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VOL. XXXVI. WINNIPEG. JUNE 20, 1901. MANITOBA. No. 528

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CONTENTS OF THIS NUMBER.

	PAGE.
THE IMPROVEMENT OF THE COUNTRY ROAD	363
THE EDUCATIONAL AT THE FAIRS	363
TWO GOOD POINTS IN A STABLE	363
ATTEND THE INSTITUTES	363
FARM SIFTINGS	363
DEFINITION OF GOOD BUTTER	364
THE FOOD AND THE COW	364
PERCENTAGE OF FOALS	364
PROVIDE YOUR STOCK WITH HAY	364
THE CALGARY EXHIBITION	364
THE VALUE OF PORCINE BY-PRODUCTS	364
SOME ENGLISH SHOWS	365
DORRINGTON 3RD (ILLUSTRATION)	365
TITANIA—103—(ILLUSTRATION)	365
COOKING ON THE FARM	366
OUR SCOTTISH LETTER	366
WHY CREAM FROM STALE COWS IS SLOW IN CHURNING	367
"A FRUITLESS MISSION"	367
HAROLD 3703 (ILLUSTRATION)	367
PLOWING AND PLOWS	368
GROWING GOOSEBERRIES AND CURRANTS	368
RIDDING POULTRY HOUSES OF VERMIN	368
THE IDEAL TABLE BIRD	368
ADVANTAGES OF THOROUGH STRIPPING	368
WHY BUTTER GOES RANCID	368
HOUSEHOLD TESTS FOR THE DETECTION OF OLEOMARGARINE AND RENOVATED BUTTER	369
FOUR BRITISHERS (ILLUSTRATION)	369
MANITOBA PLOWING MATCHES	369
BATH AND WEST OF ENGLAND SHOW	369
HAWTHORN BLOSSOM, FLORODORA, OMBERSLEY PRIDE (ILLUSTRATION)	369
TREATMENT OF WOUNDS	370
PRESERVE HARNESS IN GOOD CONDITION	370
THE PAN-AMERICAN	370
THE SOLID SECURITY OF IMPROVED LIVE STOCK	370
POLO PONIES	370
SUMMER FAIR DATES	370
THE QUESTION OF ADVERTISING	370
BREEDING AND MANAGEMENT OF PIGS	371
BONE IN SHEEP BREEDING	371
DAISY 3RD (ILLUSTRATION)	371
RAISING THE PURE-BRED CALF	371
SHARP TEETH, NOT BLACK TEETH, IN YOUNG PIGS	371
FOR THE FLIES	371
PROF. REYNOLDS ON STABLE VENTILATION (ILLUSTRATED)	372
WHITE SCOUR IN CALVES	373
GOLDEN MONPLAISIR (ILLUSTRATION)	373
THE UNIVERSAL BENEFICENCE OF GRASS	373
THE GREATNESS OF AGRICULTURE	373
PRACTICE PLUS THEORY—SUCCESS!	373
GOLDEN ROSEBAY (ILLUSTRATION)	373
A DEMORALIZING SYSTEM	374
A LITTLE CONTROVERSY	374
POULTRY RAISING AND FATTENING FOR EXPORT	375
THE LITTLE CHICKS	375
A NEW NEST EGG	375
TURKEY CURES—CARE OF TURKEYS	376
FARMERS' INSTITUTE STAFF	376
MANITOBA CROP REPORT	376
THE NEW FRUIT INSPECTION BILL	376
QUESTIONS AND ANSWERS—VETERINARY: PARTIAL PARALYSIS IN PIGS; WORMS IN SOW; CHRONIC COUGH; PARALYSIS OF FORE EXTREMITIES IN CALF; SWOLLEN LEGS IN HORSE; SKIN DISEASE IN CATTLE; SCROTAL HERNIA IN FOAL; RINGBONES ON ALL-FOURS	376, 377
MISCELLANEOUS: HOOP; SUGAR BEETS VS. MANGELS FOR COWS—STERILIZING MILK; RACE-TRACK CONSTRUCTION; HEAVY LAND AND DROUGHT; BEDDING REQUIRED FOR FEEDING CATTLE LOOSE; FARM WATER SUPPLY; SKUNK FARMING	377
O. K.	377
CHICAGO MARKET	377
BRITISH LIVE STOCK MARKETS	377
HOME MAGAZINE.	
THE FAMILY CIRCLE	378
THE QUIET HOUR	378
THE CHILDREN'S CORNER	378
GROUP OF FAVORITE KING CHARLES SPANIELS (ILLUSTRATION)	378
"PARTING OF EDGAR AND LUCY OF LAMMERMOOR" (ILLUSTRATION)	379
GOSSIP	381, 382, 383, 386, 387, 388
THE CHICAGO SALE OF CANADIAN SHORTHORNS	382
AMERICAN GUERNSEY CATTLE CLUB MEETING	382
NOTICES	381, 383, 387
ADVERTISEMENTS	361 and 362, 381 to 392

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The Council of the Royal Agricultural Society has agreed to the site of the permanent show at Twyford. It will be on the new London to Oxford Railway in process of construction by the Great Western Railway Company, and about six miles from the city. The council has agreed to raise funds by soliciting donations.

In January last, Mr. F. Miller, the well-known importer, sold in the market at Buenos Ayres, thirty-one imported Lincoln rams at an average of \$53 each, the top price being \$136 and the bottom price \$12 per head. At the same market, in the month of February, the Messrs. Ballin & Co. disposed of 221 Angora bred Lincoln rams at an average of \$23.

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

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Vol. XXXVI.

WINNIPEG, MANITOBA, JUNE 20, 1901.

No. 528

The Improvement of the Country Road.

In a young country, the roads receive but little attention as a rule, and in many cases fortunately so, for we have seen it where, after the tinkering generally dubbed "statute labor," a fairly good trail has been spoiled and the last state of the road was worse than the first. It may be assumed that roadmaking and road repairing are done in order to have those roads in the best shape for spring and fall travel, consequently there are a few primary rules to be observed. Hills should be cut down and the hollows filled up as far as is practicable. The more the surface is improved, the more the grades should be reduced. The construction of an embankment (or grade, as it is often termed) through a low spot calls for careful work. The earth should be deposited in layers so that it will settle uniformly. When the scraper is used each scraperful should be levelled down, otherwise the settling will be uneven and hills and hollows will be left; the latter will fill with water when rain falls, and the mud resulting will be disagreeable, increase the draft, and will result in material being carried out of the low spot, just the opposite to what is wanted. The use of the harrows and a heavily-weighted roller on the road as each layer is deposited will tend to firm and harden it. No road can remain good for any considerable length of time without good drainage. Drainage of roads may take three forms—underdrainage, side ditches, and surface drainage. Given a dry subsoil and the first may be dispensed with. There are spots, however, in which the use of tile would be very beneficial. It is no use to gravel or stone a road unless the underdrainage is good, otherwise the hard material will eventually work down in. In places kept soft by a spring, a line of tile along the side of the road will be more useful than if the height of the grade is increased. Side ditches are to take the water from the roadway, also to prevent any coming on to the road from the sides. They should in all cases be constructed so as to take the water away quickly. The digging of a ditch in a low spot, making it a sort of open cistern or pond, is a very bad scheme, as the water from it will be continually soaking into and spoiling the grade close to it. Side ditches need not be deep, but should have a broad flaring side to the road, and should have a good outlet, as no good road can be obtained if the ditches are canals, holding the water until it dries up. The road machine, or grader, is the best implement for this work. Side ditches are essential where a hill is cut down to make the road. The steeper the side, the greater the need for a good side ditch at that side, so as to prevent the water washing the road or taking the center of the road for it. Surface drainage calls for a knowledge of the construction of what is termed *the crown*, which should be 12 inches in 25 or 30 feet. The smoother the surface is kept, the less the crown required. A crown can be too great, with the result that the travel is entirely in the center of the road or that the side slopes wash heavily. If sods are put on the road, they tend to work up into a ridge on the center. They should be torn to pieces and levelled with a harrow. The maintenance of the road may be summed up as follows: To get rid of the water as quickly as possible, by keeping the surface smooth and the side ditches open. In some parts of this Province the road allowance has been cultivated and then let run. In all such cases seeding down to grass should be enforced; unless so done, a road may become a veritable nursery for weed seeds. The construction of culverts calls for considerable attention. The use of wood for such purposes is not an up-to-date method. Far better are the tile or cement ones. Some municipalities and the C. P. R. are using tile extensively. In Ontario, the Road Commissioner recommends cement culverts, which can be constructed by any one by the use of molds of spring iron, which can be secured at a foundry for from

\$8 to \$18, according to size. The molds are composed of an outside casing resembling a stovepipe, and are two and a half feet long; the inner being less in diameter, so as to leave a space between the two of about four and a half inches. In addition to the above means of keeping roads in good shape may be mentioned the use of wide tires, three inches or upwards on heavy wagons.

The Educational at the Fairs.

It is no uncommon occurrence to read, after the fairs are over, severe strictures on those institutions, their methods, side shows, etc. It is, however, encouraging to note that the two leading fairs of the West, namely, the Industrial and Brandon, have made a move distinctly along the educational line. The success of their ventures depends, of course, entirely on the attitude taken by the farming community. If the entries are large, the directors of these fairs will feel encouraged and will doubtless develop this laudable work by the addition of more money for competition. The dairy competition is not entirely new, and will, of course, be the province of the young women of the farm, although men will likely be numbered among the competitors. Those having had dairy-school training will be, or should be, the better fitted for the competition. The Brandon judging competition is the initiatory one for the Province, and deserves special mention. The competitors' work will probably be crude, as it is well known that while many will pick out a good animal, fewer will give satisfactory reasons for so doing. In this connection we might point out the utter lack of opportunity for the average young farmer to learn stock-judging. No agricultural college, no judging institute, and seldom a judge who explains his awards in the ring, renders it, to say the least, difficult for a young man to become a judge of live stock or even obtain the rudiments of the art and science of live-stock judging. The forward movement set on foot at the Wheat City is bound to have good results, and will doubtless be of such benefit to the competitors and of so much interest to the onlookers that they will call for a judging institute, which, once obtained, will be the forerunner of the much-to-be-desired technical college. It must not be forgotten that those to be benefited must be the people to make the demands for such branches of education along agricultural lines. The farmer of to-day must be a reader, a thinker, and an observer.

Two Good Points in a Stable.

As building time is now on, the points referred to should be provided for before it is too late: Light and ventilation are two of the prime essentials in the proper equipment of a stable. There is a medium in everything, of course, and no one would expect to find a stable as well lighted as a drawing-room; but between this and the dark, stuffy apartments which are sometimes made to do duty for the accommodation of horses there is a very great difference. In addition to being conducive to greater purity of the air present, light is known to be inimical to many of the germs which cause disease in all classes of farm animals, the two great enemies of such bacteria being light and fresh air. Faulty as many stables are on the score of light, even more of them are deficient on the score of ventilation. No one requires a stable to be an apartment through which a continuous rush of fresh air is passing from one end of the day to the other, but there should be ample provision in all stables for the egress of the vitiated atmosphere which rises towards the ceiling when animals are kept in the house for any length of time. It is the escape of this vitiated air, rather than the necessity for a great inrush of fresh air, that is of the most consequence in stable ventilation.

If rhubarb be thoroughly washed in pure water, cut into pieces, put into jars, covered with pure, cold water, and screwed up and put aside in a cool, dark place, it will keep. The acid is so severe that there is no danger of either the yeast plant or bacteria interfering with it.

Attend the Institutes.

It seems almost superfluous to recommend our readers to attend the Institute, and yet, judging by the small attendance at some of them, it is evidently necessary. We had occasion to refer to the judging institute in our last issue. Another feature that, if introduced, would meet with favor would be to have some lady speakers. In Ontario, Miss Laura Rose, O. A. C., and others have been on the Institute force for years, and the attendance at such Institutes runs up into the hundreds. There is no reason why a few talks by a practical woman on butter and bread making, simple methods of cooking, the building of the home and its convenient arrangement, ventilation, dress, gardening and poultry-raising should not be introduced into our Institute lectures. Where the women attend, there the men flock—quite an old truism, unless we except in some cases the church, and even there the young men are often to be found at the doors, if not inside. The women need relaxation as well as the sterner sex, so that we are in hope that the Department of Agriculture will be fortunate enough to secure a lady speaker for the Institute series. Mrs. Virginia Meredith, a cultured lady and noted stock-breeder, south of the boundary, also preceptress of the school of domestic economy at the Minnesota Agricultural College, says that she believes "the reason why men and boys leave the farm is due to difficulty of getting wives who will take hold of the work and be up-to-date in their methods; the girl prefers to be behind the counter, bedecked with ribbons, etc." So give the girls a chance.

Farm Siftings.

Did ever strike you that the school teachers are mainly of the female persuasion? Not a good thing for the country, by any means. If we want virility as a characteristic of our people, we must have virile teachers. The ladies are all right in their place; the teaching profession would be better did it number more men in it. Do your trustees offer a good enough salary to get a good enough teacher? One hundred dollars a year in a district may mean the difference between a good and a bad educational investment. A good teacher should be kept and the salary increased to keep him with you. Human life and character are too valuable to allow experimental work by an inexperienced teacher or one of weak character.

Every district seems to be after new railroads; those that have none, of course, are pushing their claims; while those that have one line, want two, so as to have competition, so 'tis said. A good deal of the money voted to railroads might better be used for an agricultural college. There would be fewer disappointments and better financial returns if such were done.

Institute meetings will be held shortly, and the Department will have out speakers. Go to the meetings and make a lively discussion. If the speaker is only a party hack, go and prick the bubble. If, however, which is more likely to be the case, the speaker is a practical farmer, go and glean knowledge from him and assist him to gain some. A capital suggestion in the *Advocate* a short time ago was that a *judging institute* should be held. It would be a novelty certainly, but I presume would be instructive.

The papers state that Lt.-Col. Dent will be here purchasing horses. When fitting horses for sale, do not clip the foretop. Such a procedure will mean a cut in the price. Do not dock your horses, whether they are workers or for sale.

Creamery operators (some of them) need a pointer or two. A short time ago, while watching the working of the butter in the home creamery, a piece of butter fell off the worker onto the floor. It was immediately picked up and worked into the butter mass—and now I sigh for oleo. INTER PIGVOS.

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THE LEADING AGRICULTURAL JOURNAL IN
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Definition of Good Butter.

"Good butter should possess a uniform appearance, neither patchy nor striped. Its color, which is influenced by the feeding and by the individuality of the cows, should be uniformly that demanded by the market. Good butter should neither be dull nor entirely sparkless in appearance, but ought not to possess too strong a glitter. It should possess the mild glitter that it has when it possesses the characteristic grain which distinguishes it from all other fats. In properly-prepared butter, the exceedingly fine division which the fat originally possessed in the milk should not be entirely lost. To this may be ascribed the fact that butter-fat is very easily digested—a fact quite characteristic of butter-fat.

"Good butter should neither be too soft—that is to say, smeary—nor too hard. The drops of moisture present in butter should not be too large nor too abundant, but must be quite clear, and should not have a milky appearance. Salted butter should not contain undissolved salt.

"The flavor of good butter should be that of pure butter only, and should not be associated with any kind of foreign or unusual flavor. Aside from the fact that salted butter is distinguished from unsalted butter by its salt flavor, butter possesses a different taste according as it is made from sweet or sour cream. Butter made from sweet cream is characterized by a clear, extremely mild, and by no means strong flavor. Butter made out of sour cream has a certain aroma and a powerful characteristic flavor which in most markets is demanded as an essential quality.

"We do not know the origin of this aroma, and we know nothing in regard to its chemical nature. We think it is due largely to the action of the lactic bacteria and partly to the food of the cows. Butter made from the milk of cows that have been in milk for a time is generally firmer than that from milk from recently-calved cows, and usually possesses a less fine flavor."—*Fleischman.*

The Food and the Cow.

In considering the great advancement made in agricultural lines in recent years, nothing is more noticeable than the tendency for stockmen to regard and care for their animals with the same degree of interest as would be given to other pieces of valuable and well-adjusted machinery.

Each of the various classes of animals is adapted to the performance of certain work. The horse comes into use principally as the means of applying power in the work of growing and harvesting food materials for the other animals, and for marketing their products. The others have for their function the manufacturing of the raw products of the soil into other forms of more useful and concentrated character, such as meat, milk, and wool. Peculiar conditions and demands in many instances have made it profitable to carry specialization so far that for the production of meat and of milk two different types of cattle are in use, almost as unlike each other as are representatives of two different species. In the middle Western States, where corn is abundant and creameries are becoming more popular, it has been found advisable to breed cattle that are fitted for combining the milking and beefing qualities. While it seems impossible to secure exactly the same excellence for either work that could be secured by the use of special-purpose animals, yet these cattle are found to yield paying returns for either work, and their owners have two markets to sell in, instead of being entirely dependent upon the value of beef or of dairy products. The care of the females in the dual-purpose breeds is much the same as that required for cows bred entirely for dairy purposes. While the analogy between our farm animals and manufactured machinery may not be always clear, it is most easily recognized in the case of the dairy cow. She consumes large amounts of food, masticates, digests and assimilates it, and in a few hours is ready to yield her product. The amount of her output, like that of any other machine, is, to a great extent, dependent upon the nature of the raw material and the skill of the attendant. There is nearly as much as ever of mystery in regard to the exact way in which milk is manufactured within the cow's body. Much is to be said for and against both theories, but it seems reasonable to conclude that the solids are the shed-off cells of the vesicles of the udder. If this be true, the materials which a cow yields for the nourishment of her calf are a part of her own body. This also explains the impracticability of feeding so as to change the composition of the milk. A young calf's stomach is too delicate an organ to be subject to sudden changes such as would result if his food varied with the pasturage of the dam. It is commonly considered that the quality of milk is dependent upon breed, and that the most that can be secured from feeding is an increase in quantity. As a rule, a machine is most economical when loaded to within a small percentage of the limit of its capacity. A certain amount of force is expended in overcoming friction in the machine itself, and this is but little greater when running at full capacity than when underloaded. A large part of a cow's food goes to repair the waste of tissue and for keeping up the heat and nervous energy of the body. These demands must be satisfied before any considerable amount can be used in the manufacture of milk, and it is by increasing the amount consumed above that required for running expenses that a profit can be secured. The extent to which the consumption may be profitably increased varies with the individuality of the cow, the price of feed, and the value of butter or cheese. There is some danger of overloading and permanently injuring the usefulness of the animal by maintaining the strain for too long a period, but this is seldom done except in some public test where an attempt is made to end the never-to-be-ended battle of the breeds. It is a fact that a cow will yield her greatest flow of milk in the early summer, when she has free access to an abundance of succulent and nutritious grass. An evening visit to the yards at this season is very enjoyable. The animals having been at pasture all day, have so filled their paunches that a pressure is exerted upon the diaphragm, and accompanying respiration we hear the involuntary grunt so expressive of contentment and so suggestive of full milk-pails. Experience has shown that when for any cause the flow of milk is diminished, it can be but partially remedied, and that only by special care and feeding. In the time of failing pastures, it is not always directly profitable to use supplementary feeds. The immediate increase in the milk flow may not pay for the extra feed, but taking into account the whole period, it is a losing game to allow a shortness of feed to have any effect upon the amount of output. As pastures fail, the cow attempts to maintain her former yield by drawing upon her body flesh. This reduces her in condition, and when the inclement weather of autumn approaches, she is unable to withstand its effects, and a further decrease is the result, and when winter feeding is commenced, she is nearly dry and cannot be got back to her former performance. This phase of the subject is of especial importance in the case of dairy heifers. If, after a part of the season has passed, they are allowed to shrink in milk-flow, the udder and organs directly concerned in the production of milk are not as fully developed as they would be if kept at fair pressure with the animal in strong working condition. There are a variety of feeds that may be used for supplementing short pastures. Usually some green crop or early-planted corn is very convenient, and in some seasons the price of mill feeds permits of their being used at a profit. In any case, the young cows should be kept

going with no further decrease in flow than can be accounted for by the approach of the close of the lactation period.
F. R. MARSHALL,
Instructor in Animal Husbandry, Iowa Agricultural College.

Percentage of Foals.

Often the question arises as to the number of foals a horse should get in a season. The following, while giving larger numbers than usually held, will throw some light on the subject:

"The most authentic record of stud service of any distinguished sire in this country is that of Rysdyk's Hambletonian. He went into the stud as a two-year-old. He received four patrons that season, the service being free. The result was four foals, one of which was the noted sire and perpetuator of light-harness speed, Alexander's Abdallah. Hambletonian's percentage of foals was remarkable. In 1852 seventeen mares visited him, and thirteen of them dropped foals—76 per cent. The next year his patrons numbered 101, and seventy-eight foals were dropped. In 1862, 158 mares were sent to him, and of this number 111, or 70 per cent., produced foals. Dictator was of this lot. In 1863 the unprecedented number of 217 mares were mated with Hambletonian, probably a larger number than ever has or ever will be sent to any other trotting stallion. His fee that year was \$100. The number that produced foals was 158, or about 67 per cent. of the number bred, which is six per cent. more than produced foals by him the previous year. In 1874 Hambletonian was allowed thirty-two patrons, and twenty-four of them, or about 75 per cent., produced foals. In 1875, the last season that Hambletonian performed stud service, there were twenty-four mares mated with him, only three of which, or eight per cent., produced foals. He was then twenty-five years old."

