veterinarian before crossing the lines, and all passed the test and were pronounced sound and healthy.

John A. Turner, of Balgroggan Stud Farm, has just shipped to the West five very good young Clydesdale stallions and a Hackney, from two to four years of age. They were mostly purchased from Messrs. Sorby, John Miller & Sons and Graham Bros. They include Lord Roberts [251]. He is consigned to the Canadian Land & Ranch Co. He is a beautiful large, smooth coat of good breeding, and a prize-winner, being placed first in his class at Toronto Industrial Exhibition, as well as sweepstakes for the best Clydesdale stallion any age bred in Canada. His sire is young Macqueen 2260, dam by Queen's Own, a Prince of Wales (635) bred horse, who has won many championships. No. 2 Prime Minister: Mr. Neil Martin, Regina, is fortunate in securing this horse. He is a large, smooth, good roll, rising two years old, standing on the best of feet and legs and goes right. He will undoubtedly be heard of in the showring under Mr. Martin's care. He also has consigned to him a four-year-old stallion, Highland Sandy, of good breeding and plenty of bone, and should make a good season amongst the farmers in his neighborhood. Messrs. Alex. & Geo. Mutch, Lumsden, Assn., get the beautiful filly registered as Charming Star [273]. bred by H. & O. Sorby and sired by the exceptionally good breeding horse, Lord Charming, dam the many times sweepstakes filly, Starlight [275]. This filly herself was first-prize winner at Toronto Industrial last fall. With this one, and the many other good females the Mutch Bros. have already purchased from Mr. John A. Turner, as well as Prince Stanley at the head of their stud, they should have a breeding establishment equalled by very few in the West. Amongst the others in the car are Woodlands Azilite, a very handsome large young Hackney, bred by D. & O. Sorby, which is just the type of a horse to raise military horses from when crossed with well-bred mares. His sire is Woodlands Performer, dam Imported Mable, Clifton, a very compact brown two-year-old Clydesdale, sired by Young Macqueen, dam by Queen's Own; bred by Graham Bros. is also in the lot.

A very good Shorthorn bull was consigned to the Canadian Land & Ranch Co. to head their numbered herd. He is registered Scottish Prince, and purchased from Jas. I. Davidson, Belsam. A fine lot of Shropshire ewes (all in lamb) and a ram were purchased from Hon. John Dryden. Mr. Turner has another car of young stallions and fillies which will leave for the West in April, particulars of which will be given later on.

# Some Plain Facts About the CREAM SEPARATOR AWARDS AT THE PARIS EXPOSITION.

THE very nature of the cream separator business is, perforce, productive of fraudulent claims and misrepresentation of facts. In the first place, every would-be competitor of the De Laval machines has virtually stolen the ideas which they employ in separator construction, or else appropriated them from the original patents which expired several years ago. In the second place, if the would-be competitors of the De Laval machines were to stick to the truth in the claims made for their machines, they would not sell one in a month at any price, as each of them knows and will privately concede the overwhelming superiority of the modern De Laval machines, which protecting patents prevent them from duplicating in principle, and low price together with small sales make it impossible for them to approach in quality and durability of construction.

Hence, there is nothing strange in the misrepresentation and contortion of facts respecting the Paris Exposition awards upon separators, and the misrepresentation in this regard is fairly illustrative of that practiced in other respects in practically every separator circular or advertisement put out.

There were five grades of awards at the Paris Exhibition: 1st Grand Prize, or highest award, which was confined to one or two exhibits of undubitably superior excellence and great usefulness in each class; 2nd Gold Medal; 3rd Silver Medal; 4th Bronze Medal, and 5th Honorable Mention—all of these awards below the Grand Prize being awarded rather for the novelty and attractiveness of the exhibit rather than as a testimonial to the excellence of the device or article itself, as in the case of all large exhibitions.

Only two Grand Prizes were awarded to cream separators—one to the De Laval machines and the other to a duplication of the De Laval machines, made under another name, but not known or on sale in this country or in any other where the De Laval "Alpha-Disc" machines are patented.

The lower awards were a Gold Medal to the "Sharples" and "U. S." machines, together with two makes of foreign separators; a Silver Medal to five makes of foreign machines; a Bronze Medal to the "American" separator, and Honorable Mention to one foreign make of machine.

One of our competitors was advised by the Department of Agriculture, at Washington, that "a" cream separator sent to Paris by him had received "a" gold medal, and ever since he has been advertising and circulating what purports to be a copy of this letter so garbled and virtually forged as to read that "the" cream separator sent by him had been awarded "the" gold medal; while in addition he has also advertisingly referred to it at times as the "Grand Prize."

Another competitor publishes the fact of their having received a Gold Medal at Paris in conjunction with the cut of a cup won by some buttermaker at a State fair over a year ago, together with the assertion that the prize they received was the highest award made to any cream separator "manufactured in the United States." This is a technical contortion of the fact that the European De Laval machines are made in Europe, though precisely identical in principle and construction with the American-made ones, the American machines being considered superior in finish to the European-made ones.

Another competitor advertises the claim of having "captured" the "only" Grand Prize awarded at Paris to a separator of "purely American manufacture," with no other foundation than the fact that a machine of similar construction to the one in question, but made wholly in Europe and under a different name, was a small part of a general creamery and dairy apparatus exhibit made by a French creamery supply house, which collective exhibit was awarded such a prize.

In conclusion, it is interesting to note that the De Laval Working Dairy at Paris was awarded a Gold Medal, in addition to the Grand Prize to the De Laval Cream Separators, and that the only Grand Prize award to American-made butter was to Sam'l Haugdahl, of New Sweden, Minn., a well-known user of a De Laval machine.

## THE DE LAVAL SEPARATOR CO.

Western Canadian Offices, Stores and Shops:

248 McDERMOT AVE. - - WINNIPEG, MANITOBA.

CHICAGO.

NEW YORK.

MONTREAL.

### NOTICE.

**The Chilean Nitrate Works.**—The average man has but a faint conception of the magnitude of the nitrate works carried on in Chili, South America, and the enterprising devoted to the preparation of this great fertilizer. The very best representation we have ever seen of the subject is the photographic album sent out (through Dr. John A. Myers, 12-16 John street, New York) by the Nitrate Association of Propaganda, Iquique, Chili, containing no less than 53 large and beautiful views, showing a general scene of the nitrate-beds or grounds and works, boring test holes into the rock below the surface, blasting a test hole, quarrying the caliche—in fact, the entire process of manufacture concluding with panoramic views of the great ports such as Pisagua, Junin, Caleta Buena, Tocopilla, Antofagasta, Taltal and Iquique, and great flotillas of vessels engaged in the export trade to various quarters of the world. Judging from the nature and extent of these works and the vast capital invested, the promoters do not, on the one hand, entertain any fear of the immediate exhaustion of the nitrate-beds, as fore-shadowed by some pessimistic thinkers, or, on the other, of any diminution in the demand for the fertilizing products, such as nitrate of soda, but rather an increase. The volume before us is substantially bound, and a beautifully-executed specimen of the photo-engraver's art.

Carberry Plains need 200 farm laborers by April 1st. "Oh, what will the harvest be?"

J. S. Little, Twin Grove Stock Farm, Oak Lake, Man., writes: "Enclosed find a change in my advertisement; it have made several sales, the result of advertising in the columns of the FARMER'S ADVOCATE. Have now on hand for sale my stock lot, two years old, and a sow one year old. Have for sale, at \$6 apiece, three hours and one sow, out of a litter just arrived."

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

### The Farmer

Can Reduce Expenses

of cultivation by the judicious use of

Nitrate of Soda

upon his land. This when properly applied, with other elements of plant food, never fails to largely increase the yield of hay, grain, or garden crops, without additional cultivation or labor. Our literature and list of dealers in Nitrate of Soda will be sent free on application to **John A. Myers, 12-R John St., New York City.**

**TORONTO PHOTO ENGRAVING CO.**  
92 BAY ST  
CUTS BY ALL PROCESSES  
LIVE STOCK A SPECIALITY.

STAY AT HOTEL LELAND

The Leading Hotel of the West. ALL MODERN CONVENIENCES. RATES, \$2 to \$1 PER DAY. OMNIBUS MEETS ALL TRAINS. W. D. DOUGLAS, Prop., Winnipeg, Man.

J. E. SMITH.



J. E. SMITH offers for sale 45 Shorthorn bulls (all ages), a number sired by Lord Stanley 2nd 22260, some imported from Ontario. All this year's crop of Golden Measure (imp.) bull calves are sold. 40 Shorthorn heifers, from 6 months to 2 years old. 60 Shorthorn cows, all ages. A few young Clydesdale stallions and Clydesdale mares and fillies of all ages for sale. Everything for sale, except my stock bulls, Lord Stanley 2nd and Golden Measure (imported), and the Clydesdale stallion, Prince Charles (imported). Come and see the stock. J. E. SMITH, Smithfield Ave., BRANDON, MAN., Box 274.

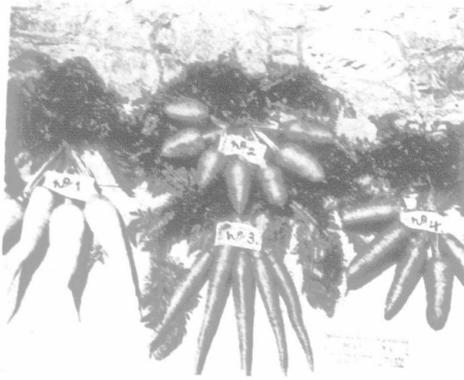
### Clydesdales and Shorthorns.



Young stallions, bulls, and heifers. Herd headed by Best Yet—14371—and Mint-horn—2484—bulls bred by Hon. John Dryden and H. Cargill & Son. PRICES ON APPLICATION. D. McBeth, Oak Lake, Manitoba

IT PAYS TO ADVERTISE IN THE FARMER'S ADVOCATE.

# Fleming's Manitoba Seeds



Are better suited to this northern climate, and more productive, than any other kind. We select our varieties upon the special experience of the Experimental Farm, from which we get a report yearly. This year we have added several new varieties to our list, which will be found especially good. We have hundreds of letters stating that those who have used

**FLEMING'S SEEDS** have had the very best satisfaction, and you could not pay many of these people to use any other kind. We give special rates to clubs and societies who wish to order together. Write us for our catalogue and clubbing rates. Address all communications to

**FLEMING'S SEED STORE,**  
DEPARTMENT B. BRANDON, MANITOBA.

## THE BIG FOUR. GREAT PREMIUM PICTURE OFFER.

For obtaining new subscribers to the "Farmer's Advocate" at \$1.00 per year.

**"Canada's Ideal"**—Admitted by judges, breeders and artists to be the most magnificent engraving of high class modern Shorthorns ever issued in any country. 24 x 36 inches. Twelve animals.

**"Canada's Pride"**—Nine celebrated draft horses.

**"Canada's Glory"**—Eleven celebrated light horses.

**"Canada's Columbian Victors"**—13 celebrated Ayrshire cattle.

Your choice of any one of the above for ONE new subscriber, or all four beautiful pictures for only three new subscribers.

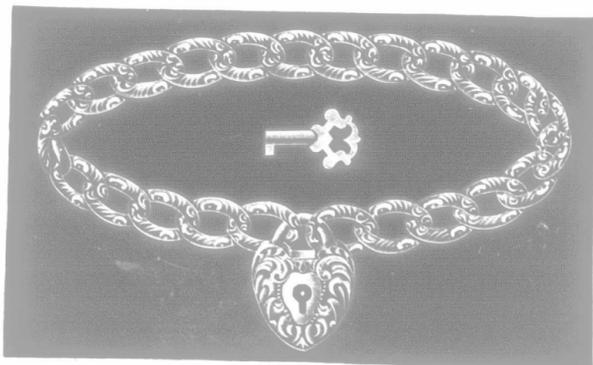
## Bagster's NEW COMPREHENSIVE Teacher's Bible,

Containing the Old and New Testaments, according to the authorized version, together with new and revised helps to Bible study—a new Concordance and an indexed Bible Atlas, with SIXTEEN FULL-PAGE ILLUSTRATIONS, PRINTED IN GOLD AND COLOR.

### HOW TO OBTAIN IT—

Would retail at from \$3 to \$4. We will send (carefully packed, post paid) this Bible to anyone sending us the names of TWO NEW SUBSCRIBERS to the FARMER'S ADVOCATE at \$1.00 each.

Handsome Curb-link Silver Bracelet with Padlock and Key.



For 2 new subscribers. For each additional new subscriber, two Sterling Silver Friendship Hearts.

Write for a sample copy of the Farmer's Advocate, and begin to work for these premiums right away. In every case cash must accompany the new names.

The William Wells Co., Ltd., Winnipeg.

First prize for Creamery Butter, Toronto and Ottawa. The highest awards for World's Fair, Chicago.

## Winnipeg Creamery and Produce Co.

LIMITED.

CAPITAL STOCK, \$50,000.

S. M. BARRE, MANAGER.

Dealers in DAIRY SUPPLIES AND PRODUCE.

238 AND 240 KING STREET.

Owing to the large increase in all departments of our business, we have organized a stock company with sufficient capital to meet all business requirements. We are now open to receive consignments of all kinds of farm produce, including butter, cheese, eggs, poultry, etc. Our creamery will be operated all winter, and farmers would do far better to send us cream than to make butter.

For further particulars please address: S. M. BARRE, MANAGER, Winnipeg Creamery & Produce Co., Ltd.

## Clydesdale Horses

for sale.



Three young stallions, bred from the best strains in America and all first-class quality. Also 15 head of first-class grade Clydesdale geldings, from good grade mares, and sired by imported Clyde horses.

A. & G. MUTCH.

Craigie Mains. Lumsden P.O., Assa.



"What a Wise Old Chap!"

He has left his hide in good hands. Send for our circular in reference to custom tanning. We send samples of work with circular.

CARRUTHERS & CO., TANNERS.

and dealers in hides, wool, sheepskins, furs, tallow, etc. 9th Street, Brandon, Man.

## FOREST HOME FARM SHORTHORNS



Cows and heifers, prizewinners at Winnipeg and Brandon Fairs, and others equally good. Yorkshire pigs—a few choice ones of both sexes. B. P. Rock Cockerels—large, strong, well-marked birds. First orders received get the choice.

Carman, C. P. R.

Roland, N. P. R.

ANDREW GRAHAM, Pomeroy, Man.

## MAPLE GROVE STOCK FARM.

70 young SHORTHORN BULLS, by a son of Indian Warrior. Also a few choice heifers. Lord Stanley 25 29217 at head of herd. Write

WALTER JAMES, ROSSER, MANITOBA. 15 miles west of Winnipeg, on main line C.P.R.

## BULLS FOR N.W.T.

Arrangements have again been made by the Pure-bred Cattle Breeders' Association of Manitoba whereby pure-bred bulls will be shipped from Manitoba to the Territories under arrangements with the Territorial Government. Apply to Department of Agriculture, Regina, for conditions, etc. Freight charges only \$3.00 per head. Cars will be dispatched as soon as sufficient animals are booked. The Association can confidently recommend parties desiring to purchase stock to place their orders with Mr. William Sherman, Souris, Man., who will again take charge of the shipments.