It may be stated that from forty to fifty per cent. is considered an average percentage of foals.

Provide Your Stock with Hay.

It will have been noticed that the columns of the ADVOCATE have contained several articles from practical farmers re retaining the fertility of the land, etc. The majority of the articles insisted on grass as a part of the rotation to be adopted. The value of grass was at the time mentioned, but without placing much emphasis on the hay end of the proposition. Often we are told, apologetically, as it were, by the farmer, that "my cattle had no hay, and are not in as good condition as I would like them to be." It seems, therefore, that good hay is almost an indispensable crop if the cattle are to be kept in good condition and the milk flow to be kept up. The following reasons are helpful in determining where hay scores as a fodder: Hay derives its great superiority over straw as a fodder for farm stock from the larger percentage of albuminoid or nitrogenous matter which it contains. It is also slightly richer in fats and carbohydrates, and is consequently a better-balanced food. Hay of good quality contains from eleven to twelve per cent. of albuminoid matters, whereas straw, even the best oat straw, does not contain more than four per cent. of this material. Good hay also contains from 3 to 3.5 per cent. of fats, as against 2.0 per cent. in straw, while of carbohydrates the average quantity in hay is about 40 per cent., as against 35 per cent. in straw. In the earlier days, the wild hay was depended upon entirely, and some of it was very nutritious, notably the red-top. It has, however, been proved time and again that rye grass, Brome grass and timothy will grow successfully here. The prudent farmer will in future so shape his farming operations as to include the growing and making of hay.

The Calgary Exhibition.

The Inter-Western Pacific Exhibition Company have issued their prize list for 1901. The fair will this year be held on July 10th to 13th, inclusive, and no effort will be spared to make it an unprecedented success. The prize list is a very liberal one. Especially in horses and cattle are the prizes offered such as will bring out strong competition. An elaborate programme of sports and attractions has been prepared, prominent features being broncho-busting, steer-roping contests, gymkhana races, etc. Calgary, the headquarters of the rancher, and beautifully situated on the Bow River, within sight of the snow-capped peaks of the Rockies, is an ideal place for a summer fair. Prize lists and all information re special transportation rates, etc., will be cheerfully furnished by the secretary, John De Sousa.

The Value of Porcine By-products.

A very considerable portion of the profit made by bacon-curers is derived from the sale of what may be described as the by-products of the animals killed in their factories. In Chicago, for instance, the greatest pig-killing center in the world, the number of uses to which the various parts of the pig are put is remarkable. Buttons are made from the horny parts, glue and fertilizers from the skull and hoofs, etc., chessman, dice, tooth brushes and knife handles from the bones, while the other portions of the bones are ground up for manurial purposes. Extract of meat is made from some of the blood, and albumen is extracted from the rest and sold for sugar-refining purposes and for leather-dressing. Other uses to which the by-products of the pig factory are put include the manufacture of neat's-foot oil and gelatine, and the conversion of rough fats into grease and fertilizers.

Some English Shows.

The first really important show of the summer season, the Oxford County Show, was held in the quaint, picturesque, old-time agricultural town of Thame, some thirteen miles from the county town of Oxford, on May 15th and 16th. Sheep, an important interest all over the world, can fittingly be taken first in respect to this particular show, from the fact that seldom, if ever, has there been so fine

and character, and would be a credit for any flock-master to own. We were also most favorably impressed by the capitally-matched pen that secured third honors for Mr. Stilgoe; whilst the pen from Mr. Brassey's flock were well deserving the fourth prize they secured. A class for flock ewes with lambs failed to secure large support, but the pens which represented Mr. Brassey, who was first, and Mr. A. H. Wilsdon, who came in for second honors, were of very high merit.



DORRINGTON 3RD.

Hackney pony, 14 hands. Sire, Dorrington (imp.); dam, Crafty (imp.). First prize at Military Tournament and Horse Show, 1901.

OWNED BY R. BEITH, BOWMANVILLE, ONT.

a display of *Oxford Downs* at this, which is really the most important show of the year for this breed, for here the first trial of strength takes place, and many which are not in the first flight are seen no more in the show-yard contests which follow, but are kept at home and got into condition to go to the ram sales in real good form. The yearling ram class of this breed was a grand one, twenty-one entries facing the judge, whose task to select the best from so large an entry was by no means an easy one. The final selection found two from Mr. J. T. Hobbs' flock of Maiseyhampton put first and second, both real good rams, with plenty of bone and masculine character. The first-prize winner was rather more forward than the second one, whose general conformation, type and character were preferred by some breeders present. In fact, so highly was this ram valued, that that noted breeder and judge, Mr. John Treadwell, offered one hundred guineas for him, which, we understand, was not accepted. Third and fourth honors were awarded to two from Mr. A. Brassey's noted flock. The leading ram was a real good one, good enough to go to Mr. J. Treadwell, who secured him at a very high figure, but the fourth-prize ram was very fortunate in securing so high a place in this very strong class. We far and away preferred that fine masculine ram of Mr. Treadwell's breeding, who had to be content with the barren honor of *r. n.* This ram, not at all forward in condition, is just in the right shape for shipment, is of grand type and character, excellent head, plenty of bone and good symmetry. Two real good rams from Mr. H. W. Stilgoe secured notice of the judge. These are not yet up in showyard form, but will probably be heard of in future contests, for their excellent character and type can hardly fail to secure prominent notice. The ram lamb class was notable as being the first one wherein Mr. G. Adams' entries have appeared for several years. That his flock has not lost its old form is clearly shown by the fact that his two entries were put first and second. The leading pen are masculine in type and good in flesh and fleece, whilst the second pen was hardly so masculine in character; in fact, we think they were fortunate to secure precedence over a very capital pen that Mr. W. A. Treweweke came in third with. This pen should have gone forward, for they were of good type and symmetry. A fourth prize went to a very stylish pen of lambs from Mr. A. Brassey's flock. Mr. H. W. Stilgoe's pen were fifth, and commendations were given to the entries of Messrs. Reading & Fisher. The winning pen of yearling ewes came from Mr. Brassey's flock. They were hummers and no mistake, and whoever may be fortunate to secure the possession of these ewes on your side will secure three of the grandest Oxford Down ewes we have seen for many years. Mr. J. C. Eady had this year to be content with second and third places. These ewes were this year not up to their usual form in respect to condition, but were equally good as in former years in respect to type and character. Two excellent pens of what may be termed field ewes, from Mr. R. W. Hobbs, and a well-matched pen, of fine quality, from Mr. G. Street, secured notice in the award list. As in the ram lamb class, Mr. G. Adams secured the first two awards for ewe lambs. These were of great quality

nice, good-fleshed ram from Mr. C. Adeane's flock, but his position in this class was most distinctly contested by a pair of grand rams from Col. H. McCalmont's flock, whose successes were well deserved, both in this class and also in those for ram lambs and ewes in lamb, in both of which he secured first honors. Buyers from your side would do well to pay a visit to this rapidly-rising flock, whose advertisement runs regularly in your valued paper.

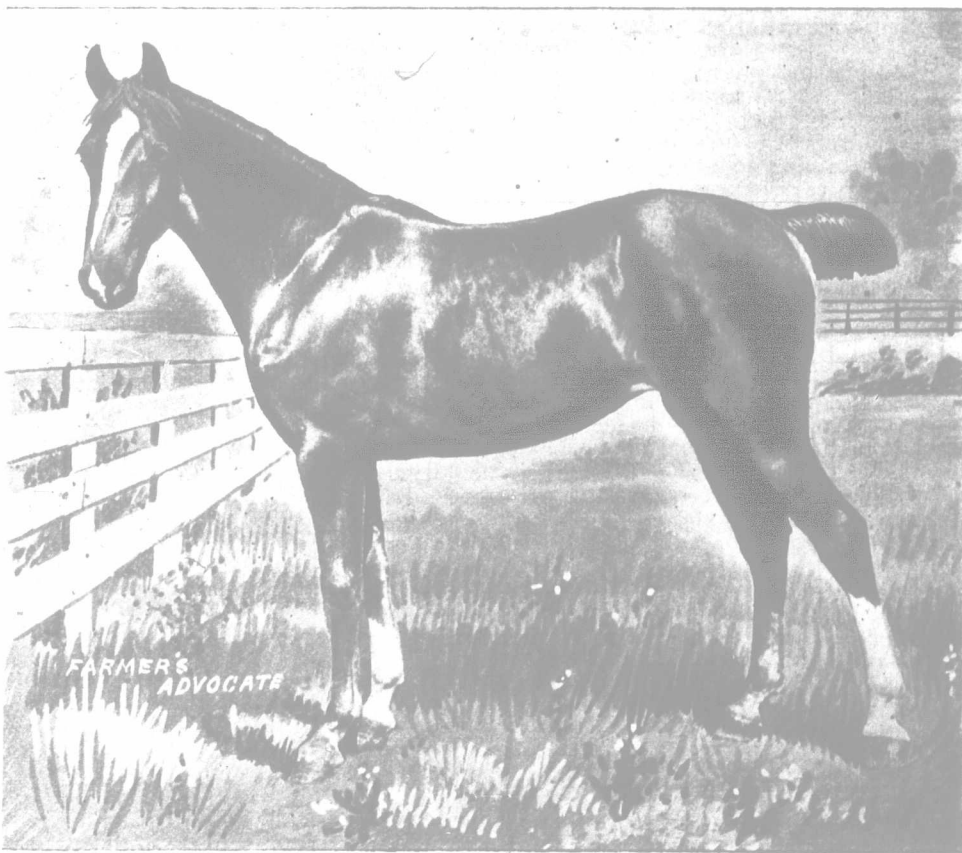
The *Southdown* exhibition was at the best a weak one. Champion honors and first for yearling rams were secured by a very nice, good-fleshed ram from Mr. C. Adeane's flock, but his position in this class was most distinctly contested by a pair of grand rams from Col. H. McCalmont's flock, whose successes were well deserved, both in this class and also in those for ram lambs and ewes in lamb, in both of which he secured first honors. Buyers from your side would do well to pay a visit to this rapidly-rising flock, whose advertisement runs regularly in your valued paper.

The *Shropshires* made an entry of great credit to their breed, and the two yearling rams that secured first and second honors for Mr. R. P. Cooper were of very high merit and quality. Mr. D. Gibson came in for third and fourth honors, whilst Messrs. Inge, Jolliffe and A. Tanner had exhibits of capital merit, which came into the honor list. Mr. W. F. Inge's pen of yearling ewes that took premier honors were of grand type and character, which were rightly preferred to the two pens that were sent by Mr. R. P. Cooper, who came in for the second and third prizes.

Pigs. Seldom if ever have we seen a better or more uniform entry of *Berkshire* pigs than those which filled two large classes of this breed at Oxford Show. Mr. E. Hayter headed the old-boar class with one of the best types of boars we have seen for many a day. This pig, beautifully marked, of great length, with even flesh and depth of body seldom met with, secured, in addition to the class prize, the champion award for best Berkshire boar, and also for best boar of any breed. It may be of interest to some of your readers across the border to know that Mr. Vanderbilt's agent, Mr. Gentry, has been fortunate to secure this boar, who will, after the English

show-yard season is over, go across the herring pond. Mr. J. Jefferson and Mr. J. A. Fricker were leading winners in this class behind the champion. In the young boars, Mr. J. A. Fricker led the way in a class of ten entries wherein the whole secured notice of the judges; Mr. Jefferson being second, Mr. Russell Swanwick third. Amongst a wonderfully good lot of breeding sows, Mr. A. Henderson's Briscot Pippin took the precedence. A grand sow she is, full flesh and great quality, and one that would be at or near the top in any company. To her went the championship for best sow in the yard. R. W. Hudson and N. Banjafield secured the other two awards. In the 9-months-old class, Mr. Fricker went first with a pair of very typical young sows. Mr. Hayter came in for second honors with a pair we liked better, in regard to breed points; whilst the third pair were two from Mr. R. Swanwick's herd, which were of real good merit. Pairs farrowed in the present year were a very large class, and Mr. Hudson is to be congratulated upon his success in taking the first place with so excellent a pair of gilts; Mr. N. Banjafield being second, and Mr. J. A. Fricker third.

Shorthorn Cattle.—In aged bulls, Mr. J. Deane Willis went to the top with Regulator, a useful bull, being followed by Mr. J. Garne's Pedestrian, whilst Miss Alice de Rothschild's Royal Prince came in for third honors. The class as a whole was a good one, and we may here remark that the entry for this breed was of high merit. The 2-year-old bull class was a large one, and we certainly did not altogether approve of the awards made. Manor Victory, from Capt. W. H. O. Duncombe, went to the front; Lord Tredegar's Prince Alto, by Alto, who was sire of Mr. H. Dudding's last year's Oxford winner, King Alto, being second; and Mr. Henry Dudding's excellent bull, Ingram's Perfection, whom we thought rather hardly treated, third. This is a grand bull, of Scottish parentage. In the yearling class Mr. Dudding went rightly to the top with another Scotch-bred bull, Victor, a dark red, with capital flesh and plenty of hair, bred by Lord Lovat; Mr. J. D. Willis winning second with Cornelia; Mr. J. Thorley being third with Prince of Troy, a Deane Willis-bred bull. The cow class was not a particularly strong one, Col. Makins being first with Welch Gem, an award we did not approve of. Preference might have been given to either the second, third or *r. n.*, owned respectively by Capt. Duncombe, Lord Tredegar, and Miss Alice de Rothschild. The three winners in the 3-year-old heifer class were J. Deane Willis (White Heather), Miss A. de Rothschild (Rose of Underley 6th), and Henry Dudding (Fairy Belle 8th). A grand trio they were, and though the order was as given, it was more a matter of personal choice than merit or quality that divided them. In the 2-year-old class, Mr. Dudding had a pair of heifers, Ombersley Pride and Gloradora, which are probably the best pair of this age we shall see out this year. The latter took first prize, whilst both of them, in two different classes, against very



TITANIA 103

Hackney filly, two years old. Second prize at Military Tournament and Horse Show, 1901.

BRED AND OWNED BY R. BEITH, BOWMANVILLE, ONT.

strong competition, at Otley last week were first-prize winners, and the former also secured the champion award for best cow or heifer at that show.

The Earl of Coventry was easily first and second in the *Hereford* bull class, and Mr. John Tudge had no difficulty in securing premier honors in the cow class for a real grand 4-year-old cow, Rustic Maid.

Cooking on the Farm.

That noted exponent of cookery, Mrs. Rorer, has the following, in the *Ladies' Home Journal*, regarding farm cookery during the summer:

FARMERS' WIVES DO NOT LEAD EASY LIVES.

The housewife, who must be chambermaid, seamstress, cook, and frequently laundress, must study menus that will build the brain and brawn of her family, take as little time as possible to prepare, and at the same time be palatable and sightly. Her life is not an easy one, but she alone, it would seem, is responsible for many of the hardships of which she complains. The hours which she spends in fancy cooking and the ironing of fancy clothing might, for her health's sake, much better be given to resting and recreation. The latter is quite as necessary as the former.

Complicated mixtures, such as pies, cakes, preserves and jellies, are seen in great variety and abundance on the farmhouse table, all of them producing much heat without giving a corresponding amount of nitrogen or muscle-making food. As the hard work of the farm is done during the heated term, any one can see at a glance the folly of such a diet. Butter and cream, admirable foods for winter, are undesirable in hot weather; and still, during harvest time, when the men are at the greatest strain, these so-called good things of life are most bountifully bestowed upon them.

WHAT WE MUST EAT TO PRODUCE ENERGY.

The object of eating is, first, to contribute to the growth of the body in its building period, infancy and manhood; second, to sustain the body under labor by providing proper material for the replacement of the worn-out particles which are constantly being cast off; third, to heat the body and produce energy. The average bill-of-fare seems to carefully and entirely skip the first two objects, and the third one is followed as closely in hot weather as in cold. The knowledge of how to live should and will be taught, before another generation goes out, in every public school. The wife of the farmer in the next generation will have some little time for rest and recreation; her husband will be a better-fed man—consequently, a better man. Work will be easier, and the world will be altogether brighter. City folks will be going to the farms, instead of all the country boys coming to the overcrowded cities.

Under the existing circumstances, however, the average farmer—the man who works on the farm—eats, with the thermometer at ninety degrees, a dinner of boiled ham, potatoes, bread and butter, and pie, with coffee and cream. This is not an unusual nor an overdrawn bill-of-fare. With the exception of the little lean in the ham, the dinner is entirely carbonaceous, leaving the man who is in the field without nitrogen, the muscle-repair food, of which he is in need during the working hours.

CAUSES OF GREAT MORTALITY IN SUMMER.

People who eat day after day in this way give out quickly, and conclude that farming is a hard way to earn a living, which is, of course, true under such circumstances. The weather is hot—very hot, and the dinners which the farmer eats contain fuel sufficient to keep the body warm with the thermometer at zero; the body is surrounded by an oppressive atmosphere, almost that of the body heat. How, then, can the lungs and heart do their work in this overtaxed condition. Sunstroke or heat exhaustion is the common result. The causes of the enormous mortality, both of children and the so-called "overworked," during the hot weather are perfectly well understood; they are chiefly overfeeding, lack of pure air in sleeping-rooms, dusty beds and carpets—in other words, a lack of household knowledge. Remedies are equally well known: the judicious selection of cooling, well-blended foods taking the place of the green, succulent vegetables containing starch; pure water; light, comfortable clothing; well-ventilated sleeping-rooms; regular bathing, and general hygiene.

As the working hours of the farmer are long, no doubt four meals a day would be better than three. The eleven o'clock luncheon, which is usually sent to the field, instead of consisting of cake and pie, might be buttermilk and brown-bread sandwiches, or milk and gingerbread, milk and sandwiches, or some food that would be sustaining and easily digested without giving heat. Cold, not iced, water should be taken in abundance, and the skin kept in perfect condition to induce rapid evaporation, which always lowers the temperature of the body.

OF WHAT THE BILL-OF-FARE SHOULD CONSIST.

Oatmeal and well-cooked preparations of wheat should take the place of meat and potatoes for breakfast. Frequently when our country neighbor wishes to express the strength of a person he says, "Why, he is as strong as a horse." This horse strength, it must be remembered, comes from oats. There is no law compelling us to feed a horse entirely on oats, or man entirely on potatoes. Observation would make us think that the contrary might be true. Oats possess all the constituents necessary for the maintenance of high bodily vigor, and are one of those complex foods, especially with the addition of milk, capable of supporting life for an indefinite period. The cooking and manner of eating make a difference in their digestibility.

Slow cooking and slow eating should be the motto with all sorts of foods, but for cereals or starchy foods this becomes a command. Cook enough oatmeal one day to last for two; each careful warming over aids its digestibility and makes it sweeter.

LEAN MEATS MAY BE USED ONCE A DAY.

Lean meats may be used once or twice a day; eggs, concentrated nitrogenous food, may always take the place of meat at one meal. It is not necessary that meat should ever be added to the morning meal. In cooking green vegetables, if care be taken, sufficient may be cooked one day for two, thus saving the artificial heat of the house and the strength of the housewife. It requires the same amount of fire to cook half a peck of string beans as it does to cook a smaller quantity; one part may be put aside and served cold with a little French dressing for the next day's dinner. Cauliflower and cabbage are equally good cold or hot. Green peas may be very carefully cooked, and a portion seasoned with salt and pepper and put aside; next day throw them into a double boiler to re-heat. When hot they will be ready to use. Cold meats, if nicely garnished, are palatable and sightly.

Sunday's dinner may always be prepared on Saturday. Potatoes may be boiled, and on Sunday hashed, mixed with cream sauce, and heated in a double boiler.

Asparagus, string beans, lima beans, peas, and even squash, may be carefully cooked on Saturday and re-heated on Sunday.

Such desserts as old-fashioned rice pudding, and those made from gelatine, also cup custards, may be made and placed aside. Fruit should be used during the summer, and cooked desserts saved for the winter.

HABITS THAT MIGHT WELL BE CHANGED.

It has been our habit, and the habit of our mothers and grandmothers, to have the heavy meal for the farmer at noonday—not because it was the proper thing to do, but because we have followed the example of generations previous. Observation told us that the generations were getting weaker, but this did not influence the noonday dinner. In the Western part of the United States, on the large ranches where work, necessarily, is very heavy, men find that they cannot work during the afternoon if the heavy meal has been taken at noon. The bodily temperature is greater during digestion, and they are unable to work easily in the hot sun during the process of digestion. Now the heavy meal is given at five o'clock, when the day's work is comparatively over, that they may quietly rest and digest. In some parts of the country progression has gone so far that the men rest during the greater heat of the afternoon, begin their work at half-past three, work until six, then take their dinner, rest an hour after, and work in the field during the early twilight.

AIM FOR SIMPLICITY ON THE TABLE.

In all walks of life the cry is for greater simplicity. No longer is the overlaid table containing six or eight kinds of preserves and half a dozen kinds of cake popular; in its place we have higher thinking and lighter living, foods prepared in such a way as to bring rest and happiness. In arranging meals the housewife should take into account the ages and habits of the different members of the household, the surrounding heat and hours of labor, and fill the demands, which alone can make perfect health. The intelligent woman no longer stands over the hot fire to preserve or make layer cakes or pies—all composed, perhaps, of good wholesome food, but each better without being made complex. She takes her bread-and-butter sandwich with the fresh fruits, rather than rubbing the butter into the flour and putting the sweetened cooked fruit inside. In this way she has better and more digestible food.

Our Scottish Letter.

THE GLASGOW INTERNATIONAL EXHIBITION.

The great International Exhibition organized in Glasgow to celebrate the opening of the twentieth century has now been going for twenty-five days, and the record of attendance during that period has been 1,708,726, or practically double the attendance recorded for the same period at the exhibition of 1888. We thought that a great affair. It left a large surplus, which formed the nucleus of the money expended on the Pine Art Galleries, the completion of which has been coincident with the holding of this exhibition. So far as financial success is concerned, the show of 1901 has already made its mark, and the main question is: How does it stand as an industrial display? It is unfortunate that so far as the vast mass of those who attend such shows are concerned the amusement department counts for almost everything. Still, it is gratifying as one passes through the halls to see so many exhibiting an intelligent interest in the exhibits.

Machinery, of course, bulks very largely in any show held in Glasgow, and shipbuilding is splendidly represented. Many other departments could be singled out for special notice, but it is not the province of this writer to do so. The agricultural department is good as far as it goes, but it does not go very far, and the house across the way, in which the Canadian agricultural department is to be seen, makes a much better display. The agricultural department proper is laid out in the form of a model farmstead, the buildings for which are of composite wood and iron, supplied as a complimentary exhibit to the Association by Messrs. Speirs & Co., 125 West Regent St., Glasgow, who make a specialty of this kind of work. It is admirably adapted for the erection of buildings designed to stand for a fair length of time, and should be in general use in Canada. The contract for the imple-

ments furnished to the steading has been secured by John Wallace & Sons (Ltd.), Glasgow, who are the West of Scotland agents for the Massey-Harris implements, and the famous chilled plow patented by James Oliver, of South Bend, Indiana. The equipment is what is needed on an ordinary farm in the west or south-west of Scotland. A fully-equipped dairy is part of this exhibit, and it is in the hands of the Glasgow Dairy Co. (Ltd.). The whole is a fair illustration of what is designed—perhaps the best thing about the buildings being the system of byre ventilation shown. This is a question of pressing interest in Scotland and England, on account of the regulations now being enforced under recent sanitary laws. The system of ventilation illustrated has been put in operation on various farms, and works well. Its main feature is a movable shutter under one control, by which the ingress of fresh air can be regulated a little above the level of the cows' heads. Many Canadian visitors will, no doubt, look at this during the period that the exhibition is open.

The other department restricted to agriculture is what is called the Agricultural Hall. It is of two rooms, the most prominent exhibit in the one being that of the German Potash Syndicate, Leopoldshall, Stassfurt, Germany, and in the other that of the Permanent Nitrate Committee, in both of which admirable illustrations are given of the working of the raw material and its resolution into the manurial substances with which progressive farmers the world over are so familiar. The exhibit of the Potash Syndicate is a very fine thing indeed, and the information set forth is both theoretical and practical in no ordinary degree. A study of the various items in this exhibit is a liberal education in the science of manuring. The West of Scotland Agricultural College has an exhibit, the strong point of which is its bacteriological fulness. Various microscopes are fitted up, underneath which are shown the working of the minute forms of germ life which are now known to exercise so potent an influence in the lives of man and beast. The Agricultural Research Association, of Aberdeenshire, makes a very good use of its space illustrating its contributions to agricultural knowledge during the past twenty-five years. It was the Director of this Association, Mr. Thomas Jamieson, F. I. O., who first discovered and insisted on the effective use of ground phosphates, thus paving the way for the production and profitable employment of basic slag as a top-dressing for grey or peaty land. The development of the slag industry is shown in an exhaustive exhibit by Messrs. Alex. Cross & Sons (Ltd.), Glasgow, who do a big business in this material. The slag is shown in lumps (raw), ground, and in bags, and the lessons to be learned are invaluable to those who are interested in this comparatively recent and most useful, although, according to our present knowledge, most erratic manure. These three exhibits, illustrating the origin, manufacture, and application of potash, nitrate of soda, and basic slag, are most important parts of the exhibition, and can be recommended for profitable study.

Touring through the exhibition, one is struck by the fulness with which the products of Canada are presented. Indeed, there can be no doubt that Canada makes the best agricultural display on the ground, alike in respect of the produce of the soil and the tools or machinery employed in its production. The exhibits from Canada are on show both in the Industrial Hall and in the building specially set apart for Canadian exhibits. It would take up too much space to attempt to describe all that may be seen in the former department, but standing alongside of the displays from other countries and colonies, the Dominion shows to good advantage. The exhibits here illustrate the educational advantages of the Dominion, what is being done for secondary and technical instruction, and the fruits and products of this enterprise. A. F. MacLaren, Imperial Cheese Co. (Ltd.), Toronto, occupy a good space, and to excellent purpose. There is cheese from Manitoba, and numerous exhibits of honey from Ontario. The Geological Survey Department of the Government make an effective display of the mineral wealth of the Dominion, showing minerals from Nova Scotia, gold from the Yukon, coal and coke from British Columbia, and great blocks of coal from the Atlantic seaboard. The women of Canada are not forgotten here, and a plentiful supply of literature is provided regarding many of the noble members of the gentle sex whose names adorn the records of Canadian achievements.

In respect of literature, nothing better appears in the official catalogue than the introductory account of Canadian products, which precedes the list of exhibits. The information regarding the Dominion is well put together, and those who take the pains to read it will learn much regarding the resources of this great part of the King's dominions. The agricultural progress of the Dominion is sufficiently indicated by the broad fact that the area sown with wheat in 1900 was double the wheat area of 1890. Its industries are classified thus: (1) agriculture, (2) fisheries, (3) timbering, (4) mining. It is startling to be told that the output of gold in the Yukon has increased from \$300,000 in 1897 to \$20,000,000 in 1900. But what chiefly impresses one who visits and inspects the Canada house is the fact last stated, viz., that there are in the Dominion a dozen large factories making agricultural implements. The dozen have every reason to be proud of the display made in "Canada" here. The most exhaustive and instructive country show in the whole exhibition.

so far as one can see, is that of Canada. The Russian courts promise to be something very fine, but they are not yet finished, and opinion on them must be suspended.

In the center of the buildings is a tower formed of the agricultural produce furnished by 250 farms in different parts of the Dominion. The inside of this tower contains exhibits of the Central Experiment Farm at Ottawa, notably tobacco leaf, wool, flax, etc. Surrounding it, forming one of the most artistic towers in the whole exhibition, is the produce of the 250 farms already mentioned. This is catalogued as "a collective exhibit of cereals and forage plants contributed by 250 farmers of Canada." I do not know who may have arranged these products as they appear in the center of the house, but he has great credit by his work. The artistic and imposing erection at once attracts the eye, and any amount of time might be profitably spent in an examination of the details. Glass cylinders there are in abundance, containing all kinds of grain, and each is labelled, showing its place of origin and value. Another interesting produce exhibit shows the apples and other fruits which have been kept in cold storage since season 1900. They look very well indeed, and have many admirers. An obliging attendant explains the meaning of the exhibit. Again, there are numerous exhibits of samples of vegetables and fruit preserved in antiseptic fluids, and looking fresh and sweet. The timber exhibits from all parts of the Dominion attract numerous visitors, and an intelligent artisan may be seen admiring and heard exclaiming, "Man, but it's grand stuff!" All kinds of timber made up is shown, the strongest exhibit of this kind being that of the Peterboro Canoe Company, Peterboro, Ont. The Canadians can build canoes. We see nothing like these in this country. Another very fine exhibit is that of the Metallic Roofing Company of Canada, Toronto. Few more interesting exhibits than this are in the show.

After all is said, however, the best part of the Canadian exhibit is the section devoted to agricultural implements. The Massey-Harris Co. (Ltd.), Toronto, are very strongly in evidence, and show some of the finest implements ever presented to the British public. Besides their famous harvester and self-binder, which is in high favor in this country, they show cultivators, hay tedders, and what not, the whole making a most effective appearance along one half of one side of the hall. David Maxwell & Sons, St. Mary's, Ont., are not much behind them, and their display occupies almost as much space on the other side of the hall. Noxon & Co. (Ltd.), Ingersoll, Ont., and the Frost & Wood Co. (Ltd.), Smith's Falls, Ont., are other exhibitors who contribute much to the success of the whole.

There can be no doubt at all that the best agricultural display at Glasgow is made by Canada, and what I have said by no means exhausts all that might be said on the subject. Canadians need not be afraid to visit Glasgow; their share in the exhibition is bound to increase the popular knowledge about Canada. She may be the "Lady of the Snows" along her northern boundary, but no region of snows could produce the marvelous wealth and prodigality of Nature displayed alike in "Canada" and the Industrial Hall. In comparison with the rest of the exhibition, Canada has made a splendid display, and we thank all who are responsible for it. "SCOTLAND YET."

Why Cream from Stale Cows is Slow in Churning.

To be successful as a buttermaker, one needs to be a student of the conditions governing the production of the raw material. Many a farmer's wife or daughter has complained of the butter being a long time in coming, the cause for such not being thoroughly understood. Students of dairy problems are on to the fact that the length of time that a cow is in milk exercises a very important influence upon the size of the fat globules contained in her milk, and the length of time which it requires to churn the cream obtained from such milk. The further a cow gets from the date of dropping her last calf the smaller do the butter-fat globules contained in her milk become, and the longer does it take for such milk either to rise in the form of cream or, when churned as cream, to "gather" into butter. This is one of the reasons why in autumn and winter churning usually takes a longer time than during spring and summer months, because under the system which prevails in most parts of the country most of the cows calve in the early spring, and are consequently well advanced in their period of lactation by the time the autumn is reached.

The cause known, the remedy is not hard to find. The trouble can be overcome by having some cows come in fresh in fall and winter, so as to have a sufficient quantity of milk from freshly-calved cows to neutralize that from stale cows.

"A Fruitless Mission."

The above is the heading which the English *Live Stock Journal* places over the following strong statement of the case of the British stockmen against raising the embargo upon Canadian cattle. The *Journal* represents a powerful body there, and the position taken shows the serious difficulty which Hon. Mr. Fisher, now in England, is encountering. It shows that should he not succeed there will be no good ground for a political outcry against him on that score, and if he does it will be all the more to his credit. The keeping out of disease is the main contention of the *Journal*, but the economic question and the fear of troubling the raiser of Irish stockers are equally potent:

"We have read with regret the following statement reported from Ottawa:—'In the Dominion House of Commons on Thursday, Mr. Fisher, Minister of Agriculture, announced that a strong memorandum to the British Government, protesting against the continuance of the embargo on Canadian live cattle, was now on its way to England, and would be followed up by personal representations when he arrived there, as he shortly would. Mr. Fisher said that since the embargo had been imposed, 800,000 Canadian cattle had been exported to England, and there had not been one case of pleuro-pneumonia.' It is, in our opinion, unfortunate that this question should be raised at the present juncture. It will certainly meet with strong opposition from most of those in the United Kingdom who are

pneumonia. Under this law Canada had enjoyed the privilege of sending here living animals that were not subject to slaughter at the ports of landing. But a disease was found among the Canadian imported cattle which the Government and some other experts could not distinguish from the familiar contagious pleuro-pneumonia. Consequently, the privilege was withdrawn and Canadian imports were placed on the same footing as those from the United States and South America, the stock being landed only for slaughter at the ports. The authorities here never asserted that pleuro-pneumonia existed in Canada; they could only go on the evidence before them in the animals actually landed, and how the disease came to be among them it was no part of the duty of the home Government to discover.

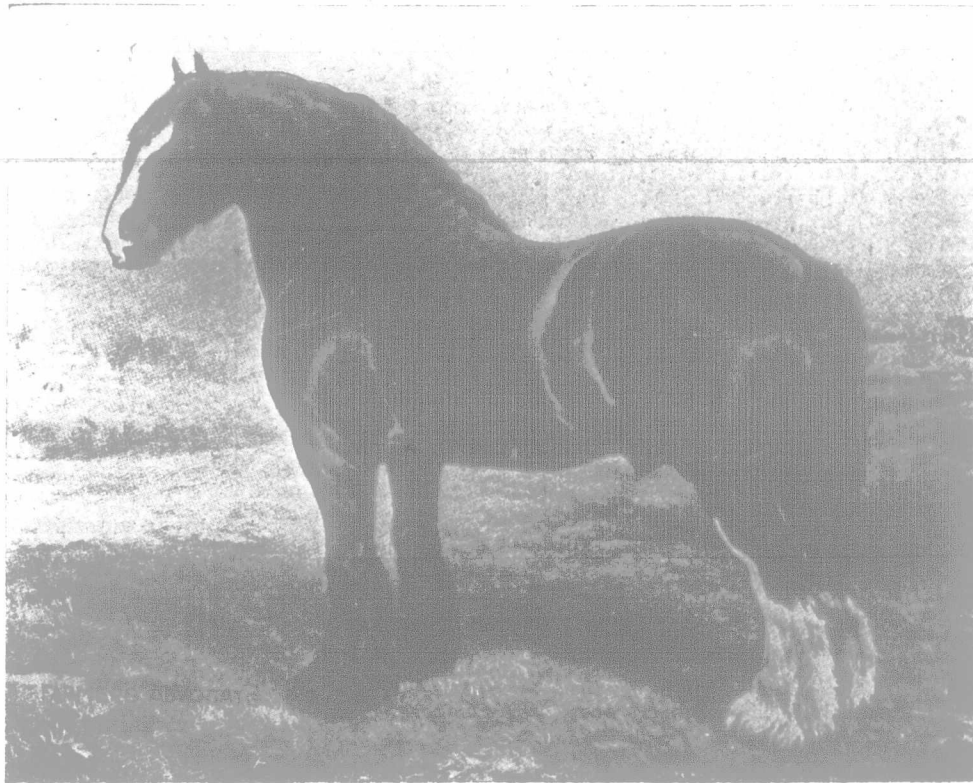
"If the same law still prevailed here, Mr. Fisher, the Dominion Minister of Agriculture, could with strict accuracy refer to the 'embargo on Canadian live cattle.' But he seems to have overlooked the fact that the law has since been greatly altered and strengthened. After pleuro-pneumonia was, at enormous expense, stamped out in this country by the slaughter of all diseased and in-contact animals, an Act was passed in 1896 repealing those portions of the Diseases of Animals Act, 1894, which provided for the exemption of animals by order of the Board of Agriculture from the rule as to slaughter at the ports of landing in cases where the Board were satisfied as to the safety of making such exemption for the time being. The Act of 1894 was in a sense a permissive measure, whilst that of 1896 is obligatory, as it renders compulsory the slaughter at the ports of debarkation of all imported animals that are allowed to be landed alive. There is, therefore, no special 'embargo' on Canadian cattle. Canada is in the same category as all other countries similarly circumstanced, and enjoys the privilege that her cattle and sheep can be landed for slaughter at the ports, all other countries except the United States and Canada being absolutely prohibited from sending live animals to these shores.

"There can be no doubt that the Act of 1896, which came into operation on January 1st, 1897, has conferred immense benefit upon the breeders of live stock in the United Kingdom by preventing the importation of disease, and thus imparting confidence to them that their property will not be destroyed. It is true that, in spite of the Act, there have been a few isolated cases of foot-and-mouth disease, which have been kept under control by the Veterinary Department of the Board of Agriculture, and it is hoped that this disease has been finally stamped out. The circumstances seem to point in these cases to the importation of the disease by mediate contagion and in an attenuated form. But if the Argentine Republic had had free access for their stock to the interior of the country when disease broke out in South America, it is to be feared, judging from analogy, that we should have had a disastrous attack of the disease, because the first we should have heard of it would have been by its appearance in a widespread and virulent form among the herds and flocks of the country. There is a striking object-lesson for us in the recent experiences of the Argentine. That

country continued to import cattle from France long after it was known that foot-and-mouth disease existed extensively there, and the result has been the temporary collapse of the Argentine export trade and the loss to us of the valuable traffic in pedigree stock, though we hope that both may soon be restored.

"With an unrestricted over-sea trade in live stock that are permitted to be distributed in the interior of a country, there is indeed no possible safety. Disease of one sort or another is certain to appear sooner or later, and to declare itself only after the mischief has been done beyond recall. The gigantic efforts that have been put forth to clear this country of these maladies would have been without result if the ports had not been closed, and the only safety is in having imported stock slaughtered on landing by a permanent and unalterable law. There is much to be urged in favor of an international dead-meat trade, but the arguments for it are based upon other grounds than those of safety, and so we have little to say about them. As has been remarked, Canada and the United States are at present the only two countries that enjoy the privilege of sending stock for slaughter on landing, and we think Canada would do well to be content therewith. There appears to be nothing that can be urged in favor of the admission of Canadian live stock that cannot be put forward with equal emphasis in support of a similar plea by the United States, and if Canada's claim were acceded to, and the Act of Parliament repealed, cattle and sheep from the United States would be admitted also, so that the exclusive privilege to Canada, even if she succeeded, would be a short-lived one.

"But we would rather not contemplate such a possibility, which would, in the first place, ruin the



HAROLD 3703.

A noted English Shire stallion. Died April, 1901; aged 20 years.

interested in the breeding of live stock, and before any reversal of the present policy as regards the admission of live stock from over sea could take place, a legislative enactment would have to be repealed which has been hailed as the charter of British stock-breeders, and which was only secured after many years of arduous struggle. We have taken the liberty of describing by anticipation Mr. Fisher's mission as fruitless, and we sincerely trust that this will prove to be an accurate forecast. The revival of this controversy now is especially regrettable, because in the mother country there is at the present moment an earnest desire to open up closer relations with the Colonies as a recognition of the very valuable services they have rendered in the war in South Africa. There is a growing feeling in favor of more intimate relations with the Colonies in many ways, and how far this may go no one can foresee, but everyone wishes that the union of interests may be greatly deepened and strengthened. Consequently, it is much to be deplored that the first active movement taken should be upon a question that will rightly meet with great opposition from an influential class, because it involves the upsetting of a law which is regarded by the majority of agriculturists (except those who are chiefly concerned in being able to buy store stock cheaply) as an absolute necessity for the preservation of the health of the herds and flocks of the United Kingdom.

"At the time when Canadian store cattle were excluded from this country the law in operation invested the Board of Agriculture with discretionary power to admit live animals for distribution in the interior of these islands from countries that they were satisfied were free from such maladies as rinderpest, foot-and-mouth disease, and pleuro-

breeding interests in this country. Farmers would, to a considerable extent, cease to breed cattle and sheep, and would rely upon the half-fattened stores from the United States and Canada. Should an outbreak of disease follow, the few who had kept up breeding herds would reap a rich harvest, as prices would go up to famine rates, and the meat supply of the community would be raised to such exorbitant values as have not been experienced for generations. The consumers equally with the producers, therefore, benefit by the present law, which gives every necessary facility for the importation of food, but ensures the exclusion of disease.

"Every consideration counsels the retention of the present law, under which the cattle exports from Canada have increased, as have also those from the United States. Our breeders, though hard hit by competition, do not zealously urge the question of a universal dead-meat trade. But if the battle has to be fought again on the initiative of Canada, then there will be a simultaneous demand for the total exclusion of all live animals except those that are imported for breeding purposes, under an adequate quarantine. That would place the imports to this country on exactly the same terms as ours are subjected to when carefully-selected pedigree stock are imported into the Colonies and foreign countries. But, as has been said, that question is not at the moment one of practical politics. It will only become so if the demand is made for the abrogation of the present law; and the concessions to be made, if that took place, would not be confined to Canada, but would also extend to the United States. It is well that Mr. Fisher and those who support his views should clearly realize this element in the case, which is of considerable importance, as it would lessen the benefit that Canada could expect from the change. This, however, is a matter for Canada herself to consider, if she has not already discounted the probability. With us it is not a question of preferential trade; it may without exaggeration be said to be a matter of life or death to the stock-breeding industry of the United Kingdom, which would be menaced first by a ruinous depreciation of prices; and when the travel-worn animals from the ends of the earth were distributed in the interior, as they would be if the barriers were once broken down, the inevitable outbreak of disease would follow; supplies would then be cut off, and the consumer would also suffer grievously. A clear and prudent policy has been incorporated in the existing Act of Parliament, which, it is hoped, will be strenuously maintained in spite of all efforts to the contrary."

Plowing and Plows.