GEORGE H. GREIG,

Secretary Pure-bred Cattle Breeders' Association.

ANDREW GRAHAM, President, Pomeroy, Man.

Note: Buyers should keep Mr. Sherman posted as to their sale.

## D. FRASER & SONS,

EMERSON, MAN.

Breeders and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale. 9-y-11

## LUMP JAW MASTERED

Stockmen killed their Lump Jawed Cattle, or saw them die by inches, until Fleming's Lump Jaw Cure demonstrated that the disease was easily cured. If you have a case in your herd, we wish to show you how quick it can be cured with this remedy. No cost if it fails.



Annan, Ont., Nov. 7, 1909.

Fleming Bros., Sirs—Please forward by return mail one bottle of Lump Jaw Cure. I have cured three cases of Lump Jaw and have two more well under way to cure, from one bottle. Find enclosed \$2. Yours, etc., JOHN C. McLAREN.

Price \$2, or three bottles for \$5. At your druggists, or sent prepaid by mail. Our pamphlet—free to readers of this paper—tells how to remove bunches or lumps of every sort from cattle or horses.

FLEMING BROS., Chemists Room J, 58 Bay Street, TORONTO, Ont.

## NO SPAVINS

The worst possible Spavin can be cured in 45 minutes. Curbs, Splints and Ringbones just as quick. Not painful and never has failed. Detailed information about this new method sent free to horse owners. Write to-day. Ask for Pamphlet No. 1.

FLEMING BROS., 58 Bay St., Toronto, Ont.

## Shorthorns.

Two young bulls—one by Imported Knuckle Duster, one by Lord Loosie 22nd.



Yorkshires.

Ten choice boars ready for service. Also some young sows. All from prizewinning stock.

JAMES BRAY, LONGBURN, MAN.

## HOPE FARM Galloways

**SPECIAL NOTICE!** In supplying some of our Western friends with their requirements of Galloway bulls for this season, we have taken the opportunity of buying from the best herds in the United States a few extra good yearlings and two-year-old bulls, among which are prizewinners at the Chicago and Iowa and Minnesota fairs in 1900. Greatest opportunity ever offered Western men to get Silver Medal stock. No culls. For prices and particulars apply to

T. M. CAMPBELL, Manager Hope Farm. ST. JEAN BAPTISTE, MAN.

**WILD AND IMPROVED LANDS FOR SALE.** Several good farms at present for sale, or rent, in the celebrated Edmonton district. All improved. Terms reasonable. Apply for information to O. C. PEDERSON, Box 185, Strathcona, Alta.

PLEASE MENTION FARMER'S ADVOCATE.

# Queenston Heights Stock Farm Shorthorn Cattle.

Eight young bulls for sale; any age, any color. Three sired by Royal Standard 27653, by Judge 23419. Well known as winners at Toronto Industrial and Winnipeg. Also good cows and heifers: straight Scotch crosses.

Isaac Usher & Son, Queenston, Ont.  
Manufacturers of Queenston Cement.

**SHORTHORNS, YORKSHIRES AND TAMWORTHS.** Stock of all ages and both sexes, at prices according to quality. Write **W. G. STYLES, ROSSER P. O.,** SEC. 12-13-1, WEST, C. P. R.

**SHORTHORNS FOR SALE** of Scotch breeding, seven bulls and forty cows and heifers, mostly all in calf or calf at foot. A few Clydesdales of both sexes. **Geo. Rankin, Melrose Stock Farm, Hamiota, Man.**

## Thorndale Shorthorns.

**24 BULLS,** under one year, and about **100 FEMALES,** of all ages, to choose from.

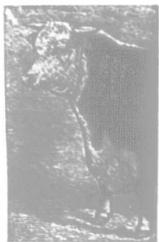
**JOHN S. ROBSON, Manitou, Man.**

### LAKE VIEW RANCH

## Herefords and Galloways

Young bulls for sale. For prices write

**J. P. D. Van Veen, FILE HILLS P. O., N.-W. T.**



### POPLAR GROVE HEREFORDS.

Champion herd of Western Canada.

Best beef cattle in the world. Sturdy young bulls for sale. Also cows and heifers. Nearly 100 head to select from. A few choice Light Brahma cockerels for sale.

**J. E. MARPLES, Deleau, Manitob.**

## JERSEYS FOR SALE

If you want a first-class family cow, or want a few to start a herd of pure Jerseys, come and see my herd or write me. A lot of the daughters of old Massena (900 lbs. butter a year). Two bulls. All registered in A. J. C. C.

**J. B. POWELL, Wapella, Assa.**

## Roxey Stock Farm,

BRANDON, MAN.

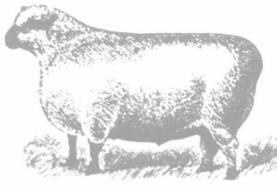
**J. A. S. MACMILLAN,**

IMPORTER AND BREEDER OF PURE-BRED

## Clydesdales, Shires, Hackneys.

STALLIONS AND MARES.

Shorthorn Cattle



Shropshire Sheep

INSPECTION INVITED.

CORRESPONDENCE SOLICITED. **Prices Right.** TERMS EASY.

FULL PARTICULARS ON APPLICATION.

APPLY **P. O. BOX 403.**

## YORKSHIRES.

Farmers who keep pigs might just as well keep good ones. Once purchased, they are easier kept and give better returns than poor animals. Now is the time to improve your stock. Seven choice young hogs and some fine sows for sale. Address:

**KING BROS., WAWANESA, MAN.**

## TWIN GROVE FARM.

Young Yorkshire pigs, stock boar two years old, and year-old sow. Prices still lower. Also Buff P. cockerels. Write

**J. S. LITTLE, Proprietor, Oak Lake, Man.**

PLEASE MENTION FARMER'S ADVOCATE.

# Seeds 1901

SEND TO **KEITH & CO.,** WINNIPEG, MAN.

Catalogues mailed on application. P. O. Box 456.

## 320-ACRE FARM FOR SALE.

South half Sec. 6, Tp. 16, R. 29, w.

290 acres thoroughly fenced and subdivided with three wires; 150 acres under cultivation; 56 acres summer fallowed the past season, and 15 acres of fall plowing, ready for wheat in the spring. The farm has been worked on the 3-year rotation system, summer-fallowing one third every year, and land in first-class state of cultivation, yielding from 40 to 45 bushels wheat per acre. There is quite a large portion in virgin prairie, with bluff of good young poplar on it. Frame house, lathed and plastered twice, making two dead-air spaces, and well-finished in every respect. Main part, 20 x 30 ft., containing dining-room, kitchen, pantry, and hall, downstairs; 4 bedrooms and linen cupboard upstairs; and a lean-to on north side, 10 x 30 ft. There is a good stone cellar, with brick partition, under house. House cost \$1,200, not counting labor of drawing sand, stone, etc., and finishing. Stable, 26 x 40 ft., concrete; hayloft above, and frame implement shed, 15 x 40 ft., on north side. Henhouse, frame; pigpen, frame. Page-fence yard. Granary, 22 x 31 ft. All shingle-roof buildings: one frame stable, 22 x 15 ft., with sod roof. There is also a never-failing well. Seed and feed can be bought by purchaser at market prices. Situation: 17 miles from Moosomin; 3 miles from church and school. The N. W. C. R. R., whose present terminus is 25 miles east, is expected, during the coming summer, to run within 3 miles of the farm.

This is undoubtedly one of the best opportunities of obtaining a grand homestead at a moderate price.

For further particulars apply to

**G. R. Collyer, or G. P. Collyer, Welwyn, Assa., LONDON, ONT. N.-W. T.**

### A NEW

## Cream Separator

**R**IGHT up to 20th century ideas of excellence. A perfect skimmer. Easy to turn. Handiest for washing or putting parts together, and **BUILT TO LAST.** Beware of out-of-date, complicated machines, and such as are made to sell. The woods are full of them, and they are, oh! so easy to buy. I say, beware of them! I have sold cream separators nine years in Winnipeg, and I have yet to meet the man who will not admit that he got from me the best on the market at the time, and one that gave good satisfaction. I was never in a better position to maintain that record. Send for catalogues, stating how many cows you keep at the pail. Agents wanted in every district. Apply at once.

**WM. SCOTT,**

**20 PACIFIC AVE., WINNIPEG.** Con-ignments of fresh dairy butter handled to shipper's advantage.

### HOME OF BARRED

## PLYMOUTH ROCKS



Owned by **H. A. Chadwick, St. James, Man.**

I keep only this breed, and aim to have in my pens the best birds in the Province. **EGGS \$3.00 PER SETTING, TWO SETTINGS \$5.00.** Black African Bantams. A few choice birds for sale. Also first-class Fox Terriers and Scotch Collies.

**H. A. CHADWICK, ST. JAMES, MAN.**

## FORT ROUGE POULTRY YARDS

**H**AS FOR SALE Golden Wyandottes, Indian Games, Langshans, Pekin ducks, Belgian hares. Seven varieties of pigeons. Also, White Wyandottes, Barred Rocks. Two breeding pens of Black Minorcas for sale, very cheap. FOR PRICE AND PARTICULARS WRITE—

**S. LING & CO., WINNIPEG, MAN.**

## PURE-BRED LIGHT BRAHMAS

Prizewinners. Ninth year. Stock for sale. **EGGS, \$2.00.** Address: **GEO. HANBY, cor. Smith St. and Portage Ave., WINNIPEG, MAN.**

### GOSSIP.

The six S.-H. bulls advertised by Shore Bros., White Oak, in this issue include an extra fine red nearly two years old, three about twelve months, and two calves about eight months. They are all reds, of the best Scotch families, and are in nice growing condition. The heifers include crosses and reds, and are from such as Lassie, Mima and Canada, Duchess of Gloster cows. See Messrs. Shore Bros.' advertisement, and write them for particulars.

A. W. Smith, Maple Lodge, Ont., writes: "A short time since we sold to Mr. J. W. Miller, Peterborough Co., the handsome cow for which we were awarded first prize in dairy show, Guelph, giving about 103 lbs. milk in two days. She is a grand breeder also, and we have some of her daughters and granddaughters in the herd that are no disgrace to her. We have several better milkers, and a number of heifers and young bulls of the same family for sale. We sold a very complete young bull in character and general make-up as well as breeding, an English Lady, closely related to Mr. Watt's, first-prize calf of 1900, to Messrs. Bateman, of Caradoc. There are not many better ones. Mr. Miller also secured a good, thick-set bull by Abbottsford, and from another of our good-milking families."

D. H. Kusnell, Stouffville, Ont., writes: "Our stock is wintering very nicely, although we have fed practically no hay and very little corn. Our cattle came in the stable thinner than usual last fall, on account of the exceedingly dry season we had in this section. The demand for Shorthorns and Shropshires has been good so far this season. Have made a number of important sales the last few months. I might say, last week I sold a nice pair of Shropshire lambs (ram and ewe) to Mr. H. W. Weigman, Holt, Mich., also six shearing ewes to Mr. John A. Turner, Balgrogan Stud Farm, Millarville, Alberta, N.-W. T., and a fine bull calf to Mr. G. C. Smyth, South River. This bull should improve Mr. Smyth's herd, for his breeding is good, and is one of the best animals I have. I still have some heifers with calf I am offering cheap, and some bull calves under one year left."

T. Douglas & Sons, Strathroy, Ont., write: "Our stock are wintering well. We have a good crop of strong, lusty calves, by imported Diamond Jubilee = 28861 =; he is also looking well, and continues growing. Visitors tell us he is a better animal than the picture in Nmas number shows him to be. The fourteen bulls we are offering are an attractive lot, smooth, strong, vigorous fellows, with grand coats of hair of good color. Nine of them are from our present stock bull, and are very much like him; the rest are from our last stock bull, Valkyrie = 21806 =. Although our fall and winter sales have been heavy, we can still count over one hundred head in the herd, so can spare a few more cows and heifers. Our sales are: One bull and two cows to S. K. Parkhurst, Reed City, Mich.; two cows to M. Campbell, Chatham; bull to A. W. Smith, Maple Lodge; bull to Richards Bros., McLaren's Depot; bull to R. V. Southian, Delaware. E. & C. Parkinson, Thornbury, Ont., selected one bull and three (in calf) Valkyrie heifers to strengthen their herd. One bull to Wm. Semple, Tiverton, Wm. Donaldson, South Zorra, selected Valkyrie Prince (from Wanetta, full brother to Rossie) to head his Shorthorn herd. A. Thompson, Chesley, secured Maple Bank Reliance. T. S. Pierce, Wallace-town, selected a fine red bull from a deep-milking dam for his lot. F. Henderson, Fingal; Reid Bros., Walter's Falls, and P. Conkey, Arkona, each one bull. Messrs. Hodson & Westervelt secured six heifers of the useful type for their British Columbia shipment, and have booked two orders for bulls from the N.-W. T."

### NOTICES.

**The Use of Fertilizers.**—"Farmers' Guide" is the name of a bright book, and, as its title indicates, is a guide to farmers in the cultivation of all crops typical to America. It states what different crops take from the soil. This book is handsomely printed, generously illustrated, and every farmer who desires one in his library can get it without charge from the German Kali Works of 93 Nassau St., New York City. Send a post card for it.

**Tick Destroyer.**—On another page we have an advertisement from the old firm of Hugh Miller & Co., of Miller's Tick Destroyer. Here is a preparation that really does all that is claimed for it. "The tick," writes the firm, "is the hardest of all the insects to exterminate, possessing a hard, bony shell, which resists all ordinary preparations, as carbolic mixtures, tobacco decoction, insect powder, etc., and it is therefore impossible that a non-poisonous preparation should effectually kill the ticks, eggs and all. Miller's Tick Destroyer is poisonous enough to kill ticks, and does it every time."

**Seed Time Coming.**—The seed business differs from others, especially in this, that the quality and worth cannot always be noticed in the seed secured, so that the purchaser must to a large extent place his confidence in the knowledge and honesty of the seedsmen. Wm. Ewing & Co., of Montreal, can be depended on to sell reliable seeds, as their seed business, which was established in 1829, has gone steadily forward during the whole 32 years. Their catalogue for 1901 is an extensive and elaborate work of over one hundred pages. Besides liberal illustrations and descriptions of varieties of farm, field and garden crops and flowers, it also contains cultural notes that are extremely useful. Their catalogue is a good one, and should be sent for at 142-144 McGill St., Montreal. See their advertisement in this issue.

**Folding Sawing Machine.** Many of our readers in this and other countries are using the Folding Sawing Machine, and if it were not entirely satisfactory we should have heard something to that effect long ago. For the benefit of our new subscribers and all who are not acquainted with the machine, we add the following short description: It is designed to take the place of the old back-breaking cross-cut saw. It does this and more. It saves the time of the extra man. It will saw more wood, cross-cut more logs, saw down more trees than two men can with the ordinary saw; it adjusts itself to all kinds of lands, hillsides, uneven places, etc.; it folds up neatly and is easily conveyed from place to place, and it is well and substantially built from the best seasoned white ash, malleable-iron castings, and the best steel saw-blade that money can buy. Write the Folding Sawing Machine Co., 35-7-9 Jefferson St., Chicago, Ill., for illustrated catalogue and testimonials.