As will be seen in another column, the plowing match is still in favor in some parts of the Province. The necessity for good plowing is well understood by the good farmer. On good plowing depends, to a great extent, the future crop of grain or weeds. Poorly done, the latter are given a handicap which is not at all necessary to enable them to gain the mastery. The late Jas. Elder stated that better plowing means: (1) increased profit on account of better cultivation; (2) a saving in time, encouraging, as it does, straight furrows; (3) a great improvement in the appearance of our fields. We might also mention that to be a good plowman one must also be a good horseman. Ins and outs make or spoil a headland, a portion of the land not included in some men's system of farming, judging by the unseeded spots so plainly to be seen at the end of many of the lands. The plows in general use vary with the purpose for which they are intended. Broadly defined, plowing is done (1) to alter the texture, forming from a comparatively hard soil a deep and mellow layer of earth; (2) to bury beneath the surface weeds and other vegetation or manure, where it may decay rapidly and be converted into available plant food. The plow tends to divide the furrow slice into thin layers which slide over one another, hence the soil is pulverized so thoroughly by this tool. The hitching to the plow is something which needs a little study of draft, as one noted authority says: "It is important, in the handling of a plow, that the line of draft be just right and such that a line connecting the center of draft in the moldboard with the place of attachment to the plow bridle (clevis) shall also lie in the plane of the traces. If for any reason the line is a broken one, the draft of the plow is made heavier. The greatest care should be exercised to have the traces, or the hitch at the plow bridle, such that the plow "swims free," requiring little or no pressure at the handles to guide it. If a steady pressure in any direction is required at the handles, something is wrong, and the team is doing more work than is necessary, as well as the man holding the plow."

The scouring of plows.—There are certain soils whose texture is such that only the most perfect plow surface sheds them completely. In such cases a moldboard resembling that of a sod plow is more successful. It is a matter of greatest moment that the moldboard possess not only an extremely hard finish, so as not to be scratched by stone or grit in the soil, but it must also possess an extremely close texture, so as to be susceptible of a very high polish. If the metal is coarse grained there will be inequalities even in the bright surface in which the fine soil particles may lodge and thus clog the plow. We shall have something to say on the care of the plow in a later issue.

Salty buttermilk is recommended as a good application for skin irritation the result of poison ivy.

Growing Gooseberries and Currants.

GEO. W. STRAND, BEFORE THE MINNEAPOLIS HORTICULTURAL SOCIETY.

Currants may be increased either by cuttings, layers or division of old plants. Where only a few plants are wanted, and old ones of that variety are accessible, if sections are taken which are fairly well rooted and composed of the newer growth, they will make very good and vigorous plants, but it is preferable to start them by either of the other methods.

For commercial purposes currants are grown almost exclusively from cuttings. These are made from the new growth soon after the leaves fall, which is about the 1st of September in this latitude. They are made six or eight inches long and tied in bunches, having the butts all one way. Although some plant them at once, it is preferable to callous them first, as this hastens the rooting process. This may be done by placing them in the ground, butts up, covering them enough to prevent them from drying out. Fermenting manure is sometimes used to hasten it. As soon as calloused, and before the small roots start, they should be set out, about four or six inches apart, in rows from three to four feet apart, set firm, in a slanting position, leaving only the upper bud exposed. A mulch of straw, applied soon after, will also be of great benefit, removing the same from just over the row before growth starts in the spring. Cuttings thus treated will have roots started before severe weather sets in, and are in condition to make the best plants.

If necessary, they may be set early in the spring, but they do not stand near the chance of growing or making as good plants as fall-planted cuttings.

Thrifty one-year-old plants are all right for transplanting, but two-year-olds give the best satisfaction generally.

Currants root very readily by layering. This may be done during the fore part of the growing season by bending down and partly covering the new growth.

Gooseberries do not start as easily as currants from cuttings, and are grown mostly from layers. The layers are generally started as soon as the new growth is long enough to conveniently handle in June. These are taken up in the fall and transplanted into rows, about six inches apart, to be grown for one or two years, the same as currants.

Another method of starting gooseberry plants is to hill up the two-year-old plants that are to be dug that fall. This will cause roots to form in the newer growth, and a good stock of layers can thus be procured with very little labor or expense. The trimming up which the stock thus receives will be more beneficial than injurious.

In starting layers, if a cut is made in the lower side—making it rather long and almost to the center of the stalk, so it will stay apart when pressed back into the soil—this will greatly aid the formation of roots, as they start more readily from a calloused surface. In fact, this is almost the only way some varieties of gooseberry and other hardy plants, such as roses, can be induced to root to any extent when propagated in the open.

As in the production of other kinds of nursery stock, the season, soil and care has much to do with the quantity and quality.

Prof. E. S. Goff (Wis.): The gentleman stated, and I think we have been taught in books and other publications, that only young wood should be used for cuttings. I visited one of our largest Wisconsin currant-growers, and was surprised at the way he did his propagating. He did not use young wood, but he took his cuttings from the older wood. He took the prunings from the oldest branches that got down where the currants got dirty. He cuts them out and then he cuts the branches off at every joint and leaves on a small shoot, which he uses as a cutting. They were very finely rooted; in fact, I found they were so nicely rooted that I could make several plants of them. It may possibly mean earlier bearing. This gentleman said he had adopted this method because he found it better in his own work. He cut them off in the spring and planted them in the ground. I wish to be understood, however, that all of these cuttings had a bud at least of young wood, or one or two buds of young wood somewhere on them, but they included a portion of the older wood, so that every branch of old cane that has an inch or two of young wood can be used for cuttings.

Ridding Poultry Houses of Vermin.

The bugbear (or *bete noire*, as the Frenchman puts it) of the poultry man or woman is vermin, to get rid of which bisulphide or carbon is said to be an excellent preventive. A continental investigator, who has recently been testing various remedies for lice and other parasites in fowls, finds that by placing a vessel containing a quantity of this bisulphide of carbon underneath the perches, all the lice or other parasites present in the house will be gradually killed off. Bisulphide of carbon, as is well known to chemists, is exceedingly volatile, and when used in poultry houses for this purpose it must be renewed at intervals of a few days. It is said, however, that even in very bad cases a week of fumigation with this material is sufficient to clear poultry houses of all the vermin present.

Bisulphide of carbon is too powerful in its effects to be used without care, and if a great amount is used, the poultry should be outside the house while the fumigation is going on.

The Ideal Table Bird.

Often our attention is called to the poultry on the farms of this country; the remark very often being made, "Are they not beautifully marked?" The fancier gives a great deal of attention to the markings as evidence of breed purity. The farmer, however, should look further and try to remove the stigma that the ideal table fowl has yet to be produced. At present, perhaps the nearest approach to it is obtained by crossing Dorking hens with Indian Game cocks, and of late years some of the French breeds have, by judicious cultivation and improvement, been made to produce cockerels capable of creditably acquitting themselves in competition with the best table birds on the market. The ideal table bird is a rapid grower and one which, on arrival at a marketable age, possesses not only a massive appearance, but carries such a wealth of flesh as to weigh proportionately. Such a bird must be long and deep in the body and carry a great wealth of flesh on the breast and thighs. It is in this particular that great length of body is needed, because unless a bird is long, it is impossible for it to carry the same amount of flesh as would otherwise be the case. The depth and weight of flesh upon the breast is chiefly determined by the length of the bird's keel. Great depth of body is therefore a point of great importance in a table bird, because shallow-bodied birds are, as a rule, furnished with shallow keels, and, as a consequence, possess relatively small breast muscles. The bird possessing the above characteristics will not be far from the mark. The Plymouth Rock and Wyandotte make fine table birds if properly selected.

Advantages of Thorough Stripping.

It may not be generally known that the first season's milking of a heifer is as important in the making of her future as is the method followed in the breaking-in of a colt. Wrong methods or careless work invariably result in financial loss in either case.

Many promising dairy cows are spoiled as milkers owing to the treatment which they receive after producing their first calves. As is well known, the time which a cow goes dry before dropping her calf is largely a matter of habit, and though the natural tendency of most cows is to dry off after being five or six months in milk, it is well known that the length of the period of lactation may be very considerably increased by careful treatment of the cow, and by so handling them as to encourage the prolonged production of milk. Much may be done in this direction by seeing that the milkers thoroughly drain or "strip" the udders of the animals at each milking. There is no more effective method of running a cow dry than that of leaving a portion of the milk behind in the udder at each milking. Thorough stripping is beneficial in two ways. Not only is the milk obtained from such stripping materially richer in quality than that obtained from the cow in the early stages of the operation, but the tendency of thorough stripping is to encourage the animal to continue producing milk for a longer period than she otherwise would.

The advanced dairyman is very careful to endeavor to prolong the first season's milking as long as possible, even milking ten, twelve or more months before allowing the young cow to dry up. Once the habit is thus formed, subsequent milking periods will be comparatively easy to keep to the required length.

Why Butter Goes Rancid.

Nothing is so obnoxious to the palate of a person used to good butter as to find that the article placed upon the table is rancid. The causes for such rancidity, as will be seen, lie almost entirely with the maker, because one of the prime essentials to the production of good butter is the thorough removal of the buttermilk when the churning process has been completed and before the butter is made up. The reason why this complete removal of the buttermilk is of so much consequence is because it contains a large percentage of the casein present in the cream or whole milk from which the butter is churned, and if this casein is not completely abstracted before the butter is made up, the keeping quality of the article will be very considerably injured. It is owing to the lack of care in completely removing buttermilk, and thus ridding the butter of as much of the casein present as possible, that so much butter becomes rancid within a short time after manufacture. The rancidity of butter in these cases is due to the development or growth of a germ or microbe which finds the food necessary for its maintenance in the casein which is present in such badly-washed butter. The germs which cause this rancidity cannot live upon or develop in pure butter-fat, and hence it is that the more thoroughly butter is washed and the more effectively the casein is removed the less liable will the butter be to go strong, and the better will it keep.

To prevent such an unfortunate condition as rancidity, churning should be stopped when the butter is in granules, and the buttermilk drawn off; the use of the lever worker in the home dairy will materially aid in getting properly rid of the buttermilk.

Word has reached us of a Toronto girl in Muskoka who, seeing a farmer's wife wringing a hen's neck, is organizing a movement to have fowl chloroformed before being killed. It would be a kinder way of doing it, certainly, but we fear it will not be generally adopted.—*Toronto Star*.

Household Tests for the Detection of Oleomargarine and Renovated Butter.

The following tests, which will later be published in the form of a bulletin, emanate from the Department of Chemistry, Washington, D. C.:

Two household tests are given—the boiling test and the Waterhouse test. The former has been in use for about ten years, and was originally used only for the detection of oleomargarine, but after the

Bath and West of England Show.

This leading agricultural show was held on May 21st and following days, at Croyden, Surrey, and whatever may be the financial result, there can be no question of the high merit of the capital entry made in all its sections.

The agricultural horses were practically all Shires. Some few classes were open for any breed, but those did not fill. Lord Rothschild's stud was very successful, the medal for best mare or filly going to Dorothy Drew, a grand three-year-old, of his stud. Lord Rothschild and Messrs. J. P. Cross, A. Ransom and Walpole Greenwell were the principal winners.

There were capital classes of Hunters, and a poor display in the Army Remount classes; but those open for Hackneys were well patronized. Mr. H. Livesey's stud being well represented, winning the champion medal for mares and fillies with that noted mare, Surprise, who had by her side a grand foal by the champion McKinley.

Devon cattle, the rubies of the west country, are always strongly represented at these shows, and this year's entry of twenty-eight were of great merit.

Shorthorns made not only a large display, but one of fine quality.

Scotch blood was very successful, and there were many real good and typical Shorthorns. Mr. Henry Dudding was to the fore in bulls, and should have also been in the same position with heifers, but luck was against him. Mr. G. Harrison won, amongst other honors, the bull championship with the roan Duthie-bred yearling, Silver Bell, by Silver Plate; Mr. Dudding being r. n. with Ingram's Perfection. Col. Makins and Lord's Rothschild and Tredegar were principal

winners in the cow classes, and Lord Calthorpe and Messrs. J. Deane Willis and J. Colman in the heifer class.

The Hereford classes were of very high merit and quality. The Earl of Coventry, in the older bull class, took the leading place; Mr. S. J. Tudge in the young bull class, with Mr. A. E. Hughes at the head of a real good class of bull calves. The four female classes were headed by Mr. J. Tudge in two cases and Mr. R. Green in the other two.

land will find their southern confreres taking the lead. Mr. R. W. Hudson, Rev. C. Bolden, J. H. Bridges, and Sir J. B. Maple, Bart., M. P., were the leading winners.

Both Jerseys and Guernseys came out in great force; in fact, these two breeds, as a rule, make larger entries at these shows than elsewhere, and no better opportunity can be taken by those who are desirous of seeing these breeds to their best advantage than to pay a visit to the annual show of this society.

The little black and brown Kerry and Dexter-Kerry cattle were shown in good numbers, and their small, compact forms form a very pleasing and instructive feature of the show.

THE SHEEP.

The Cotswold breed made a small entry, of high merit. Mr. W. Houlton won for rams, and Mr. R. Swanwick for ram lambs and yearling ewes.

Southdowns made a notable entry, of high merit. The classes were large and good, the most noticeable absentees being the Pagham Harbor Co. and Mr. F. N. Hobgen, who do not come out until the Royal Counties Show, week after next. Mr. G. Courtauld, an Essex breeder, took premier honors in the yearling ram class, the Earl of Ellesmere being next. In the ram lamb class, Col. McCalmont's flock, whose advertisement will be found in the FARMER'S ADVOCATE, took without question first and second for ram lambs, with two grand pens; Mr. C. Adeane being next. The ewe class fell to the Earl of Cadogan and Col. A. F. Walter.

The Hampshire Down classes were of a very high character, Mr. James Flowers' noted flock taking first right through, his yearling ewes and ram being remarkable for their grand type and character. The Earl of Carnarvon was second for ram and ram lambs, and Mr. C. A. Scott-Murray for yearling ewes.

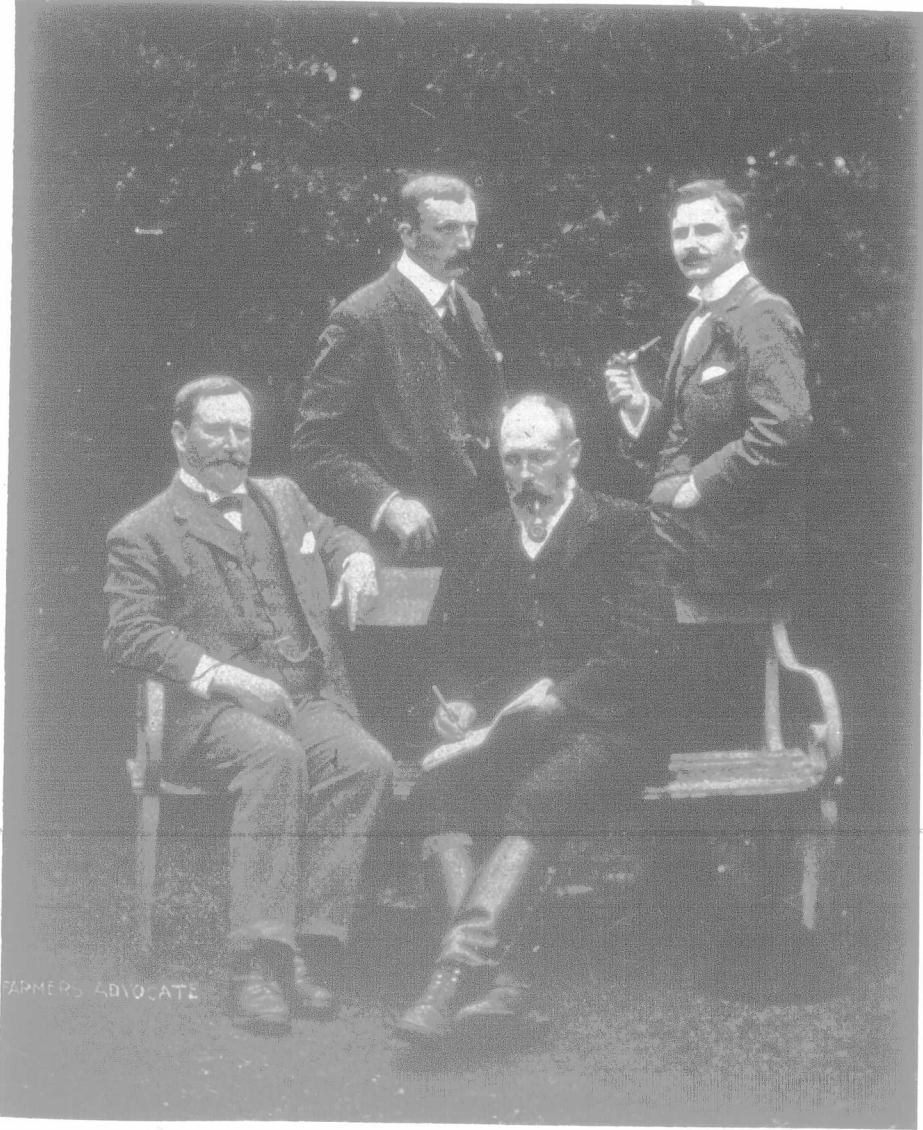
Shropshires never make a really strong entry at this show, but those that were present were most creditable to their breed; Mr. A. E. Mansell, whose dispersal sale is announced in your columns, being the proud owner of one of the very best types of ram lambs seen for many a day, who, with his mate, came in for premier honors, whilst a shearing ram from this flock, who, though second here, will live ere long to show his tail to his conqueror at this event, a grand sheep from Mr. R. P. Cooper's flock, who, in addition to being first with this grand ram, was also first for yearling ewes; Mr. P. A. Munty's pen being second.

Mr. J. T. Hobbs repeated his Oxford victory, and again led the way in the yearling ram class of Oxford Downs, being followed by Mr. A. Brassey's entries, this latter gentleman taking precedence in the classes for ram lambs and yearling ewes, the latter a very remarkable pen, of great quality. Mr. R. W. Hobbs and Mr. H. W. Stilgoe had real good pens entered. Mr. L. C. Attrill was the only competitor in the Dorset Horn classes.

PIGS.

The Berkshire classes were well filled, and Mr. Edney Hayter secured the championship with his great boar who won at Oxford, Mr. J. Jefferson being next him in the championship contest with a real good type of sow—Peel Flirt. Mr. R. W. Hudson's young boars and gilts were of excellent merit. Large Whites (Yorkshires) were not very strong in numbers, Mr. S. Spencer leading the way.

The Tamworths, which make one of the most important shows of the year at this meeting, were present in good numbers and useful quality. Mr.



MR. HENRY DUDDING MR. KIRKHAM MR. W. W. CHAPMAN A VISITOR.
(Riby Grove). (Mr. Dudding's Mgr.). (Rep. FARMER'S ADVOCATE).

advent of renovated butter the test was found to serve almost equally well in distinguishing this product from genuine butter, although not from oleomargarine.

It may be conducted in the kitchen as follows: Take a piece of the sample about the size of a chestnut, put it in an ordinary tablespoon and hold it over the flame of a kerosene lamp, turned low, with chimney off. Hasten the process of melting by stirring with a splinter of wood; then increase the heat and bring it to as brisk a boil as possible. After the boiling has begun, stir the contents of the spoon thoroughly, not neglecting the outer edges, two or three times at intervals during the boiling—always shortly before the boiling ceases. A gas flame, if available, can be more conveniently used.

Oleomargarine and renovated butter boil noisily, sputtering (more or less) like a mixture of grease and water when boiled, and produce no foam, or but very little. Renovated butter usually produces a very small amount. Genuine butter boils usually with less noise and produces an abundance of foam. The difference in regard to foam is very marked as a rule.

The Waterhouse test, designed a year or so ago by Mr. C. H. Waterhouse, at that time dairy instructor at the New Hampshire College of Agriculture and Mechanic Arts, is as follows: Half fill a 100 cc. beaker with sweet milk; heat nearly to boiling and add from five to ten grams of butter or oleomargarine. Stir with a small rod, which is preferably of wood and about the size of a match, until the fat is melted. The beaker is then placed in cold water and the milk stirred until the temperature falls sufficiently for the fat to congeal. At this point the fat, if oleomargarine, can easily be collected together in one lump by means of the rod, while if butter, it will granulate and can not be so collected. The distinction is very marked. The stirring is not, of necessity, continuous during the cooling, but it should be stirred as the fat is solidifying and for a short time before. The milk should be well mixed before being turned into the beaker, as otherwise cream may be turned from the top and contain so much butter-fat that the test is vitiated for oleomargarine.

Manitoba Plowing Matches.

Portage la Prairie	June 11
Blythe	21
Killarney	27
Virden	28
Bradwardine	28
Humboldt	July 1



HAWTHORN BLOSSOM. FLORODORA. OMBERSLEY PRIDE.
Prizewinning Shorthorn heifers in the herd of Mr. Henry Dudding, Riby Grove, Great Grimsby, Lincolnshire.
Annual sale August 7th, 1901.

The Aberdeen-Angus cattle had, for the first time, classes open to them at this show, and they certainly took full advantage of the opportunity. Most of the breeders whose names head the winning list, being south country ones, may not be known to your Aberdeen men, but, depend upon it, if the same energy and perseverance continue to be shown in the future, the breeders of these cattle in Scot-

R. Ibbotson won for old boars, the pair of young boars and pair sows; whilst Mr. D. W. Philip took precedence in the mature sow class.

There were not many visitors from either the States or Canada. Amongst those who were present we noticed Mr. F. S. Peer, who is over for a consignment of fine stock, amongst them some Leicester rams.

Treatment of Wounds.

Who is not familiar with the barb-wire cut, and the heroic treatment which followed, lime, salt, turpentine, and other non-essentials being frequently used?