### IN THE AIR.

#### The Germs of La Grippe are Conveyed Through the Atmosphere.

No one can escape La Grippe germ, because when an epidemic of the disease is prevailing the air is laden with it.

The reason everyone does not have the disease at the same time is because the persons who are enjoying perfect health are able to successfully resist and throw off the infection, while those who for any reason are not in the best of health fall ready victims.

The first symptoms are those of acute catarrh, resembling a hard cold, and if prompt treatment is applied at this time, it can easily be broken up. One of the best remedies at this stage is Stuart's Catarrh Tablets, sold by druggists everywhere, and if taken freely, say one tablet every hour or two for two or three days, the danger of pneumonia and serious complications will be averted.

The Rev. L. E. Palmer, Baptist clergyman, of Cereso, Mich., makes a statement of interest to all catarrh and grip sufferers. He says: "Stuart's Catarrh Tablets have certainly been a blessing to me. I have used them freely this fall and winter, and have found them a safeguard against La Grippe and catarrhal troubles, from which I had suffered for years. I feel that I can freely and conscientiously recommend them."

Persons who suffer from catarrh of the head and throat are very susceptible to La Grippe, and such will find a pleasant, convenient and safe remedy in this new catarrh cure.

Stuart's Catarrh Tablets are composed entirely of harmless antiseptics, and may be used as freely as necessary, as they contain no cocaine, opiate or poisonous drug of any kind.—Adv't.

## DR. BARNARDO'S HOME.

The managers of these institutions invite applications from farmers and others for boys and youths, who are being sent out periodically, after careful training in English homes. The older boys remain for a period of one year at the Farm Home at Russell, during which time they receive practical instruction in general farm work before being placed in situations. Boys from eleven to thirteen are placed from the distributing home in Winnipeg. Applications for younger boys should be addressed to the Resident Superintendent, 115 Pacific Avenue, Winnipeg, or P. O. Box 970; and for older boys, possessing experience in farm work, to Manager, Dr. Barnardo's Farm Home, Barnardo, Man.

## S. G. B. Minorcas.

Eggs for hatching now ready. English importations. Birds from the celebrated Pitt and Abbott strains. Our birds are in prime condition for ensuring good vigorous stock. Send in your order now and get some pullets laying early. A few fine S. C. B. Minorca cockerels for sale from above strains. Describe your hens, and I can have a chance to help you out in correct mating.

## B. P. Rocks.

Eggs for hatching. Also a few fine cockerels for sale, from best Canadian strains—sturdy, vigorous stock.

**A. M. Robertson, Caledonia, Ont.**

## Northern Pacific Ry.

TO ALL POINTS

**SOUTH, EAST AND WEST.**

Minneapolis,

St. Paul, Duluth, Chicago, Etc.

Excursion rates to all Californian, Mexican and Southern Winter resorts.

The only line running Through Tourist Cars to California points. Car leaves every Wednesday. Through Tickets sold to all points; also Ocean Tickets to

**GREAT BRITAIN, EUROPE, AUSTRALIA, AFRICA, ETC.**

For information call on your nearest Northern Pacific Ticket Agent, or write.

Condensed Time Table from Winnipeg.

### MAIN LINE.

Morris, Emerson, St. Paul, Chicago, Toronto, Montreal, Spokane, Tacoma, Victoria, San Francisco  
Lv. Daily..... 1.45 p.m.  
Ar. Daily..... 1.30 p.m.

### PORTAGE BRANCH.

Portage la Prairie and intermediate points.  
Lv. Daily, ex. Sunday..... 4.30 p.m.  
Ar. Mon., Wed., Fri..... 10.35 a.m.  
Ar. Tues., Thur., Sat..... 11.59 a.m.

### MORRIS-BRANDON BRANCH.

Morris, Roland, Miami, Baldur, Belmont, Wawanesa, Brandon. Also Souris River Branch, Belmont to Elgin.....  
Lv. Mon., Wed. & Fri..... 10.45 a.m.  
Ar. Tues., Thurs. & Sat..... 4.30 p.m.

H. SWINFORD, Gen. Agent, Winnipeg.  
J. T. MCKENNEY, City Passenger Agent, Winnipeg.  
CHAS. S. FEE, G. P. & T. A., St. Paul.

Annual Meeting of the Dominion Sheep Breeders' Association.

The annual meeting of the Dominion Sheep Breeders' Association was held in the Palmer House, Toronto, on February 22nd, 1901. The President, Mr. A. W. Smith, in the chair. The Secretary read his annual report, which was taken up clause by clause and adopted, with the amendments, as given below:

On motion, it was resolved: "That the clause relating to 'ten per cent. added to prizes be left as last year; that is, the report on feeding be made after the show instead of before.' Also that the Secretary be instructed to inform the Provincial Winter Fair Board of the action of this meeting on the appointment of judges and the sheep prizes, the action in one case being the recommendation of the single-judge system, and the other confining prizes to carcasses of wethers, as amended."

The President, in his address, congratulated the sheep-breeders of Canada upon the flourishing condition of the industry. The past year had been one of the most prosperous in his recollection for the sheep-breeders of the Dominion.

ELECTION OF OFFICERS.

The election of officers for 1901 resulted as follows:

President—A. W. Smith, Maple Lodge, Westerville, Toronto. Vice-President—R. H. Harding, Thornedale, Toronto. Secretary-Treasurer—A. P. Westervelt, Toronto.

Directors—Cotswolds, D. McCrae, Guelph; Leicester, Jas. M. Gardhouse, Highfield; Hampshire and Suffolks, John Kelly, Shakespear; Dorsets, John A. McGillivray, Uxbridge; Southdowns, John Jackson, Abingdon; Oxford, Jas. Tolton, Walkerton; Lincoln, John Gibson, Denfield; Merinos, W. M. Smith, Fairfield Plains; Shropshires, D. G. Hamner, Mt. Vernon; Ontario Agricultural College, Prof. G. E. Day, Guelph.

Auditor—J. M. Duff, Guelph.

Delegates to Fair Boards.—Toronto Industrial—J. M. Gardhouse, Highfield; John Jackson, Abingdon, Ottawa—F. W. Hodson, Ottawa, London—A. W. Smith, Maple Lodge; A. P. Westervelt, Toronto. Provincial Winter Fair—A. W. Smith, Maple Lodge; John Jackson, Abingdon; Jas. Tolton, Walkerton.

The appointment of judges for the Provincial Winter Fair was left in the hands of the Winter Fair Board.

The following expert judges were nominated: Cotswolds—John Rawlings, Ravenswood; Wm. Thompson Uxbridge; Val. Ficht, Oriel; R. Honey, Arkley; Jas. Hume, Arkell; W. G. Laidlaw, Wilton Grove; Jos. Ward, Marsh Hill; J. D. Davidson, Belhaven; John Slater, Burtonville; Jas. Russell, Richmond Hill; Thos. Teasdale, Concord; J. C. Snell, London; F. Bonycastle, Campbellford; John Park, Burgessville; T. Hardy Shore, Glanworth; Wm. Rae, Arkell; A. Johnston, Greenwood; A. J. Watson, Castleberg; Prof. Day, Guelph. Toronto—R. Miller, Stouffville; T. Hardy Shore, Glanworth; Jas. Hume, Arkell. London—W. Thompson, Uxbridge; Wm. Rae, Arkell. Ottawa—W. G. Laidlaw, Wilton Grove; F. Bonycastle, Campbellford. Chicago—Prof. Curtiss, Ames, Ia.

Leicesters—Jas. Fennell, Bradford; H. B. Jeffs, Bond Head; A. E. Archer, Warwick; Geo. Whitelaw, Guelph; John Wells, Galt; Hardy Shore, Glanworth; Abraham Easton, Appleby; E. Wood, Appleby; Wm. Parkinson, Eramosa; E. Watt, Salem; Wm. McIntosh, Burgoyne; Thos. Curdell, Fullarton; K. Eastwood, Mimico; John Kelly, Shakespear; Andrew Thompson, Ferguson; J. K. Campbell, Palmerton; J. C. Snell, London; G. B. Armstrong, Teeswater; John Gibson, Denfield; C. E. Wood, Freeman; Jos. Gaunt, St. Helen's; J. M. Gardhouse, Highfield; Andrew Whitelaw, Guelph; William Whitelaw, Guelph; R. C. Martin, Marysville; Alex. Smith, Maple Lodge; Alex. Waddie, Acton; Walter Nichol, Plattville; H. G. Arnold, Maidstone; Prof. Craig, Ames, Ia.; John Marshall, Cass City, Mich.; J. W. Murphy, Cass City, Mich.; Prof. Curtiss, Ames, Ia.; D. C. Graham, Cameron, Ill.; Geo. Penhale, Exeter; Jas. Snell, Clinton; John Wright, Chesley; Prof. Day, Guelph; M. Kennedy, Northwood; D. Lillo, Ayr. Toronto—E. Parkinson, Eramosa; Jas. Fennell, referee. London—John Wright, Chesley; J. B. Jeffs, referee. Ottawa—John Orr, Galt. Bradford—W. Whitelaw, Guelph.

Dorsets—Jas. Kelly, Shakespear; Chas. Fairbairn, Robaygeon; Robert Miller, Pickering; J. C. Snell, London; J. M. Gardhouse, Highfield; Jas. Johnston, Trafalgar; John Campbell, Vernon; John Jackson, Abingdon; J. G. Hamner, Mt. Vernon; Richard Gibson, Delaware; W. H. Beattie, Wilton Grove; Prof. Curtiss, Ames, Ia.; Thos. W. Hector, Springfield-on-the-Credit; G. P. Everett, Mt. Vernon; Mortimer Levering, Lafayette, Ind.; A. Danks, Allamuchy, N. J.; Prof. Craig, Ames, Ia.; Jas. Tolton, Walkerton; H. N. Gibson, Delaware; G. McKerrrow, Sussex, Wis.; Henry Arkell, Teeswater; Henry Arkell, Arkell; E. O. Denton, Somerset, N. Y.; Herbert Hamner, Burford; R. Bailey, Union.

Southdowns—John Miller, Markham; H. N. Gibson, Delaware; John Jackson, Abingdon; T. C. Douglas, Galt; Henry Arkell, Teeswater; W. H. Beattie, Wilton Grove; A. Swinton, Blackheath; Wm. Teller, Paris; J. G. Hamner, Mt. Vernon; Jas. Smith, Mt. Vernon; H. B. Jeffs, Bond Head; Jas. Scott, Aberfoyle; Geo. McKerrrow, Sussex, Wis.; Prof. Curtiss, Ames, Ia.; Prof. J. A. Craig, Ames, Ia.; J. C. Duncan, Lewiston, N. Y.

Oxford—Smith Evans, Gourock; Jas. Tolton, Walkerton; R. J. Hine, Dutton; Kenneth Finlayson, Campbellton; Henry Arkell, Arkell; Wm. Dickson, Mildmay; Peter Arkell, Teeswater; John Harcourt, St. Ann's; J. H. Jull, Mt. Vernon; W. H. Arkell, Teeswater; John E. Cousins, Harrison; Arch. McKenzie, Onabawa; R. E. Binsall, Inpsall; Geo. McKerrrow, Sussex, Wis.; W. A. Shaffer, Middleton; Chas. J. V. Cooper, Pictou; Wm. Newman, Chertsey Valley; Wm. Arkell, Teeswater; L. Parkinson, Greenwood; A. Elliott, Pond Mills; D. Brown, Bond; N. Gibson, Delaware; W. Lee, Simcoe; Prof. Craig and Prof. Curtiss, Ames, Ia. Toronto—Jas. Tolton, Walkerton; Henry Arkell, Arkell; J. M. Duff, W. H. Arkell, Teeswater; J. L. Palmer, Walkerton.

Hampshire and Suffolks—R. Gibson, Teeswater; H. Arkell, Arkell; Prof. J. A. Craig, Ames, Ia.; H. B. Jeffs, Thornton, Mich.; W. H. Beattie, Wilton Grove; Jas. Bowman, Guelph; Prof. Keizer, Columbus, Ohio; U. S.; W. H. B.

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Bowman, Mount Forest; John Kelly, Shakespear.

Lincolns—L. Parkinson, Eramosa; J. T. Gibson, Denfield; W. Oliver, Anonbank; T. E. Robson, Ilderton; G. Walker, Ilderton; John Geary, London; J. C. Snell, London; R. W. Stevens, Lambeth; John Mitchell, Glencoe; John White, Eramosa; A. W. Smith, Maple Lodge; Geo. Whitelaw, Guelph; Hardy Shore, White Oak; J. H. Patrick, Ilderton; Jas. Petty, Hensall; J. M. Gardhouse, Highfield; Prof. Craig, Ames, Ia.

Shropshires—R. Gibson, Delaware; G. P. Everett, Mt. Vernon; J. Conworth, Paris; W. H. Beattie, Wilton Grove; A. Brown, Pictou; R. Miller, Stouffville; J. Hamner, Burford; J. Campbell, Woodville; D. G. Hamner, Burford; M. Levering, Lafayette, Ind.; A. Elliott, Galt; J. Dickin, Wilton West; J. S. Thompson, Gas City, Ind.; Geo. Allen, Allerton, Ill.; W. G. Pettit, Freeman; D. J. Campbell, Woodville; G. Phin, Hespeler; Chas. Calder, Brooklin; H. N. Gibson, Delaware; Geo. Hindmarsh, Ailsa Craig; C. W. Gurney, Galt; H. Hamner, Burford; Prof. Curtiss, Ames, Ia.; J. C. Duncan, Lewiston, N. Y.; G. McKerrrow, Sussex, Wis.; Prof. Day, Guelph; S. Hagar, Plantagenet; Jos. Barnett, Rockland; Geo. L. Teller, Paris, Toronto—Geo. Allen, Allerton, Ill.; Geo. Hindmarsh, Ailsa Craig; reserve, W. H. Beattie, Wilton Grove, London—J. C. Duncan, Lewiston, N. Y.; reserve, Geo. Phin, Hespeler, Ottawa—R. Gibson, Delaware; reserve, A. Elliott, Galt, Fat Stock Show—Geo. McKerrrow, Sussex, Wis.; reserve, Prof. Curtiss, Ames, Ia.

Merinos—Rock Bailey, Union; Andrew Terrell, Wooler; G. P. Everett, Mt. Vernon; W. H. Beattie, Wilton Grove; W. M. Smith, Scotland; R. Shaw, Glanford Station; J. G. Hamner, Mt. Vernon; Geo. McKerrrow, Sussex, Wis.

On motion, it was resolved: That it is the opinion of this meeting that after this year aged ewes should be struck out of the prize list, and substituted with either shearing ewes or lambs. It was also resolved that ewes should be shown singly, instead of in pairs.