The great secret of success in dealing with wounds in horses or other farm animals is to keep the exposed portions of the flesh as clean as possible and well protected from dust particles in the air. This, with the addition of an antiseptic dressing to check the development of any germs which may gain access to the flesh, will be found to be all that is necessary to ensure satisfactory healing of the part. It is owing to the admission of dirt, or the failure to remove dirt, where foreign matter gains an entrance at the time the wound is created, that so much trouble and delay occur in the healing of cuts, bruises or other injuries. With the object of preventing the access of the germs referred to, there is nothing better than a layer of cotton wool soaked in a weak solution of carbolic acid or some other standard antiseptic.

An excellent dry dressing is composed of boracic acid, three parts, and iodoform, one part.

Preserve Harness in Good Condition.

The rainy day may be profitably employed with a little labor looking to the care of the harness.

Much may be done to prolong the life of a set of harness by giving it a little care and attention in the matter of oiling. Not only does an occasional oiling, when properly given, lengthen the life of the leather, but it also renders it pliable and more comfortable to the animals by which it is worn. Harness should always be wiped clean after being used, so as to prevent the formation of that clammy compound of perspiration and dust which is so frequently seen on badly-kept harness. The natural tendency of the leather is to dry and become brittle; this may be guarded against by subjecting it to a good soaking with oil now and again. The oil when so applied should be well rubbed in with some coarse cloth, and the leather afterwards dried by being thoroughly wiped with a dry rag or woollen material. The best oil to use for the purpose is neat's-foot. The required shade of color can be given to the oil by the addition of lampblack.

As is well known by the farmer, harness costs money. In a comparatively dry climate, such as we have, a little work performed as indicated above will return a handsome profit.

The Pan-American.

A representative of the FARMER'S ADVOCATE recently visited the Pan-American Exposition at Buffalo, N. Y. The gates had been open to the public for a month, and yet the general appearance of the grounds and buildings was most chaotic. Many of the asphalted roadways had, evidently owing to the fault of workmanship, given way under the heavy teaming, and would require complete renewing. A number of the buildings were still unfinished, and very few of the exhibits were in place. An army of workmen—carpenters, painters, moulders, gardeners and laborers—were at work, and doubtless everything will be in shape early in July. When all is complete, the general effect will doubtless be very attractive. The designs and coloring of the buildings, the statuary, the canals and fountains, the lawns, trees and flower borders will combine to make a most effective scene, and most beautiful of all is the electric lighting, which is on a scale surpassing anything ever before attempted. In comparison with the Chicago World's Fair, the Pan-American is about one-third in extent, and being confined to the American continent, the exhibits do not cover so vast and varied a collection. There is, nevertheless, much of interest, and when all the exhibits are in place, a trip to the Rainbow City will well repay the visitor, though, of course, knowing the outstanding merits, especially in substantial features, of our great Canadian exhibitions, these will not be neglected for the show across the way.

At the time of our visit, the Dominion building was not completed, but the forestry and fruit exhibits made by the Province of Ontario were among the few completed exhibits in their respective departments, and very creditable displays are made.

In the agricultural building, Manitoba had completed the preparation of its exhibit, which, though not very elaborate, was neat and practical, and favored with a good location.

The model dairy is a small building, fairly well arranged, and the cows seemed comfortable and settling down to business. Here Canada bulks largely, as the majority of the entries of dairy cows are contributed by Ontario. In addition to the contingent of Ayrshires, Jerseys, Guernseys, Holsteins, Quebec Jerseys and Shorthorns from Canada, there are only a few representatives of Brown Swiss, Red Polls, and Dutch Belted.

The term, thoroughbred, is often used by stockmen in connection with cattle, sheep, swine, poultry, and dogs. Such use of the term is incorrect. A Thoroughbred is a running horse. Pure-bred is the term to apply to pedigreed stock, whether horses, cattle, sheep, swine or poultry.

A piece of gum camphor about the size of a walnut, burned on a plate, is said to rid a room of mosquitoes. This insect is said not to bite a skin bathed with weak salt water or kerosene (coal oil) water.

The Solid Security of Improved Live Stock.

Confidence in the future of the industry of breeding pure-bred cattle of both the beef and dairy breeds has been materially strengthened by the results of the recent public auction sales of Herefords, Shorthorns and Jerseys reported elsewhere in this issue. Following close upon a great combination sale of Herefords in Chicago last month, at which the record price of \$5,000 for a cow of this breed was realized, and an average for ninety-eight head, of \$343, we have the Cooper sale, in Pennsylvania, of imported Jerseys, at which a bull was sold for \$3,500, and a cow for \$2,775, and an average scored of \$451 for one hundred and eight head. Close on this we have the sale of Shorthorns from the herd of Mr. Ward, of Iowa, at which \$2,500 was paid for a cow, and an average price of \$725 was recorded for forty-five head; and following on the heels of this the disposal of fifty-nine head in the combined offering of fifteen head from each of the noted Canadian Shorthorn herds of Messrs. Flatt, Cargill, Cochrane, and Edwards, at which an average of \$748.33 was made for the fifty-nine head sold, the forty-nine females making an average of \$816, and Mr. Flatt's offering averaging \$1,073 each, beating his own record of \$793 for fifty-six head made at his sale in August of last year, and thus holding THE HIGHEST RECORD OF AVERAGE PRICES FOR ANY BREED OF CATTLE ON THE AMERICAN CONTINENT DURING THE LAST EIGHTEEN YEARS. An encouraging feature of these last sales is the fact that no sensational prices were paid for individual animals, but that the prices were uniformly good, and that the high averages were not made mainly by phenomenal figures for a few, but by the even, healthy tone of values that prevailed throughout the list. The disposal of one hundred and four head of cattle in two days, including the Canadian offerings and the Iowa contribution, for \$76,800, or an average of \$738, is certainly a remarkable performance, and coming, as it does, at the conclusion of the greatest sale season seen in many years, it denotes that the demand for good cattle is better than ever, and that the future holds nothing but good promise for the breeder. The safe foundation of this strong demand for good breeding stock lies in the increasingly healthy condition of the dairy and meat industries.

The enterprising Canadian breeders who have so well done their part in making possible the presentation of such a record of prices for pure-bred cattle by risking their money in the importation of high-class animals, by praiseworthy persistence in overcoming the vexatious restrictions imposed for selfish ends upon the business by interested officialdom, by placing the stock on the market in healthy and attractive condition, and by honorable business methods, have performed a patriotic act and conferred a distinct public benefit in maintaining the good reputation of the Dominion for enterprise and skilful management in producing and presenting before the Western world the highest types of improved stock. In doing this they have practically increased the value of every creditable pure-bred animal in the hands of the smaller breeders, as well as those of more extended reputation. In the last analysis, profitable production and high quality of food products determine animal values; therefore, the event was a fresh and striking demonstration of the real value to the country of improved live stock.

Polo Ponies.

"Polo ponies of the right stamp—smart, active, clean-limbed animals, with a bit of breeding and showing the right type and quality—are in great demand, and can always be counted on to realize very high prices. As the mating of small Thoroughbred sires with many of the smaller mares to be found throughout Ireland is just the line of breeding to follow in the production of animals of this class, there is no reason why this country should not earn just as good a reputation for its polo ponies as it already enjoys for its hunters."

The above, taken from an Irish paper, gives the keynote to the breeding of polo ponies, which are now being sold at remunerative prices. Only recently a polo pony was sold at auction in England for 800 guineas (about \$1,000), several being sold for sums ranging from \$1,000 to \$2,500. Are there not mares to be found on the ranches suitable for breeding polo ponies?

Summer Fair Dates.

Edmonton Summer Fair.....	July 1 to 3
Yorkton	July 10 to 11
Calgary.....	July 10 to 13
Wawanesa.....	July 18
Carberry.....	July 18 and 19
Virden.....	July 18 and 19
Portage la Prairie.....	July 23 to 25
Brandon.....	July 23 to 26
Carman.....	July 24 and 25
Winnipeg Industrial.....	July 29 to Aug. 2
Minnedosa.....	July 30
Oak River.....	Aug. 6
Hamlofa.....	Aug. 7
Neebawa.....	Aug. 6 and 7
Qu'Appelle.....	Aug. 7 and 8
Souris.....	Aug. 7 and 8
Central Assiniboia.....	Aug. 7 and 8
Moosomin.....	Aug. 7 and 8
Lacombe.....	Aug. 9
Regina.....	Aug. 13 and 14
Emerson.....	Sept. 26 and 27
Hartney.....	Oct. 2
Killarney.....	Oct. 9 and 10

The Question of Advertising.

To be frank with our readers in dealing with questions affecting the interests of the farmer, or the public generally, has been one of the characteristics of the FARMER'S ADVOCATE. To plainly say what one believes to be right has not always been agreeable, but it has been wholesome. Consequently, frankness in saying a few words about the business of advertising, which concerns so many of our readers and patrons, will hardly leave us open to the charge of "talking shop." This is an age of publicity, of widespread interests, far-reaching intercourse, rapid communication. Men do not live to themselves now. They cannot do so. The wants of primitive men were few and simple. Not so to-day. Modern customs and methods have revolutionized and superseded the methods of the past, and the business man who fails to make himself known and take the public into his confidence by advertising is as great a wonder as the man who formerly launched out as a leader in that respect. The volume of trade transacted by mail is enormous. Human needs exist everywhere, and advertisements give information which thousands of people want. It is now a recognized axiom that no business can afford to ignore advertising. This is true of matters outside of what is usually styled "business." To illustrate: As many of our readers may remember, when the last India famine was on, the manager of the *Christian Herald*, of New York, undertook to raise a relief fund, and in connection with his published audited statement, he now mentions as one noteworthy feature that an investment of \$8,320 in making known his effort by advertisements in good periodicals resulted in inducing contributions to the fund to the extent of \$96,001, or eleven times the original outlay. Instances might be cited, of course, where in ordinary business advertising vastly greater returns, proportionately, were secured, but the lessons to be deduced are the same. The public had confidence in Dr. Klopsch, he presented a good case, he utilized advertising space liberally in papers of good standing and weight, circulating largely among a superior class of people, and the advertisements were skilfully written and well illustrated. Such periodicals could not afford to sell him space as cheaply as some others, but he knew that it would pay much better. And so it proved. Right at this point the experience of one of our oldest and best patrons is instructive. He told us that he was once induced to invest in space in a sheet purporting to have a considerable circulation, though evanescent in character, and for a time received many enquiries; but no business developed therefrom, directly or indirectly. Being a "Cheap John" class of paper, it had attracted a non-progressive, "Cheap John" class of readers, who, if not actually on the "beat," were very close to the line, being only on the lookout for bargains—\$1.00's worth for 50 cents. "I soon found it," said he, "to be a poor and ineffective medium, and, of course, dropped it."

Of all modern plans by which the seller would reach customers for the disposal of manufactures, live stock, agricultural products, or goods of whatever sort, advertising in papers of good repute seems to have become the most pronounced and successful, and for business with or between farmers the agricultural journal naturally best fills the bill. Their readers are educated as to the great value of improved stock, appliances, etc., and the natural medium of reaching them is through such periodicals. Such announcements should be honestly made, and good faith invariably kept with the customer, who should treat the advertiser in a square and reasonable manner, giving the paper due credit in writing the advertiser. The latter will enhance the value of his advertising space to himself by using attractive phraseology, frequent changes of wording (never letting announcements grow "stale"), and the judicious use of engravings which catch the eye. The stockmen should keep us posted as to the disposal of notable animals, and the general advertiser, of any special features cropping up in his trade.

Advertising, like manuring, has an accumulative value; but, as every farmer knows, for steady returns the applications must be regularly repeated. When we desire to enforce any sound principle or practice in farming or stock-rearing, we find it necessary to repeat it, "line upon line," impressing the truth in new forms issue after issue. From new readers or forgetful old ones we receive among the scores of questions reaching us every week for answers the same ones again and again. Repetition is a necessity. The public is forgetful. No matter how well carried on otherwise, a business must be kept in the public eye or drop speedily out of sight. This, of course, does not apply to announcements of a purely transient character.

As is the case with many other periodicals keeping a superior standard in view, the FARMER'S ADVOCATE finds it necessary to decline a very large amount of advertising every year, which is either of an unclean character or which we have reason to believe is fraudulent in its nature. In the long run, a clean and honest business is the only sort it will pay to cultivate. Three parties are naturally concerned in advertising: the person with something to sell, the one who desires to buy, and the publisher who prints the announcement, and the transaction must be satisfactory to all three. To accomplish this the principles which we have outlined must be closely adhered to.

Breeding and Management of Pigs.

[FROM OUR ONTARIO AND EASTERN EDITION.]

The Canadian farmer will in the future, far more than in the past, find that the best markets open to him will demand that the articles he produces must be of the best quality, and his chief interest will be to reduce the cost of production. While granting that much advancement has in a few years been made, we have no hesitation in asserting that in few of the articles which he produces there is more room for the continued improvement than in the average quality of hogs placed on the market. A considerable proportion of our farmers have paid attention to the trend of the markets and the discussions of the press with regard to the type of hog wanted, and have bred and fed their hogs with a view of meeting the requirements and with a good degree of success, but evidently there is a large proportion of the farmers who have not read either the papers or the signs of the times, and have gone on in the old way producing what is not wanted and must be sold at second or third class prices, thus losing money and at the same time injuring our trade, which, but for their carelessness, would be more satisfactory. The pig now required to bring the best results to breeder and feeder is one of early maturity. It has been clearly proved by repeated experiments, both by private individuals and at experimental stations, that pork made from young pigs is far more cheaply made, that it brings the highest price on the market, and that it enters more readily into consumption by the class of people who are willing to pay a good price for what suits their taste.

The type of pig required to meet the present-day demand is a lengthy, deep-sided pig, which will grow rapidly while young, and will attain the 200 lbs. weight at 6 months old. To reach this weight, he must be fed a variety of food, such as milk, whey, barley, shorts, and peas, with good pasture besides, when it is to be had, and roots supplied in winter, together with free access to such condiments as a mixture of wood ashes, sulphur and salt, and a shovelful of earth from a root cellar occasionally. As to the best means to bring one's pigs to these requirements, there may be room for difference of opinion, as most men have their own ideas of the merits of the different breeds, but it is safe to say that no one breed has a monopoly of all good qualities which go to make the ideal bacon hog.

If it is purposed to breed and keep pure-bred hogs, the first essential is to secure a sow of desired type, with good length, deep body and strong bone, standing straight on her toes, having a quiet disposition, with at least twelve teats, even in size, placed equidistant apart, and commencing as near the fore legs as possible. The fact that the produce of a boar may, and often does, amount to hundreds of pigs in a few months makes it essential that care should be taken in his selection and in the study of the character of his forebears. To this end, it is preferable, as a rule, to look for him in the herd of a breeder of long standing and good repute, and if you are not a judge, explain your wants fully and trust him to supply what you need. The oft-quoted remark, "The bull is half the herd," applies with greater force in the case of a boar in a herd of swine, and as many good points as possible should be combined in the herd boar. The first essential is that he should be pure-bred, and in order to this he should be registered, and if descended from an old-established herd, all the better, for the reason that in a newly-established herd, even though the owner may have won prizes at recent shows, a variety of type is likely to be found, and more likely the prize animals have not been raised by the exhibitor, but bought from different herds differing very much in type, and their produce, when bred together, will often be unlike the parents or each other. Here again comes up the point of importance to the beginner who hopes to found a herd good enough to take a high position. It is to select the boar from the same breed for a lengthened period in order to secure uniformity of type. Young breeders are apt to get the idea that by selecting boars from a number of leading herds in succession, they will combine the best points of all, but in actual practice this will end in a partial failure: the stock bred will lack uniformity, some points will be abnormally developed, while strong fallings will be equally noticed.

The essential points sought for in a stock boar are a compact frame, as long and deep as possible, consistent with strength, a wide chest and a good heart-girth, but fine and smooth in shoulders, and a straight top line, well-sprung ribs, deep flanks, strong loins, hams wide and deep, twist full and well-fleshed down, legs strong, straight and well placed, good quality of bone, and flesh smooth and elastic to the touch, and his temper should be good, for a vicious boar is an intolerable nuisance and a constant source of danger, and is liable to transmit this temperament to his produce, which are apt to prove restless, unsettled and poor feeders. Mere size should not be considered a strong point unless it is combined with compactness and fineness, and

strength of bone and feet. A very large boar is apt to have weakness of the spine and hind quarters, and is frequently weak in his joints, and these failings are hereditary. Weakness of fetlocks and roundness of the bone should always be avoided in a sire. These are frequently combined with great size. A medium-sized, compact boar, heavy in the hind quarters and light in the fore quarters, will most generally prove fruitful for a much longer time than one heavy in the shoulder, and a strong-boned hog and his produce will have stronger constitutions and prove to be much easier feeders.

As to the age at which pigs should be mated for breeding, there is room for a variety of opinions. Where they have been liberally fed and well developed for their age, they may be safely put to breeding at 6 to 8 months old. A young sow should not be allowed to raise more than one litter of pigs the first year, but allowed to rest and grow. After this, if desired, she may raise two litters a year, having them in April and September for best results, as late pigs generally get "stunted" and do not go on and make rapid growth for the food they consume, since they cannot in winter get sufficient exercise to give them the vigor of constitution necessary to stand heavy feeding.

Kent Co., Ont.

HENRY SMYTH.

Bone in Sheep Breeding.

The *Farmer and Stock Breeder*, England, of recent date, says: "For many years breeders of all persuasions have differed on the question of 'bone' in stock-breeding. This subject cropped up recently, when Mr. Mansell was reading his paper on sheep-breeding, before the London Farmers' Club, and in the subsequent discussion much difference of opinion apparently existed. Mr. Mansell, who breeds Shropshires, thinks that plenty of bone, when you have it combined with a good sheep otherwise, is a highly desirable characteristic, but a fine-boned sheep, otherwise suitable, he would not discard for

Raising the Pure-bred Calf.

Whether the calf is the main consideration with the breeder, or whether a little butter or cream is of more importance to the owner than the highest good of a valuable calf, must be decided at the start. If the latter, some substitute for mother's milk must be given; if there is anything to take its place, I have never found it. If possible, then, let the calf have free access to its mother, as its delicate stomach is best suited by frequent draughts of small quantities. My system is to allow the calf to run with its dam for two or three weeks, then separate them and allow the calf to suck three times a day until it is two months old, when the noon sucking is discontinued. If the calf does not take all, the cow should be stripped dry to keep up her flow of milk till the calf will take it all. In all cases the calf should be taught to eat as soon as possible, for it is important to supplement the milk ration, both in quality and variety, as early as possible. They will soon learn to nibble at a little sweet hay or oat sheaf, and as they progress, the variety should be increased by bran, oat chop, and a little sliced or pulped roots. It is generally safe to feed the calves, both before and after weaning, all that they will eat up clean. Always see that there is nothing left in the boxes to sour. A careful watch should be kept to see that they do not scour; at the first symptoms the amount of food should be reduced. Generally, the cause is easily detected, and should be removed at once; and it rarely takes more than a few days of reduced rations and quiet to correct the disorder of the bowels.

Under ordinary circumstances I do not stable the calves during the warm summer months, but after the pasture becomes good, allow them to run with the cows. They should have access to a shady place during the heat of the day. The open air and plenty of exercise I regard as one of the prime factors in making thrifty, vigorous animals. As soon as the grass begins to get a little dry, the calves should be put in roomy box stalls and fed a ration of sweet

hay, oat chop, bran, and a few roots. I grow a patch of corn to feed them at this time of the year.

The usual weaning time, seven or eight months of age, is a very critical period in a calf's life, and if cut off from nature's diet too quickly, bad results may follow. The calf should be allowed to suck once a day for a week or so, and thus gradually become accustomed to the change. The great thing is to keep the growth of the calf from suffering any check. If the weaning is followed by a period of fretting, and the calf is for a few weeks unthrifty, the effect will be apparent in the animal's after-life. It is not an easy matter to impress on many men that an animal that has an unchecked calfhood of thrifty growth will mature earlier and develop more completely than one with at first equal promise which has been allowed to get out of condition the first month's time of its life. A little retarding of growth at this period may mean the difference between making a good sale or a bad one. After the calves have been weaned, they are past the first epoch in their lives and may be regarded as out of the period of special care, but during the whole course of growth the feeder's attention should not lag, but he should use every effort to develop all there is in the animal. This is an art the feeder of breeding animals needs to learn thoroughly.

J. G. WASHINGTON.

Sharp Teeth, Not Black Teeth, in Young Pigs.