The Dominion Commissioner of Live Stock stated that the Dominion Government would pay for the transportation and maintenance of live stock going to the Pan-American Exposition; and they would also give free transportation to two men for each carload of stock.

A report received from the committee appointed at the last meeting in regard to dogging sheep, was referred to a committee composed of John A. McGillivray, D. G. Hamner, John Jackson, J. C. Snell, and Richard Gibson. The sum of \$50 was granted by this Association to assist in paying the wages of a man taking charge of the live stock going to the West.

NOTICES.

Highest Producing Grains in Canada.—Bulletin No. 36 of the Central Experimental Farm, Ottawa, has for some time been in circulation. It gives the results obtained in 1900 from trial plots of grain, fodder corn, field roots and potatoes at the Provincial Farms of the Dominion. The bulletin can be had by writing Dr. Wm. Saunders, Director Experimental Farms, Ottawa. It will prove a useful guide to farmers who wish to try new sorts of grain or roots.

A Successful School.—An assemblage of bright young men and women, gathered from many parts of the Dominion and united in the pursuit of practical knowledge under the direction of trained experienced and capable teachers, may be seen any day by visiting the Central Business College, Toronto. Modernity is really the mistress of this excellent school. It is supported by thoroughness and careful attention to every detail which can be worked out for the benefit of the student. A Correspondence Department has been added during the past year, which opens the door for many young people to acquire a very good knowledge of business subjects who find it impossible to attend a school of this kind. See advertisement in this issue.

GOSSIP.

At a draft sale of Shire horses, Feb. 19th, from the stud of P. A. Muntz, M. P., Dunsmore, Rugby, England, the highest price of the day was 600 guineas for the brood mare, Lockinge Belle, by Prince Harold. Brood mares averaged 230 gns.; four-year-old mares, 190 gns.; three-year-old fillies, 211 gns.; two-year-old fillies, 195 gns.; yearling fillies, 123 gns.; stallions, 179 gns.; two-year-old stallions, 98 gns.

At the Government stock sale held at Guelph, Ont., Feb. 25th, the annual meeting of the Dominion Northern Breeders' Association brought together a large crowd. Of the 103 Shorthorn bulls of average size, 98 were sold at an average of \$7 each, and 27 females made an average of \$20 each, making the general average \$88. About one-half the bulls offered were yearlings and of 31 sold at from \$25 to \$60 each, about from \$100 to \$150, and three at \$165, \$200 and \$210 respectively. Of the 23 females, 8 were \$50 to \$75, a considerable number of the bulls were bought by breeders for the North-west and Ontario, and the better breeds offered the average of \$100 and \$150, and a proportion of the many cattle and hogs were withdrawn and sold by the Dominion.

Ayrshire Breeders' Annual Meeting.

The third annual meeting of the Canadian Ayrshire Breeders' Association was held in Montreal, February 16th; Mr. A. Kains, Byron, in the chair. Among those present were Hon. Senator Owens, Montreal; F. W. Hodson, Dominion Live Stock Commissioner, Ottawa; J. Lockie Wilson, Alexandria; J. C. Smith, Hintonburg, Ont.; A. Clark, Brimston's Corners, Ont.; J. W. Nimmo, Toronto; A. Wood, Van Kleeck Hill, Ont.; A. Hume, Burnbrae, Ont.; R. Brooks, Brantford, Ont.; W. W. Ballantyne, Stratford, Ont.; John Morrin, Belle Riviere; T. D. McCallum, Danville, Que.; R. Hunter, Maxville, Ont.; Thomas Irving, North Georgetown; James Boden, Ste. Anne de Bellevue; and Henry Wade, Toronto, Secretary-Treasurer, and J. P. L. Berube, Eastern Secretary.

The Secretary-Treasurer's report stated that 1,480 cattle had been recorded during the past year, against 1,254 the previous year. The total number of members of the Association is 190, an increase of 50 over 1888. Volume 10 of the Herdbook is now in the hands of the printer, entries closing March 1.

Continuing the report stated: "I am very pleased to state that the Ross cow pedigree, which affected the bull, Bonnie Scotland, and several hundred others, has been accepted, allowing a great number of the best animals in Quebec, New Brunswick, Nova Scotia, some in Ontario and Manitoba, to be passed, so that the future of this Association will be much brighter. They have also been accepted by the American Association."

"It is pleasing to be able to state that the sales of Ayrshire cattle have greatly increased during the past year. In the last half of the 19th century, the Ayrshire cattle trade has advanced steadily along with the butter and cheese industries, and there is nothing to prevent a continuance of this advance, even in the 20th century. I would like to see a large representation of these fine cattle at the Pan-American Exposition, to take place this coming summer. I have been informed that the Dominion Government will pay the transport, and no doubt the Local Government will do something also. The show of cattle takes place from September 24th to 21st, just after the Toronto show. The entries are to be closed on July 15, 1901.

The financial statement showed receipts of \$1,363, and expenditure of \$1,491.93, leaving a balance on hand of \$143.29. The assets of the Association are \$1,383.29, with no liabilities.

OFFICERS ELECTED. The election of officers resulted as follows: President—W. F. Stephen, Trout River, Que. First Vice-President—F. W. Hodson, Ottawa. Vice-Presidents—Ontario, N. Dymont, Capripon's Corners; Quebec, Robert Ness, Howick; Manitoba, George Steel, Glenboro, Man.; Assiniboia, C. W. Peterson, Regina, Assa.; British Columbia, A. C. Wells, Chilliwack; P. E. Island, Hon. Mr. Rogers, Charlottetown; Nova Scotia, Fred Black, Amherst; New Brunswick, M. N. Parlee, Sussex, reserve.

Directors—Ontario: W. Stewart, Jr., Menie; W. W. Ballantyne, Stratford; A. Kains, Byron; R. S. Brooks, Brantford; J. C. Smith, Hintonburg; A. Hume, Menie; F. W. Hodson, Ottawa. Quebec: W. F. Stephen, Trout River; James Boden, St. Anne's; W. Wylie, Howick; Hon. Wm. Owens, Montreal; Nap. Lachapelle, St. Paul; R. Hunter, Maxville; R. Ness, Jr., Howick.

Executive Committee (Eastern Division)—Messrs. Hunter, Owens, and Lachapelle. Executive Committee (Western Division)—Messrs. Stewart, Ballantyne, and Smith. Revising Committee—Messrs. Hodson, Owens, Smith, Ness, and Wade. Auditor (Ontario)—C. F. Complin, London. Auditor (Quebec)—Hon. Wm. Owens. Eastern Secretary—J. P. L. Berube, Montreal. Secretary-Treasurer—Henry Wade, Toronto, Ont.

Delegates to Industrial Exhibition, W. W. Ballantyne and W. Stewart; Western Fair, A. Kains and R. S. Brooks; Ottawa, F. W. Hodson and Joseph Yuill; Sherbrooke, Que., T. D. McCallum and Robert Ness; Quebec, Nap. Lachapelle and D. Drummond.

It was moved by James Boden, seconded by John Morrin: That the different fair boards appoint two judges to judge Ayrshire cattle. Judges recommended: Toronto Industrial, G. H. Muir, A. Kains, D. Drummond, and T. D. McCallum; Ottawa Central, T. D. McCallum and D. Drummond; London Western, W. W. Ballantyne and William Stewart; Quebec Exhibition, Horace Lamarche and John Morrin; Sherbrooke, James Boden and A. Drummond; Kingston, John H. Douglas, Warkworth.

On motion, it was resolved that Hon. Thomas Ballantyne, Joseph Yuill, and James McOrmack, John Morrin, Jas. Drummond and Thos. Irving be made life members of the Association, in recognition of the valuable services they have rendered in promoting the Ayrshire breed of cattle.

A discussion took place as to the advisability of making each member of the Canadian Ayrshire Breeders' Association a member of the Dominion Cattle Breeders' Association, resulting in the following motion: "Hon. Wm. Owens moved, seconded by W. W. Ballantyne: That the Canadian Ayrshire Breeders' Association make each member, by virtue of his membership, a member of the Dominion Cattle Breeders' Association, at a fee of 50 cents per member, and that two delegates be appointed from the Ayrshire Association to represent the Ayrshire interests on the Board of the Dominion Cattle Breeders' Association." Carried.

The delegates selected were W. W. Ballantyne and Dan Drummond. Moved by Hon. Wm. Owens, seconded by R. Hunter: "That, in the opinion of this Association, the cattle-breeding industry is seriously menaced by the tuberculin test, as applied to cattle purchased for importation or sold for export; that the test as now applied is misleading and of no real value; therefore, we respectfully ask the Honorable the Minister of Agriculture for the Dominion of Canada to discontinue the test so far as within his power." Carried.

On motion of J. Lockie Wilson, seconded by George H. Muir, it was resolved: "That we, the members of the Canadian Ayrshire Breeders' Association, in meeting assembled, express our regret that up to this date no action has been taken by the Government for the regulation of railway and ocean freight rates; that we especially urge that immediate action be taken by our representatives at Ottawa for the

Chicago Sheep Shearing Machine

Chicago Sheep Shearing Machine. Price \$15. Guaranteed to shear any kind of wool that grows. All gears cut from the solid metal and hardened. BOOK ON SHEARING just published. Fully illustrated, with actual bits of wool and easy shearing by E. M. Margis, champion in the world, will be sent free to any sheep owner on application. CHICAGO FLEXIBLE SHAFT CO. 158-160 Huron Street, Chicago, Ill.

appointment of a permanent commission for the regulation of rates and the prevention of the great discrimination that now exists, and for the removal of the handicap now placed by the granting lower rates for the larger and longer haul of our American competitors, who are thus placed in a better position than the farmers of Canada, in the markets of the world; also that a copy of this resolution be forwarded to the Dominion Government." Moved by Alex. Hume, seconded by William Stewart: "That we urge upon the different fair boards to hold their exhibitions one week later, as the time selected is too early for the exhibitors." Carried.

Dominion Swine Breeders' Association Annual Meeting.

The annual meeting of the Dominion Swine Breeders' Association was held at the Palmer House, Toronto, Feb. 21, 1901, about 25 members being present, and the president, Mr. Wm. Jones, Mt. Elgin, in the chair. The secretary-treasurer's report was read, and with a few slight amendments adopted. The clause recommending that the prizes for bacon hogs be confined to two sections, one for pure-breds and one for grades, both alive and dressed, was, on motion, amended so that only in the carcass test should all breeds compete together, but on a motion to reconsider, this was modified, conditional on the donation of \$500 as prize money by the packers, in which case the original recommendation of the report will be adopted. Following is a list of pedigrees and transfers recorded in 1900:

Table with 2 columns: Breed and Count. Berkshires 1,200; Yorkshires 1,106; Chester Whites 270; Poland Chinas 71; Tamworths 432; Duroc Jerseys 352; Essex 18.

OFFICERS ELECTED FOR 1901. President, Wm. Jones, Mt. Elgin; Vice-President, G. B. Hood, Guelph; Secretary-Treasurer, A. P. Westervelt, Toronto. Directors—Berkshires, Thos. Teasdale, Concord; Yorkshires, J. E. Brethour, Burford; Chester Whites, R. H. Harding, Thornedale; Poland Chinas, W. M. Smith, Fairfield Plains; Duroc Jerseys, L. Tape, Tamworths; Andrew Elliott, Galt; Suffolks and Essex, Jos. Featherston, M. P. Streetsville; Ontario Agricultural College, Prof. G. E. Day, Guelph; General Director, George Green, Fairview. Auditor, J. M. Duff, Guelph. Representatives to Fair Boards: Toronto, Teasdale, D. C. Flatt, Millgrove, and Thos. Teasdale, Concord; Ottawa, J. C. Smith, Hintonburg; and A. P. Westervelt, Toronto; London, D. DeCoursey, Burnholm, and Geo. Green, Fairview; Peterboro, Robert Vance, Ida; Guelph, G. B. Hood, Guelph, and Jas. Anderson, Guelph; Brantford, J. E. Brethour, Brantford; Belleville, J. M. Hurley, Belleville; Kingston, J. M. Hurley, Belleville.

We are having a fine winter here and lots of snow. Feed is scarce, and going to be scarce before the new crop comes in. For ourselves, we have plenty to see us through. Have fed nothing but poor wheat straw so far to all our stock. The straw is run through a cutting box, well damped, some salt and about one and a half gallons of oat chow are added to two heaped bushel baskets a day to each horse, and we never had them looking better; of course, they are not working. We let them out every day, and if stormy keep them in the yard.—G. L., Indian Head.

UP WITH THE TIMES. Progressive Cheese and Butter makers use WINDSOR SALT, because they know it produces a better article, which brings the highest price. THE Windsor Salt Co., Limited, WINDSOR, - ONT.

PLEASE MENTION FARMER'S ADVOCATE

GOSSIP.

The Shropshire Association offers prizes for this year as follows: Chicago Live Stock Show, \$500; Buffalo Exposition, \$250; Toronto, \$100; Province of Ontario, \$100; Indiana State Fair, \$100; Minnesota State Fair, \$50.

At a sale of Hereford cattle belonging to Messrs. Armour and Funkhouser, at Kansas City, Feb. 19th and 20th, \$26,725 was realized for 101 animals—an average of \$257. The females did much better than the bulls, the bull market appearing to be over-stocked.

TALLY ONE FOR THE HOLSTEIN-FRIESIAN—ANOTHER GREAT DAIRY COW.

The official test of the Holstein-Friesian cow, Lilith Pauline DeKok 4343, owned by H. D. Roe, Augusta, N.J., was conducted in January last, by members of the Cornell University faculty, and the record made was 28.25 lbs. of butter, 80 per cent. fat, in 7 days. The milk yield was 63.4 lbs., which averaged 3.18 per cent. butter fat, an average of 33 lbs. per day. Her largest yield of milk in one day was 100.85 lbs., and the largest yield of fat, 3.37. The highest per cent. of fat in any one milking was 4.1 per cent. This, it is claimed, is the largest official record of any Holstein cow yet tested.

CAIRNBROGIE STUD.

Perhaps no other horse-breeding establishment in Canada has held so prominent a position for so long a time as that of Graham Bros., Clarendon, Ont. Their business has been chiefly confined to Clydesdales of the highest class, from the leading studs in Scotland, but for many years two or more sensational Hackneys have found their homes at Cairnbrogie. Their show-yard career has been one continuous series of successes. They have in their office very tangible evidence of victories in over 100 gold medals and 9 silver cups, valued at from \$150 to \$250 each. At the Toronto Industrial they won sweepstakes on females for three years in succession, and in no year were their winnings more important than in 1898. Just now they are, fortunately, well supplied with a good class of stock for the brisk trade that is now on and likely to continue. Their Clydesdale stock includes 20 head, made up of such notable animals as McQueen, Burnbrae, Royal Cairnton, Prince Roberts, Golden Prince, Lord Brilliant, Premier Prince, Royal Britain, and others. These are all high-class specimens of the very best types, and are in excellent form. The horse, Burnbrae [578], by Rosewood (7267), was bred by N. P. Clark, St. Cloud, Minn., in whose hands he won first award at the Chicago Horse Show as a two-year-old, in 1897. He went from there to Manitoba for a term of some two seasons. Since Graham Bros. have had him he has steadily improved in form, until he is now showing his excellent qualities as never before since his Chicago victory. Another particularly choice Clyde is the rising three-year-old Lord Brilliant, by Young MacQueen 8633, and out of Lady Macpherson 7111. He is a bright bay, and much like his notable sire in type. Premier Prince, by Handsome Prince, and Royal Britain, by Two-in-One, are promising colts—that it is worth travelling considerable distance to see. They are flash and big and bred right. Among the fillies are the two-year-old Cherry Startle, by Startle, and Charming Lady, by Lord Charming, the first and second winners at Toronto, Ottawa and other leading shows last autumn. See Graham Bros.' advertisement in this issue, and pay them an early visit, so as to be able to see and secure some of the desirable stock before they are gone.

A FRAUDULENT STOCK BUYER.

Information has been received at this office that a slick young man has recently been operating in the neighborhood of Guelph, under the name of Major Bird, of California, contracting for carloads of breeding sheep, making all arrangements for having them shipped when he sends a draft in payment, which is to be forwarded from Chicago together with a man to take charge of the stock, etc., but from the fact that he forgets to pay his hotel bills, and that some articles of clothing have been missed at farmhouses where he has staid, it is evident that he is a barefaced fraud, and stockmen will do well to look out for this "bird," who may appear in different plumage and under another name, which seems likely to be his way of getting a living. He is described as about 5 ft. 5 inches high, weight about 130 lbs., very sleek black hair, heavy tawny moustache, full gray eyes, wore a brown frieze ulster, checked cap with ear flaps, a black suit, and coon-skin driving mitts—the latter appropriated from a farmhouse near Guelph.

"Lap-Seal" Improved Asbestos Roofing.—Mr. Robert Black, of 131 Bannatyne street, Winnipeg, is sole agent for this roofing in the West, and by an advertisement in another column quotes prices. A neat pamphlet, giving particulars of this roofing, will be sent to anyone furnishing their name and address. All interested in roofing should send for one.

"LAP-SEAL" IMPROVED

Asbestos Roofing

Is Reliable, Durable, and Economical.

"GIANT" ASBESTOS ROOFING, \$3.50 3 ply, price per square, complete. We furnish with this roofing the same Red Asbestos Coating as with our "Lap Seal" roofing, which adds greatly to its wearing qualities. It is set up in rolls of 108 square feet, 32 inches wide, enough to cover one square 10 x 10 feet. Each square includes 1 lb. of nails and 1 lb. of caps.

"BLACK JACK" ROOFING, 3 ply, \$3.00 price per square, complete.

LIBERAL DISCOUNTS TO LARGE BUYERS.

ROBT. BLACK, 131 BANNATYNE ST., WINNIPEG.

PLEASE MENTION FARMER'S ADVOCATE.

AMERICAN FIELD AND HOG FENCE FULLY GUARANTEED. Best steel wires heavily galvanized. Strong, economical, efficient, durable. Local agents everywhere. If no agent in your town write to the makers. American Steel & Wire Co., Chicago or New York.

GOSSIP.

M'CORMACK'S AYRSHIRES AND BARRED ROCKS. Messrs. Jas. McCormack & Son, Rockton, write:—"In sending in change of a might say that our Ayrshires are doing very well. Our imp. bull, Glenora Sultan, is developing into a very fine animal, and is producing fine stock, some of his calves weighing 75 lbs. at birth. We have three young bulls for sale, from 7 to 17 months old. The 17 months' old bull is the first prize bull calf under a year at Toronto last September. He is a fine bull—large and lengthy. His dam is from Jack Morton. She is a very heavy milker, with fine large teats. She won second at the Winter Dairy Show, at Brantford, in 1898, for heifer under 36 months. Our National strain of Barred Rocks have again been very successful at the late shows. At the Ontario Provincial, at Guelph, we won first on hen (over 30 competing). The mother of this hen won first at the big Jubilee Show at Toronto in 1899. We will have some matings for this season's egg trade. A full brother to our Guelph winner heads our best mating, and we can supply eggs for incubator purposes, from pure-bred stock, at a very low cost."

THE NICHOLSON AND W. H. TAYLOR, M. P. P., SHORTHORN SALES.

Mr. Stephen Nicholson writes:—Allow me, ye editor, to make a brief commentary on our joint offering of 10 head of Shorthorns, to be sold by auction on March 20th next. Of our Vacuna family there are some ten females. This family produced the noted show bull, Nominee, winner of the sweepstakes at Toronto, 1897, after which he was sold to the United States, where he was never defeated at State fairs. He was used in the noted herd of W. F. Brown, Minneapolis. After his show day was over he was sold for a high price to the noted breeder, W. S. Woods, Williamsport, Ohio. His grandam was bred at Sylvan Lodge, Cromwell was also a Vacuna. He was shown by Eastwood Bros. at Toronto as a yearling and at two years old, winning first both times. He then went to the U.S., and was shown extensively, and was never beaten except by Young Abbotsburn and Gay Monarch. He got two heifers in his 10th year—Mysie Cromwell 2nd and 3rd—that were sold at auction for over \$1,000 each. He was bred at Sylvan Lodge. Besides these we might name many more that have been winners at Toronto and went into first-class herds and did a great deal of good. The females that are offered of this family are all under 6 years old, are easy feeders, have abundance of flesh of an even fiber, and all have calves at foot or are in calf to imp. Chief of Stars. Of the grand old Miss Syme family, two beautiful three-year-old heifers will be offered, one having a bull calf at foot, got by Chief of Stars (imp.); the other is in calf to the same bull. These have bred and six crosses of bulls that have won first at Toronto. They are a grand pair and would be counted good in any herd. Among the younger ones are four beautiful heifers from the grand getter, Imp. Guardsman, sire of the Robbins champion bull, St. Valentine, and a lot of other noted prize-winners. They are hardly in flesh to fetch their full value, but are just the kind to buy to go on and do well. Among the calves is the heavy-setted Vacuna 22nd, winner of fourth prize at Toronto last fall. She is a second to few or none in the Province. Those on the lookout for show animals should see after her. The white heifer, 26th Maid of Sylvan, is very little her inferior. She is considered by some to be the better of the two. The whole of the herd of calves that won third at Toronto last fall will be included in the offering, as well as some a month or two younger that are fully their equal.

The young bulls are an extra good lot. Bols, a straight Mina, 14 months old, is as good as we ever bred at the same age, fully as good as his sire, Royal Standard, we believe. He is a beautiful roan, straight, long and even, carrying any amount of natural flesh; in fact, a show bull in every respect. Crown Jewel 26th, an almost full brother to Crown Jewel 17th, owned and shown by Eastwood Bros., winning first both as a 2-year-old and a 3-year-old at Toronto, is fully as massive, but even in conformation, and covered with a wealth of natural flesh. There are also two splendid reds by Royal Standard, about 13 months old, that will please the most critical. They are good enough to head any herd. The four by Imp. Guardsman are just what one might expect from such a noted sire. They are a little younger than the others, but are growing into grand young bulls. But we must not particularize. The whole lot are as well blooded and individually are as good as their breeding. This is the fourth auction we have held within the last few years, and all have been satisfactory. Every animal catalogued at these sales was sold and delivered. Not one bid was made but what was bona fide. The same rigid principles will be adhered to in our sale of the 20th inst. We shall have left after our sale our normal quantity of breeding cattle in both herds, and, as in both herds we breed so as to come in at two years of age, we hope to soon have our stables more than full again.

IN WRITING

PLEASE MENTION FARMER'S ADVOCATE.

The Horses that made Janesville Famous.

For twenty years past Janesville has been associated with all that was high-class in the line of horses, and the name of "GALBRAITH" is familiar as a household word to every horse breeder of any note on this continent. The undersigned respectfully invites an inspection of his present stock of

CLYDESDALES,

which are believed to be fully equal to the best ever maintained during the palmy days of the business. Ample size, superior breeding, great individuality, moderate prices, and the best of guarantees, are among the inducements offered buyers. An assortment of Percherons, Shires, Suffolks and Hackneys also on hand. The only place where the best of all the breeds can be compared alongside each other. Prominent prizewinners at the recent International Live Stock Show at Chicago. Send for catalogue.



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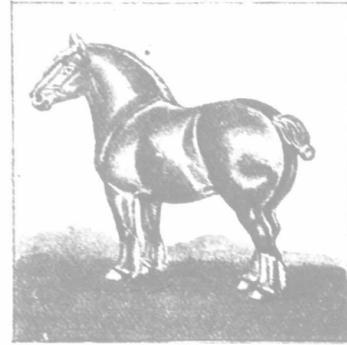
THE HOME AND HEADQUARTERS OF THE WINNERS.

The oldest, largest and most complete collection of Clydesdales in America. Established in 1871, and has been the champion stud ever since.

27 FIRST AND 9 SECOND PREMIUMS, INCLUDING 7 GRAND SWEEPSTAKES.

At the recent leading Canadian shows—Toronto and Ottawa—being three times the number won by all competitors. Our animals are of immense size, good quality and action. Prices moderate. Terms to suit customers. Visitors cordially invited. Correspondence solicited.

CLAREMONT IS 25 MILES EAST OF TORONTO, ON THE C. P. R.



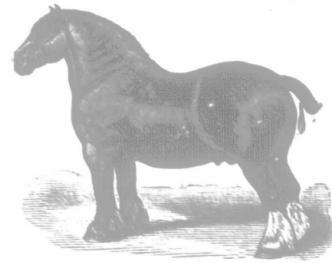
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Fourth consignment will arrive about February 15th, 1901.

A High-class Lot, of Good Size and Quality, and of Most Fashionable Breeding.

Parties desirous of securing high-class horses will do well to see these or write us before purchasing.

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LATELY IMPORTED A FRESH LOT OF

CLYDESDALE STALLIONS,

Comprising sons and grandsons of many of the most noted Scotch showyard winners and sires, all in the pink of condition without surplus flesh, and personally selected to meet the best Canadian markets, having, without exception, the best of bone, hair, feet, and action, coupled with true Clyde character.

I will make further importations as the times demand. Inspection invited.

Prices consistent with quality.

ROBERT GRAHAM,

Stouffville Station, G. T. R., and telegraph office.

RINGWOOD P. O., ONT.

GREAT SHORTHORN SALE

R. & S. NICHOLSON, OF SYLVAN, AND W. H. TAYLOR, OF PARKHILL.

WILL SELL BY AUCTION, AT "SYLVAN LODGE," ON Wednesday, March 20, 1901,

40 Head of Shorthorns 27 FEMALES 13 BULLS.

The most of them have from 1 to 6 crosses from bulls that have won 1st at the Toronto Industrial Exhibition. We are satisfied that no better lot of home bred cattle have been offered for a number of years. All young, and nothing doubtful in the lot. Terms: 12 months' credit on approved paper. LOCATION: 5 MILES SOUTH-WEST OF PARKHILL STATION ON THE G.T.R. Teams will meet train on evening before and morning of sale. Catalogue sent on application.

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R. & S. NICHOLSON, SYLVAN P. O., ONT.

IN WRITING

Please Mention the Farmer's Advocate.

**A QUICK, SHARP CUT**  
 hurts much less than a bruise, crush or tear  
 Done with the  
**DEHORNING KEYSTONE KNIFE**  
 is the safest, quick, sharp cut. Cuts from four  
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 Most humane method of dehorning known.  
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 THE LATE A. C. BOSCH'S PATENT

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Anyone thinking of farming in British Columbia should write for descriptive pamphlet of farms for sale in the Lower Fraser Valley—the garden spot of the Province.

We have compiled the largest and most complete list of farms, orchards, cattle-grazing and garden lands, and fishermen's attentions, in the Province. It has been very carefully selected, and we have a personal knowledge of every property described. Prices range from \$3.00 per acre to \$250.00 per acre, and in extent from 1 acre to 1,000 acres.

In the Lower Fraser Valley, and on the coast lands around Vancouver, we rarely have more than a month of frost and snow at outside, and the thermometer has only sunk to zero twice in ten years.

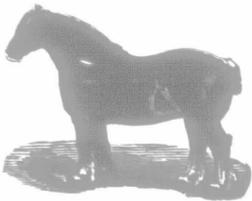
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**Stallions and Colts**

From the best blood in Scotland and Canada. Ayrshire bulls and heifers from imported stock. Jersey heifers and bull calves, sired by the prize-winning bull, Distinction's Golden. Best milking strains, with good teats.

Terms reasonable.  
 A visit to Thorncliffe will well repay you  
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AS ALWAYS, VASTLY IN THE LEAD.  
**PERCHERONS, FRENCH COACHERS, SHIRES.**

ON HAND, HOME-BRED AND IMPORTED  
**270 STALLIONS, 235 MARES.**

The greatest collection of stallions ever brought together. Our two large, recent importations for this year included the Principal Prize Winners at the **WORLD'S EXPOSITION, PARIS,** and at the Government Shows at Amiens and Mortagne, and the Tops, first choice, purchased from the leading studs of France and England.

The superiority of the Oaklawn Percherons was also shown at the

**INTERNATIONAL LIVE-STOCK EXPOSITION** at Chicago, December, 1900, pronounced by press and public the greatest live stock exhibition ever seen, where Oaklawn's Exhibit was awarded

Three 1st Prizes, three 2d Prizes, three 3d Prizes, two 4th Prizes and two 5th Prizes in the three stallion classes; Championship, stallion, any age; Championship, mare, any age; 1st and 2d Prizes for collections; \$100 Gold Medal best group, five stallions; \$100 Gold Medal, best group, three mares.

Catalog on application. Prices reasonable.  
**DUNHAM, FLETCHER & COLEMAN,**  
 WAYNE, DU PAGE CO., ILLINOIS.

Mr. Thos. F. Shore, White Oak, Ont., whose advertisement of turkeys and various breeds of fowl will be found in this issue, reports a good season's trade in Mammoth, Royal turkeys, and the other fowls in his pen. He can still supply a few birds, but as they are going, those who need males should act soon. Mr. Shore has already commenced to book orders for eggs from his specially noted pens. Orders will be filled in rotation as received, and careful attention given to supplying exactly what is ordered. See ad. in Nov. N.

**WORLD'S STANDARD**  
 THE WATCH WORD IS  
  
**Elgin Watches**  
 measure the flight of time with an erring accuracy. Perfectly adapted to the rougher usage of the mechanic and the farmer as well as the gentler handling of the lady of fashion. They come in various sizes and patterns to suit everyone. Sold by Jewelers everywhere.  
 An Elgin Watch always has the word "Elgin" engraved on the works—fully guaranteed.  
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**ELGIN NATIONAL WATCH CO. ELGIN, ILL.**

**4 Imp. Clydesdale Stallions**

From such well-known sires as Sir Everard (5353), Prince Roberts 7135, Prince Alexander 8889.