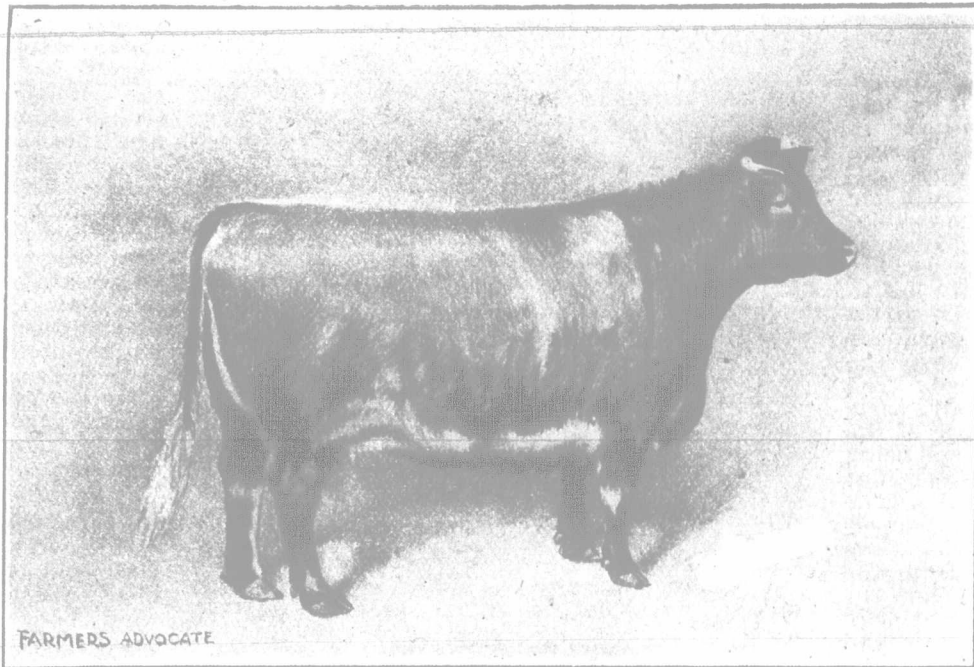
To the Editor FARMER'S ADVOCATE:

SIR,—I have read from time to time articles in your paper on black teeth in young pigs. If the writers would call them sharp teeth, then they would be barking up the right tree. I never saw young pigs without black teeth, as it seems to be natural for them to be black. But that is not what we are getting at. I want to give your readers to understand if they would buy a pair of small pincers and break off eight long teeth close to the jaw, four above and four below, that are as sharp as needles and cut the little pig's tongue and cause it to swell and create inflammation of the throat, etc., they would lose fewer pigs. I always remove the teeth from my pigs after a day old, and seldom lose one.

A. M. LAIRD.

For the Flies.

The following cheap mixture has been recommended for the fly pest: Take pine tar, 1 lb.; lard, 6 lbs. Melt the lard, and stir in the pine tar warmed. Smear some of the mixture on the poll, along the spine to the tail root, and on the brisket, twice or three times a week.



DAISY 3RD.

Imported 3-year-old Shorthorn cow, contributed by W. D. Platt, Hamilton, Ont., to the Canadian combination sale at Chicago, June 5th, 1901, and sold for \$1,910.

breeding purposes. This, we fancy, is the attitude of the great majority of breeders of the smaller breeds. The Southdown, for instance, maintains its supremacy by reason of its small bone and quality of carcass. It is not difficult to get large-framed Southdowns if the breeder wished it so, but the distinctive character of the breed would be lost thereby. Indeed, in some parts, that is the difficulty with many of the Southdown flocks, to keep down the bone and keep the type. On the other hand, Mr. Treadwell, an Oxford breeder, leads the van for bone. Without plenty of bone you cannot have lean flesh. Quite true; but when a breeder looks too much to bone, he is apt to sacrifice quality. Moreover, much depends on the quality of the bone. The eye is very deceptive, and a flat-boned sheep is sometimes discarded because he does not appear to be so well equipped in this particular as a round-boned sheep. If quality and quantity can be combined when dealing with the larger breeds, by all means encourage bone; but if encouragement of this feature should lead to coarseness, let us walk warily. The Lincoln sheep owes a very large part of its popularity abroad to the bone it carries. Foreign Lincolns do not necessarily decline in quality of wool, but they cannot retain the substance. Under these conditions, plenty of bone is essential if the popularity of the breed for export purposes is to be retained.

Amateur Farmer Mr. Green, there seems to be something serious the matter with the horse I bought of you yesterday. He coughs and wheezes distressingly, and I think perhaps he is wind-broken. What would you advise me to do?

Horse Dealer (promptly)—Sell him as quickly as you can, jes like I did.

Prof. Reynolds on Stable Ventilation.

In a country where the live stock necessarily spends several months of each year indoors, proper ventilation of buildings is the very first requisite towards the maintenance of sound health. We are gratified to find that the subject has come to the front despite spasmodic attempts to magnify the tuberculin-test fad. Farmers and stockmen have taken a keen interest in the series of articles running through the FARMER'S ADVOCATE, describing the systems recommended by Prof. J. H. Grisdale, of the Ottawa Experimental Farm; by Mr. H. S. Foster, of Quebec; by Prof. H. H. Dean, of the O.A.C.; by Mr. Isaac Usher, and others. Prof. J. B. Reynolds, of the Ontario Agricultural College (Department of Physics), has made a special investigation of the question, and, as a great many new stock barns are now being erected and old ones reconstructed, we have asked him to discuss a couple of enquiries just received from two different localities, bringing out points of general value. In one the general principles are stated, and in the other a practical application is made. The following questions in the letter first mentioned are from Mr. E. A. Garnham, Elgin Co., Ont.:

1. "At what place in the stable should the fresh air be admitted, and why?"

The fresh air should be admitted at the points where it will do the most good, and in such small quantities as can do no harm by creating appreciable drafts. The fresh air is needed principally for breathing purposes, and therefore should be admitted near the heads of the animals in the stables. If there is a forced draft, such as is caused by making use of the force of the wind outside, the best point for admitting the fresh air is at the floor, immediately in front of the stalls. It has been found that cold fresh air passing into a stable at the ceiling causes the deposition of moisture, which is avoided if the air is introduced at the floor.

2. "Where should the impure air escape, and why?"

For perfect ventilation, the impure air should escape at the ceiling immediately after it has left the lungs of the animals. The air which has just been expired from the lungs of the animals is 30 or 40 degrees higher in temperature than the surrounding air; and being warmer, it is lighter (bulk for bulk), and consequently tends to rise to the ceiling, where it may be drawn off almost immediately. But perfect ventilation is not practicable, especially in stables, since the question of temperature has to be considered as well. The air of the stable is partly warmed by the mixture with it of the warm air from the lungs of the animals, and in that way the warmth of the stable is partly maintained. The object of practicable ventilation is to remove parts of the impurities, and to maintain the air of the stable at a definite standard of purity, it not being practicable to remove all of the impurities as fast as they are driven from the lungs of the animals, since such rapid removal would mean too low a temperature. When the temperature of the stable is too low to admit of warm air being taken from the ceiling line, the impure air must be drawn from the floor. On this account, it is advisable to provide in the foul-air shafts openings at the floor line and also at the ceiling, the latter being provided with arrangements for closing when required.

3. "The size of the in-take and that of the escape; and if any difference, why?"

The amount of air required for good ventilation in stables is as yet largely a matter of conjecture; in fact, it is as yet a question as to how much can be admitted without lowering the temperature too greatly, not how much each animal actually needs. Therefore, so much depends upon circumstances—that is, upon the construction of the stable, whether warm or cold; upon the number of animals in the stable, and upon the velocity of the wind and the temperature outside—that no definite rule can be laid down as to the amount of air required for each animal. I think I am safe in saying that a fresh-air box one foot square, inside measurement, will carry the minimum amount of air for ten animals; that is to say, for every ten animals there should be at least one square foot of inlet pipe. The size of the outlet should be slightly greater, but not much greater, than that of the inlet, for the reason that the outgoing air, being warmer than the incoming air, occupies larger space. There is danger, however, in providing too large an outlet, which results in down drafts.

4. "Is the air after being breathed by the cow heavier than before, or than pure air?"

This question has been answered in No. 2, but the simple answer, without further explanation, may lead to wrong conclusions. The air just emitted from the lungs is likely to be lighter than before it was breathed into the lungs. This, however, is principally a question of temperature. If the animal is breathing air of a high temperature, 90° or above, then the air before being breathed may be lighter than the expired air. In any case, the expired air in a short space of time becomes, by being mixed with the surrounding air, of about the same temperature as the latter; but this does not quite settle the question as to the proper points for drawing off the foul air. We hear of the carbonic acid gas, a product manufactured in the lungs of the animal, and of aqueous vapor, also coming from the lungs. These are the two principal products

which ventilation is required to remove. The carbonic acid gas at the same temperature is considerably heavier than air. Aqueous vapor is considerably lighter. It might be supposed that when these two products, after being expired, have reached the temperature of the outside air, the carbonic acid gas settles to the floor, and the aqueous vapor rises to the ceiling. As a matter of fact, however, both of these products diffuse almost uniformly throughout the whole space, so that at whatever height in the stable the foul-air outlet is placed it will draw off almost the same proportions of these products. Of course, if there is any difference, the carbonic acid gas is found in greater quantities near the floor line, and similarly the aqueous vapor at the ceiling.

5. "In case where two rows of cows are standing with heads to an alley, should the escape be in the alley, behind the cows, or at both places?"

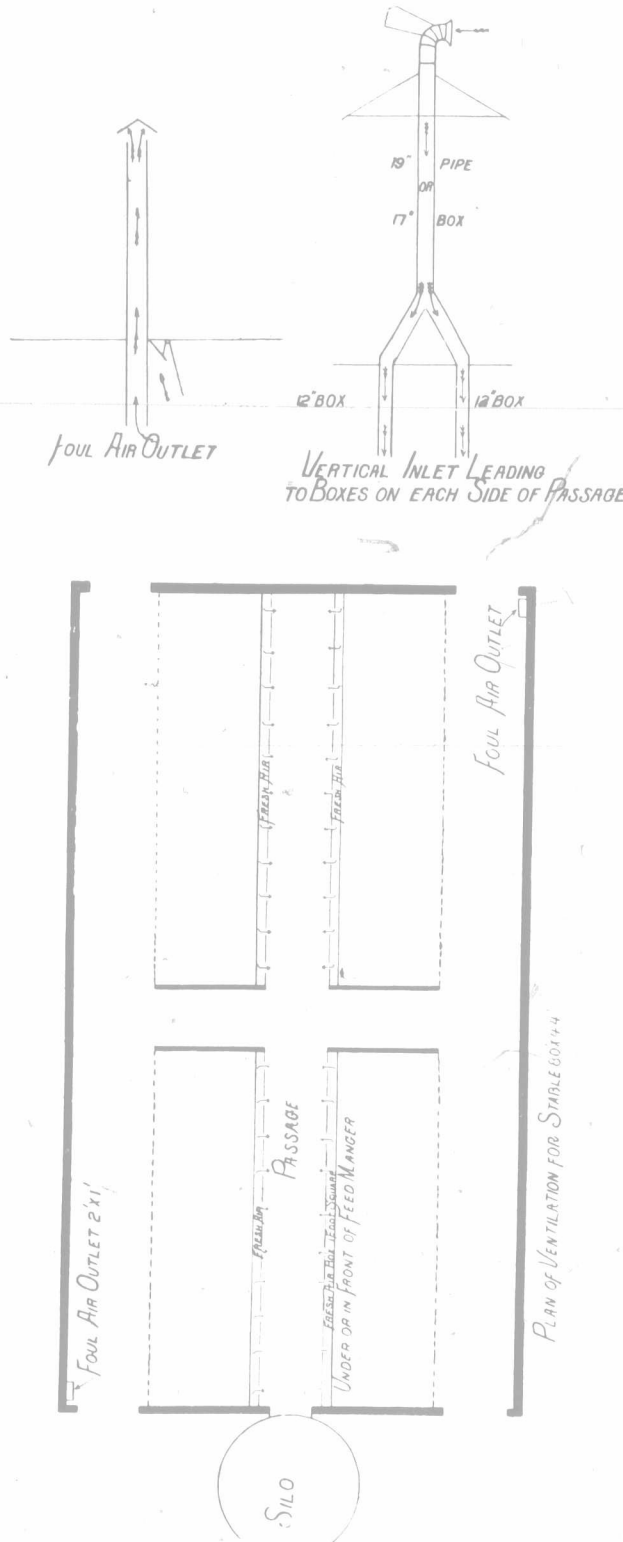
If the fresh air is admitted in the alley, then the escape should be behind the cows, in order to provide for a complete circulation of air through the whole stable. Otherwise, with the inlet and outlet both in the alley, the air behind the cows will be stagnant.

J. B. REYNOLDS.

VENTILATION SYSTEM FOR LARGE BASEMENT BARN.

Q. "I have just begun work on my new basement barn, 80 x 44 feet, with ceilings 8 feet 8 inches high, to house 42 head of full-grown cattle, which will stand in two rows, with heads to a feed alley running through center. From passage in rear of cattle the manure will be drawn out by team. As I cannot use the ventilation system advised by Mr. H. S. Foster in your paper for April 20th, I would be obliged if you would describe in your next issue a simple, efficient, and not too expensive plan to provide my stock with constant fresh air without being too cool in winter. My silo will stand outside at one end, opposite feed alley. The barn will stand on a hill, with no trees or obstructions near it. Concrete walls and floor." P. J.

[I beg to suggest the following plan of ventilation in reply to this question (see plan):



The fresh air is conducted to the stable by means of a revolving cowl, which is constructed as shown in the figure. This cowl always faces the wind,

and, therefore, the one great difficulty in stable ventilation is met, viz., a force to keep up the circulation. In order that the full force of the wind may be insured at all times, this cowl should stand just above the peak of the barn. The pipe or box with which it is connected should pass down through the barn to the floor. On reaching the barn floor it is branched, one branch going to each side of the main passage in the stable below, and connecting with the fresh-air box, which passes along the floor immediately under or in front of the feed manger.

If the stable arrangements are carried out as the plan shows, two of these cowls will be required, one at each end of the stable. A 19-inch circular pipe or a 17-inch wooden box will convey a sufficient amount of air for half the number of cattle mentioned in the question. The branches from the barn floor down and along the stable floor should be each one foot square, so that the outfit required would be two cowls, two pipes or boxes leading from the cowls to the barn floor, four branches from the barn floor to the stable floor, and four boxes along the floor for distributing the fresh air. The boxes along the floor should be provided with 4-inch openings, cut in the face of the box, opening out into the passage—one for each animal.

Outlets.—The outlets may be placed at any convenient points around the walls. Of course, the more of them the better; but, practically, two of these outlets will be sufficient, and the area of them should be equal to or slightly larger than the total area of the inlets; that is, 4 square feet. I have indicated a possible position for these outlets in opposite corners of the stable. The Fig. 3, at the left, shows a vertical section of one of these outlets. A wooden box, 2 x 1 foot, or slightly larger, beginning near the stable floor and continuing up through the barn and through the roof, will answer. The bottom of this ventilator should be left open at all times, so as to draw off the air from the floor. In addition to this opening, another should be placed in this box, near the ceiling of the stable, and provided with a lid worked by a string, so that it may be opened or closed as required. In warm weather it should be open, but may be closed if the stable is cold. The advantage of having two openings for foul air, one at the floor and the other at the ceiling, is that the temperature may be controlled by opening or closing the upper one; and also since the moisture in the stable tends to collect at the ceiling, the ceiling outlet provides for its escape. Therefore, it should be left open as much as possible.

In this particular case it may be found advisable or necessary to have one cowl for admitting fresh air, instead of two. This plan would be cheaper, and almost as efficient. If this is done the cowl may be erected at either end of the stable (in order not to interfere with operating horse-fork car), or over the middle, and the air distributed from it after the same general plan as is shown. If one cowl is made to do the work of the two, as described above, it will require to be 27 inches in diameter.

Advantages of this System.—The advantages of the system here outlined are:

First—That ventilation at all times is insured. On account of the exposed position of the cowl, and of the fact that it always faces the wind, it will rarely happen that there is no movement of air in the stable.

Secondly—The fresh air is evenly distributed at the places where it will do the most good—that is, immediately in front of the cattle, so that they are breathing fresh air.

Thirdly—As there is a constant circulation of air by this system, there will be little or no danger of dripping—that is, of moisture condensing in any part of the stable. Providing outlets at the ceiling also tends to lessen this danger.

Fourthly—The system requires little or no attention. The ventilators do not have to be opened or closed with every change of wind, the only attention required being in the case of extreme weather, when the ceiling ventilators may require to be closed.

I may add that the inlets should be provided somewhere with shut-offs, so that in case of very high wind they may be partly closed, as, of course, the amount of fresh air which comes into the stable depends upon the velocity of the wind outside.

Cost of this System.—A 19-inch cowl, made of galvanized iron, costs about \$7, and a straight pipe, of the same diameter, costs about 40c. a foot in length. A wooden box, of course, costs a good deal less, and if made fairly tight, is equally as good as a galvanized-iron pipe. All of the parts of the fresh-air box along the floor need not be specially provided, since the floor, if tight, may do for the bottom of the box, and the front of the manger for the back; so that the extra lumber required for this box would be simply a board for a face, and perhaps another board for the top.

Cheaper systems than this may be described, but I know of none as effective as this and costing less. There are plans of ventilation that will work fairly well under favorable circumstances, but are a nuisance under other circumstances. There are plans of ventilation that require almost constant attention. In a barn of this dimension, with, likely, all modern improvements in connection with it, a few extra dollars expended in a good system of ventilation will be repaid many times over in increased profits and increased comfort for cattle and men.

J. B. REYNOLDS.

White Scour in Calves.

The important investigation into the causes of the mortality of calves in the province of Munster, which Professor Nocard, the eminent French bacteriologist and veterinarian, is conducting for the Department of Agriculture and Technical Instruction for Ireland, has reached the conclusion of its first stage. Professor Nocard, with whom has been



GOLDEN MONPLAISIR.

Four-year-old imported Jersey bull, sold for \$3,500, at T. S. Cooper's sale, Coopersburg, Pa., May 30th, 1901.

associated Professor Mettam, Principal of the Royal Veterinary College of Ireland, and a qualified staff, has been fortunate in being able to observe numerous cases of the disease in almost every phase of its development, and has made a large number of post-mortem examinations. The full significance of the results of these examinations cannot, however, yet be stated. Professor Nocard has returned to his laboratory at Alfort, where he will continue the experiments with the materials collected at the laboratory at Limerick. He will visit Ireland again this month, for the purpose of carrying out a fresh series of experiments with a view to verifying or correcting any conclusions he may have arrived at. Meantime, Professor Nocard has carried his researches far enough to enable him to say that he has discovered the nature of the disease and the modes of its transmission, and to justify him in recommending, with full confidence in their efficiency as preventive measures, the following course of procedure.

White scour is generally the consequence of an umbilical infection which occurs at the moment of parturition, occurring through the wound resulting from the rupture of the navel cord. Farmers may ward off the disease if they will conform with the following rules:

1. Provide the cows that are about to calve with dry and clean bedding, and keep it in good condition until after the calf is born. If possible, a special stall or loose box should be provided for calving cows. Strict regard to cleanliness is of the utmost importance.
2. When the cow shows signs of being about to calve, the vulva, the anus and the perineum should be disinfected with a warm solution of lysol in rain water—20 grammes of lysol to one litre of water (i. e., two parts of lysol to one hundred parts of water). The vagina should also be washed by injecting, by means of a large syringe, a considerable quantity of the same warm solution of lysol.
3. Whenever possible, the calf should be received upon a piece of clean sacking or some such material, or at least upon a thick bed of fresh clean straw, unsoiled by urine or excrement. Or the calf may be received into the arms of an attendant, and held there until the treatment is completed. The object is to keep the umbilicus or navel cord of the newborn calf from being soiled or infected before treatment.
4. The cord should be tied immediately after birth, with a ligature of twine which has been steeped in the lysol solution; the cord should then be cut about an inch below the ligature.
5. The portion of the cord still attached, as well as the region of the umbilicus, should be dressed with the following solution, applied by means of a large brush:

Rain water,	1 litre = 1 1/4 pints.
Iodine,	2 grammes = 31 grs. (by weight).
Iodide of potassium,	4 grammes = 62 grs. (by weight).
6. The disinfection of the region of the umbilicus and the cord should be completed by dressing them with another brush dipped in the following solutions:

Methylated spirit,	1 litre = 1 1/4 pints.
Iodine,	2 grammes = 31 grs. (by weight).
7. The operation is finished, after this spirit has evaporated, by painting upon the cord and the region of the umbilicus a thick layer of collodion and iodine (1 per cent.), applied with a third brush. When the collodion is dry the calf may be left to the care of its mother.

The year-old colt resembles his sire and promises to make a good horse when he matures. Do not save him from the surgeon's castrating knife unless he is both pedigreed and a good one. Careful selection and relentless culling will aid in keeping the stock up to the high-water mark. The same will apply to the ram lamb, the bull calf or the boar pig. Never allow any male animal to procreate his kind unless he is well bred and a good individual. Neglect of these precautions means certain loss.

The Universal Beneficence of Grass.

Perhaps never throughout many sections of the country did the foliage and herbage spring so quickly and luxuriantly into full growth as they have done the present season. The knee-deep greenness over which the herds and flock have been grazing recalls the following immortal eulogy paid to grass by Senator Ingalls, of Kansas:

"Next in importance to the divine profusion of water, light and air, those three physical facts which render existence possible, may be reckoned the universal beneficence of grass. Lying in the sunshine among the buttercups and dandelions of May, scarcely higher in intelligence than those minute tenants of that mimic wilderness, our earliest recollections are of grass; and when the fitful fever is ended, and the foolish wrangle of the market and the forum is closed, grass heals over the scar which our descent into the bosom of the earth has made, and the carpet of the infant becomes the blanket of the dead.