**4 Imp. Shorthorn Bulls,**  
 4 Bulls Imp. in Dams.

2 Canadian bred Bulls,  
 2 Canadian bred Cows and Heifers.

**GEO. ISAAC & BROS., BOMANTON, ONT.**  
 COBURG STATION, G. T. R.

**FOR SALE.**

**CLYDESDALE** stallions, mares and fillies, representing the best blood in Scotland—Prince of Wales, Darnly, Macgregor and Lord Lyon—including the great sweepstakes winner, The Marquis (1182), a grandson of Prince of Wales and Macgregor; also the first-prize 3-year-old at Ottawa this season.

**THOS. GOOD,**  
 Richmond P. O., Ont.  
 R. R. Station, Stittsville, C.P.R.

**HEREFORDS FOR SALE.**

**THE HERD** of upwards of 90 head of registered animals contains the blood of the best English herds, with imported True Briton and Likely Lad at the head. Stock of both sexes and all ages for sale. Correspondence or a personal visit invited.

**A. S. HUNTER,**  
 DURHAM, ONT.

**90 HEAD**  
 High-quality, Early-maturing  
**Herefords**  
 Prizewinners.  
 Young bulls, cows, heifers.

The blood of "Corrector," "Eureka," "Ancient Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue.

**H. D. SMITH, COMPTON, QUE.**

**HAWTHORN HERD**  
 OF DEEP-MILKING SHORTHORNS.  
 We are offering 8 young bulls for sale, of first-class quality, and AI breeding.  
**Wm. Granger & Son, - London, Ont.**

**JOHN DRYDEN,**  
 BROOKLIN, ONTARIO.

OFFERS SIX YOUNG SHORTHORN BULLS, ready for service, at reasonable prices. Strong, active, masculine.

**GOOD QUALITY AND CHOICE BREEDING.**

**FOR SALE:**  
**Shorthorn Bulls, Cows and Heifers,** carrying a combination of Scotch top crosses, and tracing through many popular strains on the dam's side.  
**F. A. Gardner, Britannia, Ont.**

**YOUNG SHORTHORNS FOR SALE**  
 Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Western (imp.) dams; also bull calves, from Blue Rib, in shape and out of Royal George cows. Inspect and order at once. See ad. in Nov. N.

**A. & D. BROWN,**  
 M. C. RAILWAY, IONA, ONTARIO.

**SPRINGBANK FARM.**  
 Shorthorn Bulls, Oxford Sheep, and Bronze Turkeys. Young bulls for sale.  
**JAS. FOLTON, WALKERTON, ONT.**

PLEASE MENTION FARMER'S ADVOCATE.

**GOSSIP.**  
 WM. STEWART & SON'S AYRSHIRES AND POULTRY.

When we called at Messrs. William Stewart & Son's stock farm, at Menie, we found a gloom had recently been cast over the household by the death of one of Mr. Stewart's daughters, a bright young woman yet in her teens, who was stricken with diphtheria a few days previously. The family have the deepest sympathy of all their friends in such an hour of trouble. Owing to this circumstance, our visit was cut short, and only a hasty look was made among the stock. We found the working herd, of some 20 cows, in their comfortable quarters, recently provided. The two imported cows, Sprightly and Primrose, were found in their usual form, while Jean Armour and her descendants put up an attractive appearance. They are an excellent tribe; in fact, the kind of which any breeder might justly feel proud, being not only show animals, but the robust, productive kind, which are always able to account well for themselves, whether at the stall or in the show-yard. They are all good bull producers, and young sires from this family are eagerly sought. The young son of Jean Armour, by Mr. Hume's imported Caspian, is full of promise, having that type and form which inspires confidence in his future as a sire. Seldom is such an array of well-bred sires found in a herd of such proportions. White Prince (imp.) is again installed here to assist Blair Athol and Hover-A-Lad, the son of Jean Armour and Dainty Lad. A few young bulls are among the present offerings that are at the serviceable age.

In poultry, Mr. Stewart, Jr., has gained a national reputation in the show-yards, which nothing but good judgment and personal attention could achieve. He informed us that at the recent Ottawa show, out of 71 entries he drew 35 firsts, 32 seconds, and four specials, while at Peterborough nearly everything competed for came his way; and when one considers the great competition such exhibits call out, it is evident that Mr. Stewart understands his business. In many lines, we were informed, it is frequently impossible to fill all orders, and we have yet to see any surplus stock on hand. The enormous demand absorbs all salable stock as fast as ready. The special lines bred here are Silver Gray and colored Dorkings, Houdans, Minorcas, Barred and White Rocks; Silver and Rose Comb, White and Brown Leghorns; Golden Penciled and Silver Spangled Hamburgs; Golden and Silver, White Crested and Black Polands; Indian Game, and Seabright Bantams; Rouen, Pekin, Aylesbury and Cayuga ducks, and Bronze turkeys. Note the firm's advertisement.

**ROBERT NESS & SON'S CLYDESDALES, AYRSHIRES AND POULTRY.**

Perhaps no breeders are better or more favorably known in their respective classes than are Messrs. Ness & Sons, Howick, Que. The firm have had a lifelong experience in their business, and during that period have enjoyed a reputation that only sterling business qualities can command. Being actively in touch and sympathy with the heavy-horse business at home and in Scotland, Mr. Ness, Sr., has been peculiarly well qualified to meet the requirements of the trade in breeding Clydesdale stock. We have frequently found their stables well filled with good, salable stock, but perhaps never better than on the occasion of our recent visit in January, when we were shown a string of Scotch and home-bred Clydesdales that would be hard to duplicate for form and quality. The 8-year-old brown horse, Durward Lely, half-brother to the great Baron's Pride, by Sir Everard, is the kind of horse for which this country will be the better. He combines size and quality with the grandest of bone and hair, coupled with character and quality seldom excelled. We also saw a splendid 3-year-old by Prince of Kyle, who won the highest show yard honors in Scotland and fetched \$8,000 as a yearling; and while his son will perhaps never have such a brilliant career, he is an all-round good colt and will take a lot of beating when he gets into bloom. His feet and legs are just right. Of the three 2-year-olds, Mr. Ness informed us that two were by Baron's Pride and the third by Sir Everard. They are coming along in good form, and to all appearances will be on hand when the trumpet sounds, and while the highest quality of strong opposition, the other fellow will have to go some to win. A few excellent home-bred animals were also shown us, chiefly the progeny of the grand imported horse, Lawrence Again, and although the old horse is away, he has left a lasting and impressive likeness in his sons and daughters, which give great promise, especially the yearlings and 2-year-olds. A few mares bred with class season to Durward Lely, and since his get were qualified to win in strong classes from time to time, we see no reason why the firm are not in a position to breed as good horses here as Scotland can produce.

Show-yard winnings have clearly demonstrated the firm's judgment and ability to produce and bring out good AYRSHIRES, 75 head of which were on hand at the time of our visit, much, no doubt, being due to the high quality of the sires employed. To our enquiries, Mr. R. R. Ness, Jr., informed us that they have employed in the herd such bulls as Matchless (a son of Nellie Osbornet, Golden Guinea (sire of many World's Fair winners, Goldfinch (imp.) and Duke of Clarence (imp.), the spicy young champion show bull now at the head, a bull which has defeated all comers of his own and other ages. He has a superabundance of quality and style, and is bred in the purple, his stock proving wonderful sellers. Much might be said as to the individual merit of the females if space permitted, but in the face of the record the herd has established, we deem it sufficient to state that Mr. Ness has worked for a specific type in his cattle, the chief characteristics being constitution, quality, and productiveness, coupled with character, a combination of qualities which, coupled with the good facilities and sound judgment of the owner, is bound to succeed. A few Dorset sheep are kept, which were selected from the best Canadian flocks, and are headed by a pair of good proportions, from the flock of Mr. Jas. Bowman, Guelph.

Much attention is given and ample accommodations provided a choice flock of poultry, their specialties being Barred and White Rocks, Silver Dorkings (which were imported), Light Brahmas, Black Minorcas, and Brown Leghorns; Bronze turkeys, China and Embden geese, Pekin and Cayuga ducks. Many of the best prizes of the large shows have fallen to the lot of this firm, and like the other branches of their stock, they are thoroughly in touch with the up-to-date poultry business.

**Stranger than Fiction**

**A Remedy Which Has Revolutionized the Treatment of Stomach Troubles.**

The remedy is not heralded as a wonderful discovery, nor yet a secret patent medicine, neither is it claimed to cure anything except dyspepsia, indigestion and stomach troubles, with which none out of ten suffer.

The remedy is in the form of pleasant-tasting tablets or lozenges, containing vegetable and fruit essences, pure aseptic pepsin (government test), golden seal and diastase. The tablets are sold by druggists under the name of Stuart's Dyspepsia Tablets. Many interesting experiments to test the digestive power of Stuart's Tablets show that one grain of the active principle contained in them is sufficient to thoroughly digest 3,000 grains of raw meat, eggs and other wholesome food.

Stuart's Tablets do not act on the bowels like after-dinner pills and cheap cathartics, which simply irritate and inflame the intestines without having any effect whatever in digesting food or curing indigestion.

If the stomach can be rested and assisted in the work of digestion, it will very soon recover its normal vigor, as no organ is so much abused and overworked as the stomach.

This is the secret, if there is any secret, of the remarkable success of Stuart's Dyspepsia Tablets, a remedy practically unknown a few years ago, and now the most widely known of any treatment for stomach weakness.

This success has been secured entirely upon its merits as a digestive pure and simple, because there can be no stomach trouble if the food is promptly digested.

Stuart's Dyspepsia Tablets act entirely on the food eaten, digesting it completely, so that it can be assimilated into blood, nerve and tissue. They cure dyspepsia, water brash, sour stomach, gas and bloating after meals, because they furnish the digestive power which weak stomachs lack, and unless that lack is supplied it is useless to attempt to cure by the use of "tonics," "pills" and cathartics which have absolutely no digestive power.

Stuart's Dyspepsia Tablets can be found at all drug stores, and the regular use of one or two of them after meals will demonstrate their merit better than any other argument.—Advt.

**Standard Sheep Dip**  
 (OIL OF TAR.)

Non-poisonous, cheap and effective. Destroys Scab, Lice, Ticks, Foot Rot, etc.

Write for Testimonials and Circulars.

Manufacturers: **The West Chemical Company,** TORONTO, ONT.

For Contagious Abortion use West's Fluid.

**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 LEVERING, Secretary, Lafayette, Indiana.

**SHORTHORNS AND BERKSHIRES.**

Young bulls, six to twelve months old; cows and heifers. Berkshires (various ages, either sex), and Embden geese.  
**MAC, CAMPBELL,**  
 Northwood, Ont.

**Bonnie Burn Stock Farm**

Forty rods north of Stouffville station, Ont., offers 5 Shorthorn bulls and some heifers, 30 Shropshire rams and ewes from Imp. and Canadian-bred sires, at reduced prices.  
**D. H. RUSSELL, Stouffville, Ont.**

**ARTHUR JOHNSTON**

Greenwood, Ontario, Canada.

**HIGH-CLASS SCOTCH SHORTHORNS**

(First Importation Made in 1874.)

(My recent importation of 30 head has just arrived home from quarantine. Herd now numbers over 120 head.)

OFFERS FOR SALE  
 40 Imported Cows and Heifers,  
 40 Home-bred Cows and Heifers,  
 11 Imported Bulls and Bull Calves,  
 13 Home-bred Bulls and Bull Calves.

Railway stations: Pickering, on main line of Grand Trunk Railway, 22 miles east of Toronto, and Claremont, 23 miles east of Toronto, on the C. P. Railway. Catalogues on application.

**Shorthorn Bulls**

TWO excellent young bulls: one 2 yrs. in May, and one 1 yr. in Mar. Bred straight from high-class Scotch-bred bulls and Scotch-topped cows, of good milking families. Write for prices, or come and see for yourself.

**GEO. MILLER, Markham, Ont.**



IMP. FASHION'S FAVORITE.

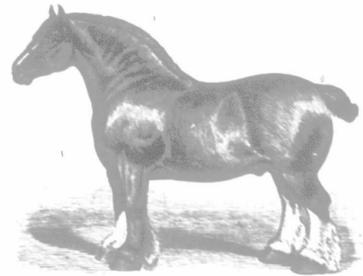
FOR SALE  
**Three Beautifully-bred  
Clydesdale Stallions**

**Royal Erskine (imp.) [2529] (10431)**

Brown; foaled May 3, 1896. Bred by Chas. Smith, Jr., Incheorsie, Huntly, Scotland.

Dam Roseabella (12921)	Sire Prince of Erskine (9647)	W. S. Park
2 Rose of Incheorsie (7825)	Lord Montrose (7973)	J. McGibbon.
3 Susie of Incheorsie (7822)	Johnny (414)	Wm. Kater.
	Black Samson (62)	A. K. Leitch.

ROYAL ERSKINE is a grand young horse, and won Second at both Toronto and London in 1899 against strong competition, when in very thin condition, being just off the ship. PRINCE OF ERSKINE (9647), by Prince of Albion; dam Halton Beauty (5687), by the great Darnley (222). LORD MONTROSE (7973), by Knight Errant (4483); dam Lady Jane (6424), by Model Prince (1225). JOHNNY (414), alias Xonsuch, alias Young Emperor, alias Rantin Johnny, was a prize-winner at the Highland Society's Show at Glasgow in 1875.



**Balmedie Cameron Highlander (imp.) [2562] [Vol. 21, p. 134 S.]**

IMPORTED IN 1899 BY H. CARGILL & SON, CARGILL, ONT.

Dark bay, white star on face, hind feet and ankles white, foaled April 7, 1898. Bred by W. H. Lumsden, of Balmedie, Scotland.

Dam Balmedie Doris (13311)	Sire Royalist (6242)	Brooder of Sire, Jas. Lockhart.
1 Lady Dorothy (1683)	Balmedie Prince (7454)	J. Cranston.
2 Maggie of Kirminnoch (5825)	Darnley (222)	Sir W. Stirling-Maxwell.
4 Jean of Kirminnoch (5826)	Strathelby (1538)	J. McIsaac.
	Young Conqueror (957)	Jas. Smith.
	Cairn Tom (117)	Mr. Cochrane.