"Grass is the forgiveness of nature—her constant benediction. Fields trampled with battle, saturated with blood, torn with the ruts of cannon, grow green again with grass, and carnage is forgotten. Streets abandoned by traffic become grass-grown, like rural lanes, and are obliterated. Forests decay, harvests perish, flowers vanish, but grass is immortal. Beleaguered by the sullen hosts of winter, it withdraws into the impregnable fortress of its subterranean vitality, and emerges upon the solicitation of spring. Sown by the winds, by wandering birds, propagated by the subtle horticulture of the elements which are its ministers and servants, it softens the rude outlines of the world. It evades the solitude of deserts, climbs the inaccessible slopes and pinnacles of mountains, and modifies the history, character and destiny of nations. Unobtrusive and patient, it has immortal vigor and aggression. Banished from the thoroughfare and fields, it bides its time to return, and when vigilance is relaxed or the dynasty has perished it silently resumes the throne from which it has been expelled but which it never abdicates. It bears no blazonry of bloom to charm the senses with fragrance or splendor, but its homely hue is more enchanting than the lily or the rose. It yields no fruit in earth or air, yet should its harvest fail for a single year famine would depopulate the world."

The Greatness of Agriculture.

At the recent dedication of the splendid new agricultural building in connection with the University of Illinois, Hon. L. H. Kerrick struck a note that should dominate the thinking of every Canadian as well as every American farmer, namely, that of all secular business or pursuits, agriculture is the greatest and most honorable.

Right-thinking and discerning men have deplored the trend of people and institutions away from the farm, farm life and the invigorating influences of nature, till to-day there are too few people in the country and too many in the city. There are not enough on the farm to do the work well and comfortably, while in the city there is crowding, poverty and strikes. These desperate struggles, with bloodshed and ruin in their train, while accentuated by a mad and selfish race for wealth, and precipitated by various means, have their foundation in too many people needing the same job. The trend of the schools has been away from the farm, teaching its sons and daughters anything and everything but what they require to make that life attractive, satisfying and successful. To say that the so-called learned professions are full, pressed down and running over, said Hon. Mr. Kerrick, gives but a hint of their actual condition. In addressing a graduating class of Chicago University, President Harper said to the successful graduates before him:

"You are now entering the world, and you will find that poverty will be the strongest opponent to overcome. You who are entering life as lawyers need only to look at the papers to-day to find that the average lawyer does not earn his salt. Those who will become physicians will find that their only companion for a few years to come will be the wolf at the door; while those who go forth to teach, need only to witness the struggles of the school teachers in this city. The School Board is beset with howls and wails for an increase of salaries."

What a prospect for the brilliant students of a great university, and that too in one of the largest, richest, and most thriving of American cities! Imagine President Mills saying to a class graduating from the Ontario Agricultural College:

"Gentlemen, you are going out to the farms. You have not mastered the whole of agricultural science: that will not be done by any living or yet to live; but you have done your work well in the college, and you are well equipped for your business. However, I feel obliged to say to you that poverty will be the strongest opponent you will have to overcome. The average farmer is not earning his salt—that is, for his personal consumption, mind you, let alone the cattle and horses. The only companion you will have for some years to come will be the wolf at the door."

Or imagine, if you can, such a speech from the superintendent to the graduates of any of our Canadian dairy schools, or the School of Horticulture at Wolfville. Human imagination is capable of some great stretches, but it is unequal to flights of this description.

If the FARMER'S ADVOCATE reads aright the

signs of the times, and we believe we do, a change is coming over the spirit of the people. Already there is discernible the beginnings of a return to agriculture, a recognition of its primal importance, and also that it is a business requiring business training; that it is an art requiring skill, and that it is the most all-comprehending of sciences. It affords ample scope for the best natural abilities and attainments, and full scope for the best development of manhood. Many have failed because they did not appreciate farming at its par value. In some measure the farmer is responsible for the way in which too many have looked upon his avocation. How can we expect others to esteem a calling for which we seem to have so little regard ourselves? There is a change, too, coming over the spirit of educators. Everywhere we find them turning their attention to "nature study" and natural science. Schools and colleges of agriculture are being thronged, and never before was there so much real interest manifested in the agricultural experiment station as to-day. Comparatively new, these institutions of instruction and research, which must ever go hand in hand, are abundantly proving their value, and in proportion to the skill, vigor and judgment with which they are conducted, will they win friends and give a generous return for the expenditure involved.

Practice plus Theory = Success!

The agricultural college of to-day is the embodiment of technical education along agricultural lines. At one institution we find sheep-shearing competitions and plowing matches going on among the students. At another, live-stock judging contests for medals and the honor of being picked to represent the college at the International Live Stock Show, or to act as judge at the local fairs. At another, hard work is being done in the dairy making butter for a national contest. At still another the students are studying and judging cereals, roots and corn. One institution gives a training in farm-butchering; another in the construction and handling of farm machines, from the windmill to the gasoline engine. Spraying of trees or making solutions to knock out smut or other fungi keeps the college man well employed. The work in the blacksmith and carpenter shop has made him expert enough to save many a journey to town. He now builds his own gates or henhouses. The faker has a sorry time with the college man. Lightning rods, aquatic separators, patent churns, etc., don't go with the agricultural student. His knowledge of political economy is ample enough to enable him to prick the bubbles of the demagogue. So that altogether from the strictly dollars-and-cents point of view a college education in agriculture pays.

"Now is the summer of our discontent," because we have been warned out by the pathmaster, and neighbor Jones will persist in talking politics and scandal instead of grading up the road. Statute labor is a relic of the old feudal system, when the grand lords held bees to cut their wood, steal their neighbors' cattle or their wives, and otherwise hold high-jinks. Roadwork of the enduring kind is best done by contract and under the supervision of a competent civil engineer. If so performed, we shall cease to see efforts made to get water to run up hill, or the low places made still lower, which, under the old statute-labor system, was often the case.

Do you own a Government butter brand? Isn't it ridiculous that you or I who may have a few pounds of butter to sell weekly, should have to tattoo the package with a brand making the package resemble a Chinese tea-chest. It is probably all right to brand the creamery packages, and so get on to the man who is spoiling our reputation in foreign markets, but for farmers the parchment paper and man's name is sufficient without the convict-like system of numbering our products.



GOLDEN ROSEBAY.

Five-year-old imported Jersey cow, sold at T. S. Cooper's sale, Coopersburg, Pa., May 30th, for \$2,775.

Is there a scrub bull or scrub stallion in your neighborhood? If so, now the weather is right, grass good, etc., do a little tactful missionary work, and explain that the cutting of that male will be a public benefaction.

A Demoralizing System.

POLITICS AND PATERNALISM—A DISGRACEFUL WASTE—PROTESTS FROM SELF-RESPECTING AMERICANS WHO REFUSE TO BE "BUNCOED."

The *Country Gentleman*, of Albany, N. Y., is not only an ably-conducted periodical from the standpoint of the American farmer, but it possesses a wholesome spirit of independence, and has the courage of its convictions. The following vigorous letter from one of its contributors, Mr. F. H. Valentine, which we reproduce, should be a fresh warning, in addition to some examples we have already seen at home, of the dangers of official paternalism. With this appalling object lesson before us, Canadians should call a halt before being led further into the mire:

I am glad to see that you are again condemning the distribution of free seeds by the Government, through the Department of Agriculture. I say by the Government, because in the earlier days of his administration of Department affairs, Secretary Wilson apparently did his best to abolish or minimize this farcical humbug. But Congress not only disregarded his reasonable recommendations, but in the face of them increased the appropriations! What the Secretary's attitude now is, and whether he has seen fit to experience a change of heart, I know not, but the system—always

BAD IN PRINCIPLE AND WORSE IN PRACTICE—

has now descended to apparently impossible lower depths.

As we all know, the original idea was to disseminate new and valuable seeds and plants. How far actual practice has lost sight of this commendable intention, those of us who have received any of these seeds well know. I have for several years past received from the Department and from members of Congress, packages of seeds of varieties which had been, some of them, in successful cultivation by market gardeners in different parts of the country for 40 years. But the varietal names have heretofore always been given on the packets, and one might have a reasonable certainty of at least thinking he knew what he was getting. Now not even this is done. A few days since, I went into our post office, where the postmaster was distributing a pile of unaddressed packages of seeds. Each bore the compliments, etc., of our member of Congress, but the latter apparently did not consider the packages of enough importance to address them to his constituents. Wise man! The postmaster distributed them according to his own ideas. As I received one, it was with the advice to

FEED THE SEEDS TO THE CHICKENS

when I got home. As our chickens are pure-bred and of considerable value, I did not run the risk. The package contained four packets of seeds. One was marked: "Peas—A Select Variety"; another, "Beet—A Select Variety"; one, "Watermelon—A Selected Variety"; the fourth, "Spinach—A Selected Variety." Just what the particular distinction is between "Select" and "Selected" I am not aware. Not heeding the good advice received, I have planted them, just to see what they will bring forth. The packets are all small, containing fewer seeds than the average seedsman would put in a 5-cent packet. The peas were some wrinkled variety, many of them weevil-eaten, and numbered about 220 by actual count. They will have to yield extraordinarily well, and every one grow, if the product furnish enough for one meal for even our small family. So much for their value!

In the past, there have been

MANY SCANDALS,

of more or less gravity, in connection with the purchase and distribution of these seeds. Now another has apparently been unearthed. A city newspaper has been investigating the matter as regards conformity on the part of the packers of the seeds to requirements of the Government, and finds, as reported, that instead of coming up to required weight, those sent out fall far below, thus swindling the Government—the people—out of the difference. This sort of thing might have been expected when the contract is let to the lowest bidder, and is to be guarded against only by the strictest supervision.

But now we are threatened with a new deluge. It is currently reported that the Department of Agriculture is to engage in the distribution of trees along the same lines. And why not? If the distribution of seeds was wise and right, that of trees and shrubs should be also. And by that same token, why not send the farmer a plow and harrow to fit his ground, cultivators and hoes to cultivate his crops, mowers and harvesters to gather them in, and if all this, then let our beneficent uncle add a "selected variety" of pig or sheep or goat or cattle or poultry to improve the live stock of the farms. True, these could not be sent through the mails, but when the Government owns the railroads instead of the railroads owning the Government, no doubt provision will be made for their distribution. Imagine a lot of farmers lounging around the railroad some spring day, swapping stories while they wait for the

"GOVERNMENT FREE LIVE-STOCK EXPRESS,"

loaded with a varied assortment of "selected" farm animals for free distribution! It would be much such a scene as we now see when a lot of victims have gathered for the regular spring delivery after some enterprising nursery agent has been "working" the country round. And it would likely prove just about as big a bunco game too.

But what are the gravest objections to these practices? Not their money cost. The entire expense of the free-seed distribution is a mere bagatelle compared with the number of people taxed, or the vast sums squandered in other ways. Not the influence upon the recipients, for nine out of every ten on the average estimate the seeds at their true value, and make slurring remarks about them. Every packet contains a request that results be reported to the Department. It would be interesting to know what proportion of the recipients comply with this request. Neither is it an objection that results are often disappointing. Few people expect much from these seeds, and it would be a blessing to the few who do if they met disappointment. Neither is it the overloading of the mails with tons upon tons of this useless rubbish, thus increasing the deficit that is such a bugbear to the postal officials, and leads them to postpone as long as possible the inevitable general free rural mail delivery. All these are bad enough, but the great objection is in the debauched and degenerated system itself. As now carried out, it is the pettiest and most

CONTEMPTIBLE PATERNALISM AND FAVORITISM.

It is an insult to every independent, self-respecting farmer. Of course, seeds are not sent to farmers only, for any applicant, though he live at the summit of the Rocky Mountains or on top of some colossal city pile, and have not a foot of ground to receive them, may have his quota of seeds. But the prevailing idea is that the system is for the benefit of the farmer, and he must bear the onus. The popular notion is that he can be purchased with a dime's worth of seeds. And this notion has been fostered by the farmers' (mis)representatives, too; for did not Congress persist in continuing and increasing the appropriations for this purpose against the direct protest of the Secretary of Agriculture? Every self-respecting farmer in the land should protest strongly against the continuance of this pernicious system, and continue doing so till he is heard and heeded. Farmers' organizations should throw the full weight of their united power against it. As it now exists, it is

A STANDING DISGRACE

to the American farmer.

I do not advocate abolishing the work of the Department of Agriculture in the discovery, distribution for trial and dissemination of new and valuable or promising varieties of every species of economic plant, tree or shrub. This may well come within its province, and may be made of inestimable benefit primarily to the agricultural classes and eventually to the whole people. But the distribution for testing must be systematized. If done at all by the Government, it should be through the experiment stations. These are now well organized in practically every State, and their officials are better informed as to localities and individuals within their territory for the intelligent and efficient accomplishment of this work than any outsider can possibly hope to be. All our reliable seedsmen, too, now maintain extensive trial grounds, and are ever on the alert to discover and bring out new varieties. These agencies have developed to a wonderful degree since the scheme of sending out free seeds was first inaugurated by the Government. There is not the apparent need there once was for the work of the latter, though there is still much that can be done, if only—and there's the rub—there was less politics in the business, and more plain business sense in methods adopted. I do not wish to be understood as casting any reflections upon the incumbent of the office of Secretary of Agriculture, whoever he may be; for he is but the victim of

A VICIOUS SYSTEM

which he did not create, and can only partially regulate, for it is beyond his control.

Another reprehensible practice of our beneficent Government, in which the Department of Agriculture is perhaps the most flagrant offender, is the publication of such vast numbers of bulletins, reports, articles, etc., on every conceivable subject that by any possibility can be construed as coming within its province. To such an extent is this carried that a monthly bulletin is published, giving the names of the different publications during the month, together with their price; for many of them are sold for five cents and upward. Then a monthly paper is issued, called the *Crop Reporter*; but while some of the information it contains may be valuable, most of it is so ancient that it is useless. Of course, the initiated know that the Government printing office, through which all these are issued, is only a part of the great political machine maintained as a haven of rest for partisans; but the practice of issuing many of these publications is a serious reflection upon the ability and sagacity of the agricultural press of the country. What earthly excuse is there for the Government usurping the work of the latter? But, then, no self-respecting paper would give space to some of the subjects treated in these Government prints.

MORE BUNGLING.

One personal experience shows the lax business methods prevailing in connection with this work. It has been my lot to change my post office twice within little more than a year. I had received many of the publications of the Department of Agriculture for many years. At each change, I requested the Department to change my address on its mailing list. It was done to the extent that I received the publications at the new office, but they

continued to come to the old; so that, the last I knew about it, they were coming to three different post offices. How long would a private business continue under such methods? But these are political business methods, and are only samples. The question that should come to every thinking, self-respecting farmer, is: "What is my duty with relation to all these flagrant abuses?"

Bergen County, N. J. F. H. VALENTINE.

A Little Controversy.

"ECONOMIST" REPLIES TO MR. F. J. SLEIGHTHOLM.

To the Editor FARMER'S ADVOCATE:

SIR,—As was to be expected, my article of May 20 has drawn forth a criticism from the "owner and operator" of a creamery—a milk-gathering creamery—Mr. F. J. Sleightholm. This gentleman says he speaks from the standpoint of an "owner and operator" of a creamery, and gives me a few "facts," not merely thoughts or opinions, to chew upon regarding the cost of farm and factory separators. These "facts" would be very convincing if the initial cost only had to be considered, and I again wish to give Mr. Sleightholm, and others like him, credit for their enterprise in introducing the separator system, well knowing the difficulty of inducing the farmers to adopt new methods when it means a considerable outlay at the start. But although facts, as Mr. S. says, are stubborn things, they may sometimes be stated in a manner that is calculated to mislead; and that is the manner in which he has stated them when he compares the cost of his four power separators with that of the two hundred and fifty that would have been required to do the same amount on the farms. One power mill in an elevator would clean all the grain grown on two hundred and fifty farms, and would not cost nearly as much as two hundred and fifty farm fanning mills; and yet we find that every farmer prefers to have his own fanning mill, because it pays, just as the farm separator pays. Mr. S. admits that the farm separator has come to stay "in its right sphere." Will he kindly inform your readers what its "right sphere" is, if not to separate the farmer's cream from his milk?

Would it not also be well for him to tell your readers that the reason the "local buyer" and the "English importer" referred to in his article did not want the cream-gathered article was because of the scarcity of farm separators, and because a large number of the patrons of cream-gathering creameries still separate by the gravity system, if such is the case?

This last is merely some more of my thought, and as, from the rather caustic tone of Mr. S.'s article, I presume he does not set a very high value on the thoughts of any one but the owners and operators of separator creameries, I beg to refer him to the answers given to twenty-six questions submitted by *The New York Produce Review and American Creamery*. They can be found in issue of May 22nd, 1901. They cover the whole field pretty well, and are intended more for the instruction of owners and operators of creameries than for farmers, and should therefore be of more than passing interest to Mr. S.

Questions 3 and 4 relate to the use of farm separators, and the answers given are of interest to every one who makes butter or patronizes a creamery, and I regret that space will not permit me to give them in full.

Question 3 asks: (a) Is the use of farm separators increasing in your locality? (b) In your experience, have they lowered the quality of the creamery butter? (c) What is the tendency of their effect on the creamery system?

From the answers received to this question, so far as given, the consensus of opinion is: (a) The use of farm separators is rapidly increasing. (b) The quality of the butter is not necessarily lowered thereby. (c) Concentration of creamery plants covering larger territories, and less expense than the whole-milk system.

Question 4: (a) Are farm separators advantageous to creamery patrons? (b) To creameries? (c) To the creamery business as a whole?

The answers to this question show conclusively that: (a) The farm separator is advantageous to creamery patrons. (b) It is no disadvantage to creameries, and is likely to benefit them when it becomes universal. (c) It is certainly advantageous to the creamery business as a whole.

Now, if my deductions are correct, and I have taken them from a summing up of the answers of the following gentlemen—Prof. McKay, of Ames, Iowa, Dairy School; E. L. Child, Cornish Flats, N. H.; H. C. Hansen, Scandia, Minn.; Ludwig Engleman, N. Yakima, Wash.—all prizewinners—I think they should go a long way toward sustaining me in the position taken in my former article.

The farm separator has come to stay. Its proper sphere is to separate the milk as soon as milked. The milk will not then have absorbed any odor, as it does not absorb until its temperature has fallen more than 20°. The cream should be immediately cooled to 40° if possible, and kept at a low temperature until it is sent to the creamery. By this means I claim that the chances of an A I article are better than where a large amount of milk has to be taken care of on the farm, and where the facilities for handling it are often inadequate. The fresh skimmed milk is vastly superior to the factory article. It can be fed at the proper time. Fourteen-fifteenths of the cost of drawing is saved. If the factory stops, the farmer can still take care of his milk. The farm separator pays. ECONOMIST.

Poultry Raising and Fattening for Export.

BY J. W. CLARK, POULTRY FATTENING STATION, BRANT CO., ONT.

As poultry raising and fattening for export is soon to become one of the leading industries of this country, and it can be put in as a side issue on almost every farm, and can be looked after largely by the boys or girls, there is no reason why almost every farmer cannot arrange to raise and fatten from three to four hundred birds, which would bring a return of from \$150 to \$200 if properly fattened. There is an increasing demand for Canadian poultry in the British market since the Dominion Government, through the untiring zeal of Prof. Robertson, has arranged an almost perfect system of cold storage, whereby we can land our poultry on the English market in the finest condition possible.

The first important point in starting this industry is to select a suitable breed for the purpose. Almost any of the Asiatic, American or English classes, or crosses of these, do very well for fattening. In April 20th issue illustrations of the correct type to select for this purpose were published. After getting a suitable type, the first essential to secure good fertile eggs is to have a good active male. A great many run off with the idea that one or possibly two males are sufficient for 75 or 100 hens. You cannot make a greater mistake. When your eggs hatch you will wonder why so many have no chicks in them, and you have a lot of rotten or infertile eggs, a great many chicks not being able to break through the shell, and a great many that do manage to get out cannot stand the slightest dampness of cold, but die. An infertile egg will not rot or have an offensive smell though it has been under a hen for 21 days. Rotten eggs are due to the germ having started, and not being strong enough, dies between 5 and 15 days of incubation, largely due to having too many hens to one male. Other causes are very fat hens, feeding soft or stimulating food to force egg production, lack of exercise, inbreeding, very young pullets, and using poor, weakly males. There is no better food to produce good fertile eggs than whole grain with considerable meat scrap or bone meal.

After your chicks are out, do not feed till 24 or 36 hours old, as nature provides for this length of time. A great many chicks are lost or greatly set back by the first week's feeding, as many think that soft food is the proper thing for little chicks, and will soak bread in milk or water, feeding it sloppy and wet, thus causing diarrhoea, which is the greatest trouble among young chicks. There is nothing better than oatmeal fed dry, with a few boiled eggs chopped fine added; this will answer for first week. Second week take half corn meal and oatmeal and mix with sour milk, adding several eggs, and bake in a cake; this crumbled up makes a first class ration. Once a day feed cracked wheat or screenings from wheat or millet seed may be scattered among some chaff or chip dirt; this will keep them busy, and exercise develops the muscles, which is essential for strong birds. If they are confined in coops they relish a little green food of some kind—lettuce or onion tops chopped fine, or a little young clover, answer well. Do not forget to place plenty of fresh water before them at all times, also keep some coarse sand or grit constantly before them. Another important food is meat or bone meal, especially if they are confined where they cannot get any worms or insects. This is essential to insure rapid growth.