BALMEDI DORIS won the following prizes, only times shown: 1896, Second Prize as a three-year-old at Royal Northern, Aberdeenshire, 1897, Second Prize as year mare at Royal Northern, Aberdeen. 1898, Second Prize as mare with foal at foot, at Royal Northern, Aberdeen. LADY DOROTHY won the following prizes, and was one of the best mares left by that famous stallion, Darnley (222): 1891 Glasgow Show, Fourth Prize. Royal Northern, Aberdeen, First and Special for best mare in yard. 1892 Royal Northern, Aberdeen, First with foal at foot. Highland and Agricultural Show at Inverness, First Prize. 1893, Highland and Agricultural Show at Edinburgh, Silver Medal. 1894, Highland and Agricultural Show at Aberdeen, Third Prize. 1895, Farmington Show, First Prize and Special for best female. Inverurie Show, First Prize and Special for best female. ROYALIST (6242), sire Darnley (222); dam Princess (6365), by Prince of Wales (673), is one of the Champion Clydesdale Stallions of the day, both in the show yard and at the stud, his progeny having taken First Prizes at the Highland and Agricultural Society, Royal English, and other leading shows. ROYALIST, in 1887, as a one-year-old colt, gained Third Prize at Kilmarnock, First Prize and Cup at Royal Northern Summer Show, Aberdeen, and Third Prize at Highland Society's Show at Perth. In 1888, as a two-year-old colt, he gained First and Challenge Cup at Inverurie Show, First Prize and Cup at Royal Northern Summer Show, Aberdeen. In 1889, as a three-year-old stallion, he gained First Prize at Royal Northern Summer Show, Aberdeen, and Second Prize at Highland Society's Show at Melrose; and in 1893, when seven years old, he gained First Prize and Challenge Cup as champion male at the Jubilee Show of the Royal Northern Society, Aberdeen. BALMEDI PRINCE (7454), by Prince of Wales (673).

**Royal Carruchan (imp.) [2561] (Vol. 21, p. 172, S.)**

IMPORTED IN 1899 BY H. CARGILL & SON, CARGILL, ONT.

Bay, stripe on face, off fore and hind feet white; foaled May 4, 1898. Bred by David Walker, Coullie, Udny, Aberdeenshire, Scotland.

Dam Jess of Coullie (13647)	Sire Prince of Carruchan (8151)	Brooder of Sire, J. McCaig.
2 Balfarg Jess (3265)	Mount Royal (8965)	D. Mitchell.
3 Dainty of Kingsdale (2648)	Corsair (1419)	Sir W. Stirling-Maxwell.
4 Jess Maid (760)	Scotman (760)	J. McIsaac.
5 Jess (1537)	Stirling Tom (1537)	R. Monbray.
6 Mettle (778)	Sir Colin Campbell (778)	R. Lorran.
	Stirlingshire Champion (530)	J. Hardie.

PRINCE OF CARRUCHAN, by Prince of Wales, was First at Highland Agricultural Society Show at Dundee, as a two-year-old. First and Champion at the Highland Society, as a three-year-old, at Stirling. First as an aged horse at the Highland Society Show at Edinburgh; also winner of the Cawdor Cup twice at the Glasgow Stallion Show.

MOUNT ROYAL won the following prizes: 1888, First at Perth. 1889, First at Turrit, 1890, First and Champion for best entire, any age, Royal Northern, Aberdeen. First and Clydesdale Society's Medal for best entire, any age, Turrit. First and Challenge Cup for best animal, male or female, Inverurie. First and Lord Aberdeen's Special Prize for best entire colt, Aberdeen. V. H. Commended, Highland Society's Show, Dundee, 1891. First and Champion Cup for best entire, any age, Royal Northern, Aberdeen. First at Royal Northern Summer Show, Aberdeen. Second to Prince of Carruchan at Highland Society's Show, Stirling. 1892, First, Royal Northern Summer Show, Aberdeen. Fourth, Highland Society's Show, Inverness, 1893. Second, Glasgow, as sire of five yearlings. Kirriemuir Society's Premium horse, 1894. Kirriemuir Society's Premium horse, 1895. Short best of five for Glasgow Premium, Selkirk and Galashiels Society's Premium horse, 1896. Windygates Society's Premium horse. His stock has gained First Prizes at Huntly, Keith, Banff, Turrit, Inch, Kennethmont, Inverurie, Fyvie, Aberdeen, Glasgow, Edinburgh, Dundee, East Kilbride, Kirkintilloch, Girvin, Kirriemuir, Montrose, Forfar, Arbroath, etc. He is sire of Royal Garty (9844), the Cawdor Cup winner in 1895 and 1896.

FOR SALE:  
**Three imp. Yearling  
Bulls; Seven imp. in-  
dam Bull Calves.**

Bred by Messrs. Duthie and Marr, from females imported by us, and sired by the best bulls in Scotland. All are excellently bred and first-class individuals.

We also offer any reasonable number of females, either in calf or with calves at foot; all ages.

Herd headed by the imported bulls, Golden Drop Victor and Prince Bosquet.

Also the Standard-bred Trotting Stallion,  
**PAVON (30760) A. T. R.**

CATALOGUE FREE.

If interested, come and see us or write:

**H. CARGILL & SON, CARGILL, ONT., CAN.**

**TROUT CREEK HERD OF SHORTHORNS.**

Since our Chicago sale we have imported sixty-two head, including some Royal winners; they were pronounced in Scotland superior to past importations. We try to import the best, believing that this is one of the ways to assist in improving the breed on this side of the water. Being thoroughly convinced, also, that a bull of the right sort is even more than half the herd, we have decided to keep the following choice ones:

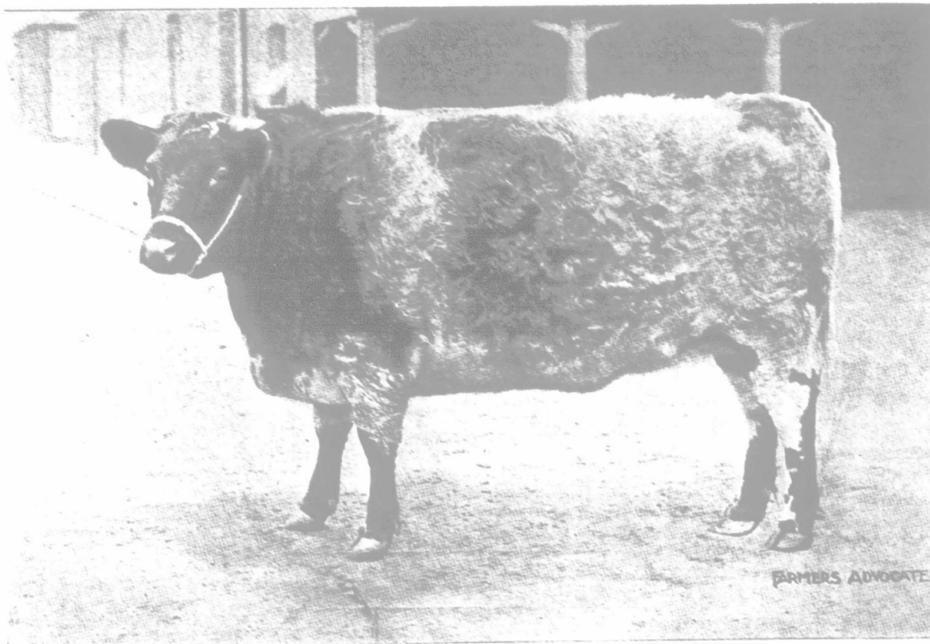
**Imp. Lord Banff.**

Bred by A. Watson; of the Campbell Bessie family.

**Imp. Consul.**

Bred by J. D. Fletcher; of the Campbell Claret family. Consul was awarded first at Edinburgh, first and champion at Provincial Union, first and champion at Creiff, and second at the Highland. His sire, Watchword, bred by Wm. Duthie, was first at the Highland in 1895 and 1896, and got by Scottish Archer. Watchfire, by Watchword, was first at the Highland, 1897. Consul is the highest-priced bull imported to Canada.

Hamilton is a city of over 50,000 inhabitants, located on main line of Grand Trunk Railway, between Chicago and Buffalo; also connected by Canadian Pacific Railway and Michigan Central Railway branch lines.



CICELY.

Bred by Her Majesty the Queen; undefeated in her class and many times champion; imported by W. D. Flatt.

**Imp. Silver Mist.**

Bred by Wm. Duthie; of the famous Missie family. He had many friends for first choice at Messrs. Marr and Duthie's sale. Mr. Beck, representing the Prince of Wales, made next to last bid.

**Imp. Wanderer's Last.**

Bred by W. S. Marr; also of the Missie family. Is the last calf got by that renowned Cruickshank bull, Wanderer. Mr. Marr considers this youngster very promising.

We keep in our herd a choice lot of both imported and Canadian cattle, of both sexes, from which to make selections. Personal inspection invited. Parties desiring to see the herd will be met on arrival of trains at Hamilton if notice is given. Visitors always welcome.

**W. D. FLATT,**

HAMILTON, ONT.

Jas. Smith, Manager.

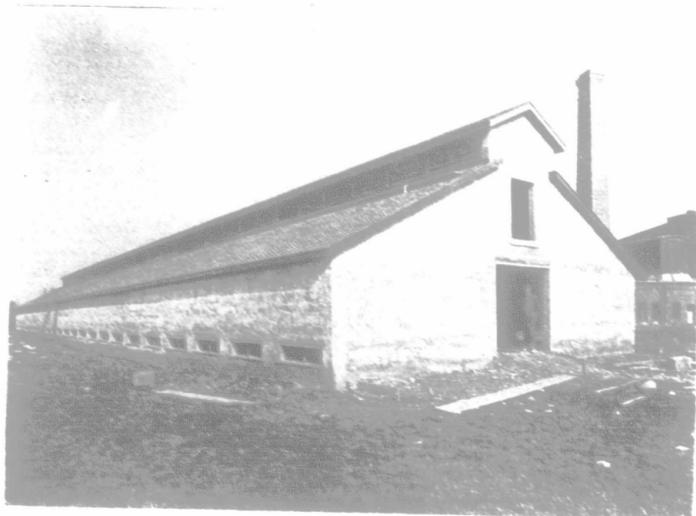
178 Hess St. South.

# A Mammoth Piggery

THE FARMERS' CO-OPERATIVE PORK PACKING CO., OF BRANTFORD, ONT.,  
USE 324 BARRELS OF

## Thorold Cement

IN THE CONSTRUCTION OF A MAMMOTH PIGGERY.



BRANTFORD PIGGERY.

Size of main building 40 x 192 x 10 feet x 9 inches thick. Gables, 13 feet high x 9 inches thick. Office, 18 x 20 x 10 feet x 9 inches thick. Floors, 6 inches gavel and 4 inches concrete, in all 10 inches thick.

Capacity, 12 carloads pigs. Labor and material, walls and floor—12 men 24 days; 225 yards gravel; 11 yards stone; 324 barrels **THOROLD CEMENT**. Built under the supervision of our N. R. Hazard.

Estate of **JOHN BATTLE**, Thorold, Ont.  
Thorold Cement Manufacturers.

# The National

Centrifugal Farm

## Cream Separator



AN ACTUAL NECESSITY FOR PROFITABLE DAIRYING  
WHEN MAKING BUTTER ON THE FARM OR  
WHEN SENDING CREAM TO THE  
CREAMERY OR CITY TRADE.

It combines all important improvements and points of merit that are of real practical service to the everyday operator on the farm. Most simple in its construction. Anti-friction ball bearings; convenient and easy to operate by the children. Skims the cleanest; makes the sweetest cream; no numerous parts to give trouble and delay when washing every time it is used; only two pieces inside of the bowl. Strong, durable, made of the finest material so as to give the most lasting service, and most beautiful in design and finish.

MANUFACTURED BY

THE  
**Raymond**  
Mfg. Co.  
of Guelph,

LIMITED.

GUELPH, ONT.

"NATIONAL" NO. 1 HAND POWER.  
Capacity, 330 to 350 lbs. per hour.

If not introduced in your locality, see advertisement in this issue.  
**Joseph A. Merrick,**  
BOX 518, WINNIPEG, MANITOBA., Gen. Agt. for Manitoba, N. W. T., and B.C.

## The Breed THAT FIRST Hillhurst Famous

**FIVE GRAND YOUNG SHORTHORN BULLS FOR SALE**, 9 to 12 months registered; bred from milking strains; hardy and active, having been reared in a natural manner on pasture. Prices moderate. Special inducements to clubs. A choice lot of

### SHROPSHIRE

Ram and Ewe Lambs, by imported rams of Mansell's and Harding's breeding. **HAMPSHIRE, THE GOLDEN-FLESHED**, Ram Lambs all sold. Next crop due January, 1901. Ready for service in August.

**M. H. COCHRANE,**

**HILLHURST STATION,** on **COMPTON CO., P. Q.**  
117 miles from Montreal, on Portland Div. Grand Trunk Ry.; 12 miles from Lennoxville, C. P. R.

## W. G. Pettit & Son,

FREEMAN, ONT.

IMPORTERS AND BREEDERS OF

Scotch Shorthorns  
and Shropshire Sheep

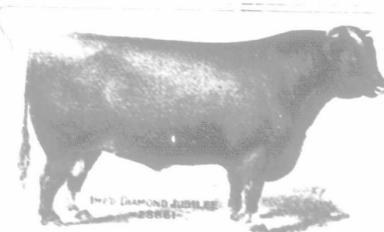
OFFER FOR SALE:

- 12 Imported bulls, 12 mos. to 2 yrs. old.
- 5 " " " 9 to 12 mos. old.
- 20 " " " cows, 3 to 6 yrs. old.
- 15 " " " heifers, 2 yrs. old.
- 5 " " " 1 yr. old.
- 6 Home-bred bulls, 9 to 18 mos. old.
- 20 " " " heifers, 1, 2, and 3 yrs.

Our imported bulls are now getting in good shape. All our heifers of suitable age are bred to Pure Gold (Imp.), by Cyprus, and Scotland's Pride (Imp.), a Cruickshank Clipper, by Star of Morning.

Catalogues on application. All our imp. cattle were registered in the American Herd Book before the \$100.00 fee for recording was put on.

Burlington Junction Station, Telegraph and Telephone Offices, within half a mile of farm.



**T. DOUGLAS & SONS,**  
STRATHROY, ONT.

BREEDERS OF..

## Scotch Shorthorns

100 HEAD TO SELECT FROM.

Offer for sale 11 young bulls, and cows, and heifers of all ages, of the most approved breeding, bred to (Imp.) Diamond Jubilee—28861, at head of herd. Farm one mile north of town, on

## J. & W. B. Watt, SALEM, ONT.,

(Post and Telegraph Office.)

BREEDERS OF

Clydesdale horses,  
Scotch Shorthorn  
cattle, Leicester  
and Oxford sheep,  
Berkshire pigs.

Our **SHORTHORN** herd was founded over 30 years ago, and contains such tribes as the Village Ruds, Matchless, Missies, Mildreds, Stamfords and English Lady, upon which we have employed such bulls as *Barrington Hero* 324, *Young Abbotshurn* 6236, *Challenge* 2333, *Perfection* 9100, *Lord Lansdowne* (Imp.) 2712, *Clan Stuart* 14381, *Canada* 19535, *Sittlyton Chief* 17449, *Royal Sailor* (Imp.) 18639, *Royal George* 28313, *Clipper King* 16233 and *Judge* 23419, all of which have been first-prize winners wherever shown. *Royal Victor* 34681 and *Royal Wonder* 34682, by *Royal Sailor* (Imp.), and out of English Lady and Mildred dams, now head the herd, assisted by *Royal Cloud* 31317, by *Lord Gloster* 28295, and out of *Melody* 21922, a descendant of the Buckingham family. We are now offering young bulls, cows and heifers for sale, of Scotch type.

Farm 2 miles from Elora Station, G. T. R. and C. P. R., 15 miles north of Guelph.

## Rapids Farm Ayrshires.

REINFORCED BY A RECENT IMPORTATION of 20 cows, 2 bulls, and a number of calves, selected from noted Scotch herds, and including the male and female champions at leading Scottish shows this year. Representatives of this herd won the first herd prize at the exhibitions at—

Toronto, London, and Ottawa, in 1900.

Come and see or write for prices.

Young Bulls and Heifers for Sale, bred from High-class Imported Stock.

**Robert Hunter, Manager**

for W. W. Ogilvie Co., Lachine Rapids, Quebec.

### Shorthorns, Cotswolds and Berkshires



**FOR SALE.** One yearling bull and six bull calves; also a few cows and heifers. A choice lot of ram lambs, ewe lambs, and ewes in lamb. Young pigs of the long bay type, from two to three months old. Write for prices.

**F. BONNYCASTLE & SONS,**  
Campbellford P. O., Ont.

### SHORTHORNS FOR SALE

Cows and heifers, also a few young bulls. I have employed sons of Lord Lovel, Royal Member, Perfection, Indian Chief, and Clan Campbell, on Lord Lovel and Abbotshurn females.

WM. HAY, TARA, ONT.

### Shorthorns FOR SALE:

12 young bulls,  
10 yearling heifers and heifer calves,  
16 2-year-old heifers and young cows,

several well advanced in calf to Precious Stone (Imp.). Prices moderate. Write for particulars.  
**G. A. BRODIE,**  
Stouffville Station, Bethesda, Ont.

### 6 Shorthorn Bulls 6

Also cows in calf and yearling heifers.  
All of straight Scotch breeding.

**SHORE BROS., WHITE OAK, ONT.**

### SHORTHORN BULLS FOR SALE.

We have Cruickshank Lovely, Fashions and Stamfords females, and Matchless females bred by J. & W. B. Watt, Salem, Ont., with Lovely Victor 22179 at the head. **T. MERCER, MARKDALE, ONT.**

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from such sires as Mariner (Imp.), Royal 17460, S. P. Van Selma (Imp.), Grenadier 26241, and Roseville A. 20874, on a Victoria foundation. Also some ewe lambs of Star 10 mos. red face, and some young pigs.

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BULLS AND HEIFERS FOR SALE.

Choice quality and best Scotch breeding. Imported and home bred. Imported Kunkle Duster (22393) and Imp. Royal Prince head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years.

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For MAPLE SYRUP and SUGAR. Has a corrugated pan over firebox, doubling boiling capacity and saving fuel...



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High-class Shorthorns and Yorkshire Pigs.

One very superior bull, about 17 months old; three bulls about 5 months old, from imp. stock...

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4 SUPERIOR Scotch-bred Shorthorn bulls, 12 to 14 months; 1 two-year-old heifer of the best strains...

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Shorthorn Cattle and Lincoln Sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898.

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Maple Lodge Stock Farm ESTABLISHED 1854.

SHORTHORNS—An excellent lot of young bulls, and a special value in young cows and heifers in calf to our imported Knuckle Duster.

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One Jersey bull two years old. Some very choice all calves, from 2 to 5 months old, and a few high-grade heifers and heifer calves.

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GLEN ROUGE JERSEYS.

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

Butter Jerseys

But I have others fully as good, or better. Heifers from 4 months up to 2 years. Several soon due to calve.

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The home of officially tested, Advanced Registry, dairy test and showing-win HOLSTEINS. A grandson of the famous Sylvia now for sale.

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Four bull calves, born in August and September, sired by the great bulls, Count Mink Mercedes and Daisy Teake's King...

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Imported bulls at head of herd: Glencairn 3rd, Napoleon of Auchenbrain, and Lord Dudley. Forty imported females, selected from leading Scotch herds...

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Expect to import from Europe, in the near future, and can book orders for stock on commission, as I have a good connection in England and Scotland.

T. D. McCALLUM, Danville, Que.

GOSSIP.

The Canadian Horse Show will be held, combined with the Military Tournament, in Toronto, April 24-27.

The stockholders of the Ohio Poland-China Co. met at Dayton, Ohio, January 23. Directors elected were: L. N. Bonham, Oxford, Ohio; J. M. Kiever, Bloomington, Ohio; John W. Williams, Briant, Indiana; J. H. Lackey, Jamestown, Ohio; Ed. I. Brown, Winchester, Indiana; J. J. Snyder, Paris, Ohio, and C. W. Goslee, Roundhead, Ohio.

Thomas Good, Richmond, Ontario, writes: Clydesdale stallions wintering well; not overloaded with fat, but in grand health. Our system of daily exercise is having a marked effect in sound constitution and sure stock-getters.

CLYDESDALE WINNERS AT THE GLASGOW STALLION SHOW.

The following were leading winners in the Clyde class at the Glasgow Spring Show, Feb. 6th: In the aged stallion section for the Society's premium of £50, to serve in Glasgow district £2, competing Mr. John Crawford, Casablanca (10523), rising 3 years, a son of Baron's Pride (9122) and Garthland Queen (13113).

OFFICIAL RECORDS OF HOLSTEIN-FRIESIAN COWS RECEIVED DURING JANUARY, 1901.

This class of records are made under the supervision of experiment stations by the scales and the Babcock test. All are for periods of one week. The equivalents of butter are calculated by the Superintendent of Advanced Registry.

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W. W. Chapman, Secretary of the National Sheep Breeders' Association.

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

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SOUTHDOWN SHEEP (IMPORTED AND HOME-BRED), ALSO DEXTER-KERRY CATTLE. A USEFUL LOT OF SOUTHDOWN RAMS NOW FOR SALE.

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Sheep of both sexes for sale, many of which are bred from the famous imported ram, Royal Warwick 3rd. Correspondence solicited. Visitation welcome.

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**GOSSIP.**  
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**JOS. FEATHERSTON & SON,**  
 IMPORTERS AND BREEDERS OF  
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 We have some nice young boars and sows fit for service, for sale. Also one imported boar, 8 months old, and have 9 imported sows in farrow and 2 more to be bred for June litters, besides a number of home-bred sows. Our imported stock was selected personally from the well-known herds of Philip Ascroft, Rufford; T. Heuson, Peterboro, Yorkshire; D. R. Daybell, and Sir Gilbert Greenhall, Bart., Walton Hall, Warrington, England. Correspondence solicited. Streetsville P. O. and Telegraph.



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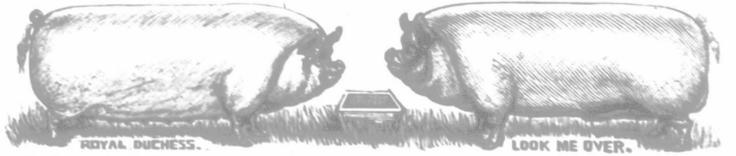
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At the **Maine State Dairymen's Association Meeting** at Augusta, Dec. 4-5, 1900, there were 59 entries of butter, of which

- 15 were by users of the **Improved U. S. Separator.**
- Highest 98, lowest 91, average of the 15 entries **95.6**
- 12 were by users of the **Alpha-DeLaval Separator.**
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**NOTE THE FOLLOWING FACTS**

- The users of the **U. S. Separator** averaged **FOUR POINTS** higher than the DeLaval
- The Highest, 2d Highest and 3d Highest scores went to users of the **U. S.**
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- The **U. S.** stood **FIRST** in all the different classes and special premium offers.

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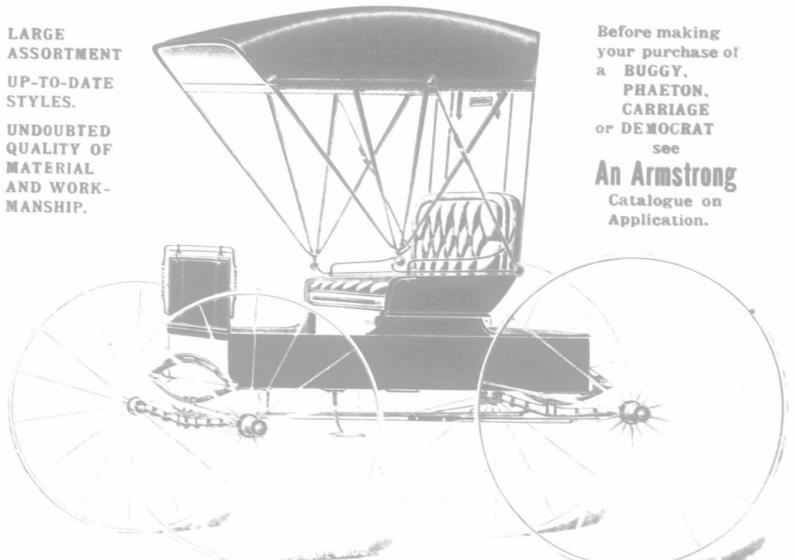
**VERMONT FARM MACHINE CO., Bellows Falls, Vt.**  
 193 No duty on Improved U. S. Separators shipped into Canada.

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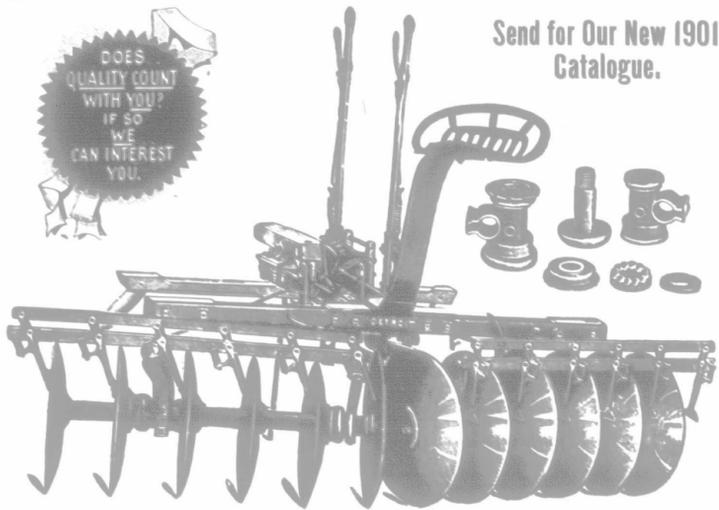
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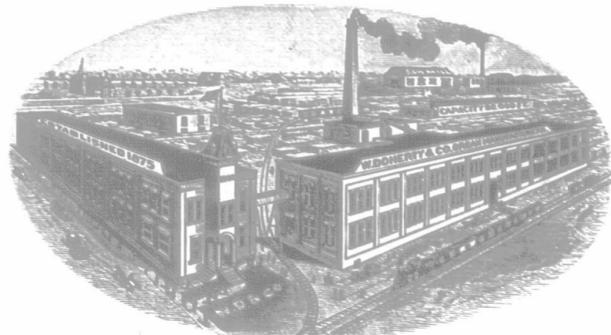
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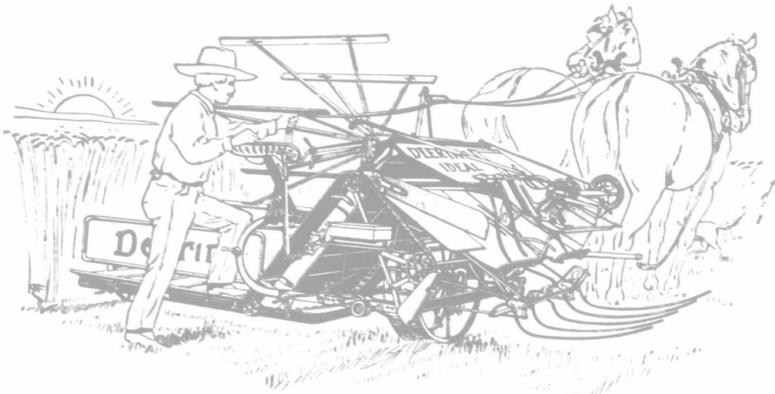
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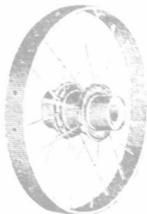


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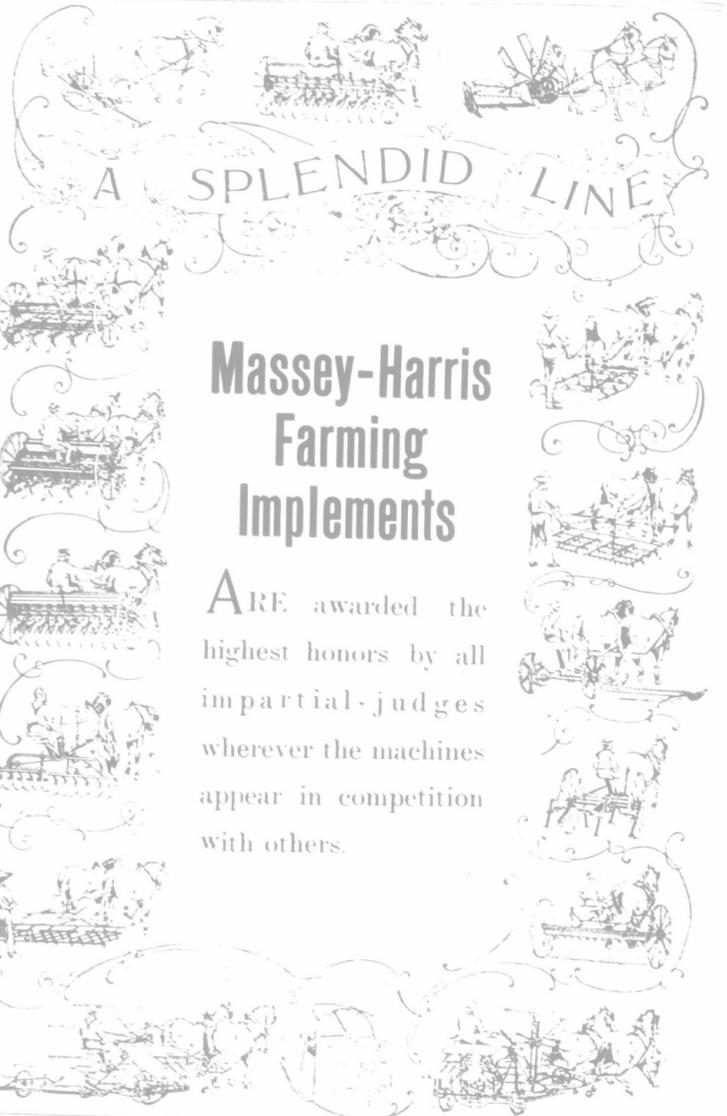
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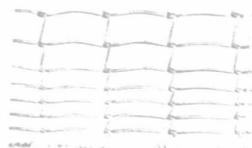
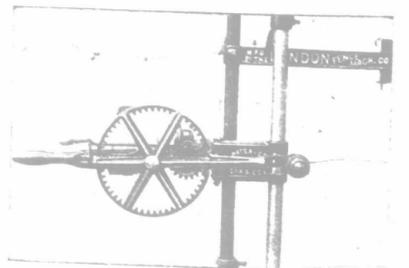
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