A great enemy that young chicks have to contend with is lice; it is almost impossible to force any growth on young chickens if they have lice to battle against. Keep plenty of insect powder on hand, and dust the hen quite often, also while the chicks are feeding give them a little sprinkle—a very little is sufficient. Avoid feeding sour or stale feed at all times; never give them more than they will clean up at any time. A great many chickens are stunted by feeding too much grain food. It is just as easy to stunt growing chickens as it is to stunt young pigs. They need oatmeal mixed with other grains largely, as this is one of the best grains for growing chickens; it does not overheat their blood like most heavy grains. At four months old they should be large enough to crate and feed for market.

THE FINISHING PERIOD.

It is useless for any one to think they can fatten poultry properly by letting them run about the yard, as has been commonly done for the local markets. They must be confined in close quarters if you want to get the best results, as by letting them run at large their muscle becomes hard, which toughens the whole bird. Crating is by far the best method to fatten. Crates made 6 or 12 feet long by 20 inches square, with partitions every 2 feet, will hold 4, 5 or 6 birds, according to size, in each division. With a slatted bottom the droppings fall through, which saves a lot of trouble in keeping clean. Another advantage of the crate is that your birds have no room to fight one another; they are always there to take their feed. If it happens to be a little late you can hang up a lantern, and they will eat just as well, where if they were in a pen on roosts they would miss a meal now and then, for you have to feed quite early at night in late fall, or it soon gets too dark, and they won't come down to feed. If you have no crates your next best method is to coop in close quarters. Make a trough so the birds can put their heads through and eat and not get on the feed with their feet. The trough I use is

12 feet long, made V-shaped, of two boards, each 5 inches wide. Over it stands a bottomless box 1 foot high, with slatted sides, through which they put their heads when feeding. Pullets will do fairly well fed in this manner, as they are not as quarrelsome as cockerels. Before putting them in the coops see that they are free from lice; they will not thrive or fatten if infested with lice. Dust well with insect powder—once does. If their legs are rough or scaly, it is caused by a parasite; this gives the bird an old and unhealthy appearance, and a little coal oil or grease will stop this trouble.

THE PROPER FEED

for fattening is one-third finely-ground oats (with hulls out if possible), one-third corn chop, one-third buckwheat, mixed with skim milk to a porridge—not too stiff; one-third shorts may be added in place of corn or buckwheat with good results. It is essential to have the skim milk, as this gives the flesh a creamy-white appearance; it also keeps their blood cool. You must be careful on the start not to stall your birds, or they will go off their feed; give sparingly three times a day for two or three days. Never at any time give them more than they will eat up clean. After three weeks, twice a day will do to feed; for the fourth and fifth weeks, a little tallow should be added—one pound to 60 or 70 birds twice a week. The tallow makes the lean flesh much more juicy. If you are scarce of skim milk, potatoes pulped and boiled and mixed with grain will give good results; the birds relish potatoes, and it makes a cheaper food. If you feed grain alone, their blood soon becomes heated, and they soon start feather-pulling. It is a great mistake to feed whole grain to fatten poultry; you can afford to grind it much cheaper than they can; they will not thrive at all if confined on whole grain. A great many have the idea that you must have a crammer machine to fatten poultry; with it you can force them to fatten in less time, but they will get just about as good in one week longer feeding, unless it be a few poor feeders. The crammer machine means considerably more work, and I do not think it would pay a person feeding a small number to invest in one. I had quite a number last year that weighed 7 and 8 pounds, with no crammer used. There are usually quite a number that are poor feeders which I put on the crammer. A little powdered charcoal added twice a week keeps them in a healthy condition.

POULTRY KILLING

for export must be done in the right manner, as no birds are exported with their heads off. They should be bled in the mouth or have their necks broken. Plucking must be done dry, which can be readily accomplished if commenced as soon as the neck is broken and before the heat leaves the body. If the birds once start to get stiff and cold it is a big task to pluck them. Leave about 3 inches of feathers on top of neck next to head, also a small ring at hock joint. As soon as plucked, draw their legs down alongside their breast by taking a piece of cord, double, and tie two or three toes on one end of loop and draw over back, putting toes of other leg in loop; this should be good and tight, as it gives the bird a much more compact appearance. Then put breast down on shaping board, putting a brick on the back. As soon as the birds have all the heat out of their bodies they should be wrapped in parchment paper and packed in cases and put in cold storage.

RECORD CARD

for the poultry-fattening station at Onondaga. Number of chickens, 27. Weight when placed in crates, 151 pounds. Commenced fattening November 20, 1900. Cost, \$9.06. Average cost per chicken, 33¢ cents.

	Feed Consumed		Chickens.		Remarks.
	Lbs. Ground Oats, Shorts & Buckwheat.	Lbs.	Lbs. Weight.	Lbs. Gain.	
First week	48½	Potatoes & Water 129	170	19	Potatoes pulped and boiled, weighed after.
Second week	46½	Potatoes & Water 125	188½	18½	Same as first week.
Third week	68	Milk 103	208½	20	Separator milk used, no potatoes; 3 lb. tallow.
Fourth week	98	Milk 182	231	22½	Crammer used; 4 lbs. tallow.
Fifth week	Sold				
Totals, Feed and Gain	261½	540	231	80	
Feed consumed per lb. of Gain in Weight	3.3	6.7	Average gain in weight per chicken, 3 lbs.		Cost of feed per lb. of gain, 4.1c.

Date of killing, December 20, 1900. Starved before killing, 36 hours. Price realized per pound, 8 cents; per chicken, 68 cents. Remarks—Grain used: ½ oats (finely ground), ½ buckwheat, ½ fine shorts. Potato ration much the cheapest.

The Little Chicks.

The boy who has been strolling round. Comes running in—What has he found? "Mamma," he says: "Come quick; come quick;—I'm sure I heard a little chick."

When the little chick comes out of the shell it soon makes its presence known. Yet the little chirper isn't hungry, as some people imagine. It needs nothing but warmth for the first twenty-four hours of its life. We always give ours a hard-boiled egg for their first meal. Afterward, bread crumbs, oatmeal, and plenty of clean water. After they are two weeks old, we give them small wheat, some potatoes, and meat cut up in very small pieces two or three times a week. We keep them in a coop at night. The chickens have a little yard to run around in, where there is plenty of sunshine, but the hen is kept in. We had rather poor success in raising chickens this spring. In the first place, the hens didn't cluck early, and when they did cluck at last, they didn't hatch out nearly as well as usual. We had planned to have some nice flocks of early Plymouth Rocks, but we were disappointed. We set five hens about the same time. As the eggs didn't nearly all hatch, I broke some of them, and found a few dead chickens, but the most of the eggs were rotten. Well, I thought it would never pay to have the hens losing their time caring for a few chicks, so I decided to give them all to one hen and let her mother them. The first one I set had five chickens, so when the others were hatched I put them in the coop all together; but biddie No. 1 rebelled—she didn't want to adopt any children; she began to pick them unmercifully. So I bundled her out and put in No. 2. She acted just the same: flew at the poor little chicks as if to say, "Get out, you miserable interlopers, you don't belong to me and you shan't stay here with my youngsters." So I served her the same way as No. 1; but she wanted her own chickens, and nearly went wild when she was taken from them. She kept flying up against the coop for a while, then she would call the chickens to come to her. Then I placed her in solitary confinement for a few days. I then took No. 3, a quiet, motherly hen, and put her in the coop. She warmly welcomed her large family of foster children by taking them under her wings, though it wasn't easy for them all to get under. She seemed quite proud of her large family. She has taken good care of them, and I never before saw chickens grow so fast. They are large, healthy Plymouth Rocks. When I let the hen out of prison, that grieved so much over the loss of her little family, she went straight back to her nest. I had taken the eggs away that didn't hatch, but she didn't mind that. She seemed determined to stay there until she got another brood. I wondered how it would do to set her again. I thought perhaps she wouldn't sit the three weeks. But when I found her so persistent, I made a new nest for her in the same place, dusted her with sulphur, and gave her 14 eggs. That was just two weeks ago, and she has been sitting well ever since. I set another hen about the same time, so intend to reward this patient, persevering mother by giving her the other brood too, if she will take them. It would be too bad to rob her again after sitting so long.

Many people are complaining of eggs hatching poorly. One of our neighbors set three hens, and only had eight chickens. I think that the cause of failure was that the eggs were not fertile. Perhaps some of the readers of the ADVOCATE have had a similar experience, and can throw some light on the subject. I consider the exchange of thoughts and ideas, the experience of farmers and their wives, very helpful and interesting. One knows something another does not, and thus by carefully reading the experiences of others, each of us can be continually adding to our store of knowledge. A. R.

[NOTE.—Poor hatching has been generally complained of this spring even among expert poultry fanciers where the care given has been the best known. While it may be difficult to arrive at a just conclusion as to the cause of the trouble in all cases, the following causes are blamed: Too many females to one male, too close confinement during winter and spring, and a heavy laying season during the winter months. A. R. attributes the poor hatch to non-fertility, and states that many eggs were rotten, while a few had dead chicks. We would point out, however, that non-fertile eggs do not rot with three weeks' sitting; they do dry up a little, so that they will shake in the shell, but the contents are not putrefied, but smell fresh and appear as fresh eggs when broken. Some go so far as to consider them fit to use for cooking after being in an incubator or under a hen two or three weeks.—EDITOR F. A.]

A New Nest Egg.

AN EASY LICE REMEDY.

While viewing the flock of Barred Rocks belonging to one of the Neepawa poultrymen, we were shown his method of lice prevention, which was to place in each nest three or four moth balls (naphthalene). This poultryman states that the balls are very effective for the purpose intended, in which statement we feel bound to concur, as no self-respecting hen louse will, we believe, stay in the vicinity of such a malodorous atmosphere. Moth balls are cheap, lice are expensive, so place some of the little white spheres in the laying and hatching nests.

Turkey Cures --- Care of Turkeys.

BY MRS. M. E. GRAHAM.

In all diseases of turkeys, my small experience teaches me that a quick death, with burial, or, better still, cremation, is usually the most profitable remedy. This might be emphasized when the disease appears to be contagious. We feel as though we ought to do something to save them, in view of the money they represent. Yet, it were better to lose the penny and save the pound represented by the remainder of the flock. My experience also teaches me that lice cause the "passing away" of the great majority of turkeys, and it is just possible that diarrhea and kindred ailments may be brought on by lice having weakened the constitution of the birds. Yet, I have found, when killing healthy, fat turkeys, that they had been the feeding grounds of several colonies of apparently well-fed lice, one of which would cause us to lose a pound of flesh from nervousness and exhaustion in our endeavors to pursue it.

When the diseased birds are killed or quarantined, it would be a good plan to spray the rest of the flock with a safe disinfectant, and also to disinfect their roosting places, and, if possible, to plow or dig the ground that they have frequented. Mrs. Mackey, in *Reliable Poultry Journal*, for nearly all turkey ailments recommends the use of Epsom salts in the drinking water. She says: "It takes away the impurities from the bowels, and, at the same time, purifies the blood. A little kept in the drinking water is good, but the best thing I have ever tried is extract of logwood." Again, she says: "I have used extract of logwood for years. There is no danger of using too much, and there is nothing better for ordinary bowel trouble either in chicks, poults or grown fowls. I make the water a rich wine color." In every case "prevention is better than cure," and I believe that a great many diseases may be cured before they arrive by clean quarters, plenty of grit, access to coals, and "rustling" for their food, which gives variety and exercise.

This year I have registered a vow that, if possible, I shall hatch all turkey eggs in incubators, for several reasons. My very earliest were put under a hen. These were intended for my show turkeys. But, alas! the hen sat for three weeks and four days and left her nest, and I was not there just about that time; consequently, the turks died in the shell. The next lot were under three hens. Something destroyed all but one egg, on the twenty-sixth day, in one nest. The other two nests were all right, with the exception of one or two crushed in the nest. These are thriving, and came safely through the cold, damp weather of May. I have sixteen with a hen that is not for sale, though she is a half-bred game. She is always willing to take advantage of every bit of dry weather and sunshine and take the flock on a foraging tour all through the orchard and garden, and when provisions are not plentiful she brings them to the back door, where a handful of rolled oatmeal, a sprinkle of dry bread crumbs, some mashed potatoes, or, perhaps, some squeezed-out curd, is forthcoming. I have given them the choicest situations on the lawn, giving them only a small coop and a small pen, both of which are convenient for one person to move, and I move it every day, and during the wet weather, when they were nearly always confined to the pen, it was moved two or three times during the day.

My next lot of eggs were put under my best Bronze turkey hen. She had succeeded in crushing five before they were able to get out. I shall not give them anything but a handful of fine gravel until they are thirty-six hours old, and I have decided that as near as possible to nature's method of feeding them is the best, and that it is not so important what we feed so long as we do not feed it wet or too much at a time. Last year I found greatest trouble with the latest hatches that were given to common hens, but I believe the original cause was lice, which increase more quickly in hot weather. My early flock has only required one dusting. This year I am using sulphur, applied with the insect blower. The old hen has been dusted twice. They all enjoy the natural dust bath. Mrs. Mackey recommends a little cream or lard rubbed on heads, between wing feathers, etc., but says not much or it will kill the turkeys. I find the young turkeys grow larger when they have free range, but I always like to see them shut in their coops at night until they are large enough to roost in trees, and I do not like to have them out in the morning until the long grass has become dry. Cold and dampness combined will kill them, or, at least, retard their growth. When they are two or three weeks old, I begin feeding the old hen some wheat, in order to teach them to eat it, as I wish as much as possible to reduce the labor and expense in connection with turkey-raising. Some time ago there was a discussion as to the advisability of using old males. I was almost inclined to think that my Mammoth White male would be on the superannuation list, but I find that this year, though he is three years old, yet nearly all the eggs are fertile and the turks strong and lively.

Farmers' Institute Staff.

The Manitoba Farmers' Institute has secured upon its speaking staff the services of H. H. Dean, B. S. A., Professor of Dairying, and Robt. Harcourt, B. S. A., Assistant Chemist, Guelph Agricultural College; and Miss Blanche Maddock, of Guelph, a graduate of the O. A. C. Dairy School.

Manitoba Crop Report.

The June crop bulletin issued by Manitoba Department of Agriculture reveals a very satisfactory state of affairs, for not only is the consensus of opinion as gathered from the crop correspondents a most hopeful one, but the acreage under crop shows a marked increase over that of last year. From every district reports indicate a strong, healthy growth of grain crops. In some localities the continued dry, hot weather of May was beginning to injure some crops, but the heavy rains of early June came in time.

In spite of the fact that feed was very scarce during the past winter, stock wintered fairly well, and the early, warm, dry spring greatly favored the stock, and was also beneficial in assisting the milk flow, and the dairy industry is greatly stimulated. Nearly all the creameries are turning out twice as much as at the same time last year. If prices for dairy products hold up even fairly well, the dairy industry will this year enjoy quite a boom. In every crop division an increase in the number of milk cows is reported; the total increase for the Province being 26,864, making in all 110,480.

Below is a detail report of the acreage under crop:

DISTRICT.	Wheat. Acres.	Oats. Acres.	Barley. Acres.
North-western.....	199,210	148,610	20,490
South-western.....	791,840	225,120	43,960
North Central.....	345,100	106,505	45,135
South Central.....	522,600	131,100	62,400
Eastern.....	153,085	78,616	11,624
Province.....	2,011,830	689,951	191,069
Total area under Flax.....			20,978 acres.
" Rye.....			2,907 "
" Peas.....			879 "
" Corn.....			1,802 "
" Bromo.....			7,565 "
		Potatoes.	Roots.
		Acres.	Acres.
Province.....		24,429	10,214
Total area under grain crops, 2,919,201 acres.			
Total area under all crops, 2,961,409 acres.			
	1900.	1901.	
Area under Wheat.....	1,806,215	2,011,835	
" Oats.....	572,650	689,951	
" Barley.....	178,525	191,069	
" Flax.....	20,457	20,978	
" Potatoes.....	16,880	24,429	
" Roots.....	7,482	10,214	
Total crop, including Rye, Peas, Corn, etc.....	2,612,134	2,961,409	

The New Fruit Inspection Bill.

After long and careful consideration by fruit-growers, by the Dominion Minister of Agriculture, members of the House of Commons, and the Canadian Senate, an Act to provide for the marking and inspection of packages containing fruit for sale has been passed, and goes into operation on July 1st. In the Act, the expression "closed package" means a box or barrel the contents of which cannot be seen or inspected when closed, and the expression "fruit" does not include wild fruit. It is enacted that: "Every person who, by himself or through the agency of another person, packs fruit in a closed package, intended for sale, shall cause the package to be marked in a plain and indelible manner, before it is taken from the premises where it is packed; (a) with the initials of the Christian names, and the full surname and address of the packer; (b) with the name of the variety or varieties; and (c) with a designation of the grade of the fruit." Provision is made for two brands or markings: "A No. 1 Canadian Fruit" and "No. 1 Canadian Fruit." For the former the fruit must consist of well-grown specimens of one variety, sound, of nearly uniform size, of good color for the variety, of normal shape, and not less than ninety per cent. free from scab, worm holes, bruises and other defects, and properly packed. For "No. 1 Canadian," the fruit must consist of specimens of one variety, sound, of fairly uniform size, and not less than eighty per cent. free from scab, worm holes, bruises and other defects, and properly packed. Persons are prohibited from having in their possession, selling or offering for sale closed packages of fruit with marks representing it to be of the "finest," "best," or "extra good quality," unless such fruit consist of well-grown specimens of one variety, sound, of nearly uniform size, of good color for the variety, of normal shape, and not less than ninety per cent. free from scab, worm holes, bruises and other defects, and properly packed. It is enacted to be fraudulent packing when more than fifteen per cent. of the fruit is substantially smaller in size than, or inferior in grade to, or different in variety from, the faced or shown surface of such package.

The penalty for violating this Act is a fine not exceeding \$1 and not less than 25 cents for each package, or, in default, imprisonment not exceeding one month. When the Inspector detects such packages, he is to brand them "falsely marked," in a plain, indelible manner, and the penalty for altering or obliterating his marks is a \$10 fine. The person on whose behalf the fruit is packed or sold is held to be liable *prima facie*. Any person obstructing an Inspector carrying out the provisions of this Act shall be liable to a penalty not exceeding \$500, and not less than \$25, with costs, and, in default, not exceeding six months, with hard labor. Half the fine goes to the informant and half to the King. The Governor-General is empowered to make regu-

lations for the enforcement of the Act. By the amended General Inspection Act, provision is made authorizing the appointment of Inspectors and deputies, to be paid by salary or fees, for various articles, including apples. According to a third Bill passed, respecting the packing and sale of certain commodities, apples packed in Canada for export must be in well-seasoned barrels, not less than 26 inches inside measure between the heads, a head diameter of 17 inches and a middle diameter of 18 inches, representing as nearly as possible 96 quarts. For apples, pears or quinces sold by the barrel, the dimensions must not be less than those specified. For violating this provision there is a penalty of 25 cents per barrel.

In respect to certain other points, it is provided that every box of berries or currants offered for sale, and every berry box manufactured and offered for sale, in Canada, shall be plainly marked on the side of the box, in black letters at least half an inch square, with the word "short," unless it contains when level full as nearly exactly as practicable: (a) at least four-fifths of a quart, or (b) two-fifths of a quart.

Every basket of fruit offered for sale in Canada, unless stamped on the side plainly in black letters at least three-quarters of an inch deep and wide, with the word "quart" in full, preceded with the minimum number of quarts (omitting fractions) which the basket will hold when level full, shall contain, when level full, one or other of the following quantities: (a) fifteen quarts or more; (b) eleven quarts, and be five and three-quarter inches deep, perpendicularly, inside measurements, as nearly exactly as practicable; (c) six and two-third quarts, and be four and five-eighths inches deep, perpendicularly, inside measurement, as nearly exactly as practicable; or (d) two and two-fifths quarts, as nearly exactly as practicable.

The usefulness of the foregoing measures will depend very largely upon the efficiency of the Inspectors who are appointed to enforce them.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the *Farmers' Advocate* are answered in this department free.

2nd.—Our purpose is to give help in real difficulties; therefore, we reserve the right to discard enquiries not of general interest or which appear to be asked out of mere curiosity.

3rd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer, as a guarantee of good faith, though the name is not necessarily for publication.

4th.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

PARTIAL PARALYSIS IN PIGS.

Will you kindly let me know what is the trouble with my pigs? They are about thirteen weeks old. After weaning, they were fed middlings and milk until about two weeks ago, when I have fed boiled potatoes with milk and oat and barley meal ground very fine. They have the run of a small yard. Their backs seem to cave in at times, and they go down on their bellies to the ground, their front legs bending under them. They do it when they are walking, every step or two.

THOMAS CONWAY.

[Your pigs are suffering from partial paralysis, caused by digestive derangement. Give them sufficient Epsom salts, common salt or raw linseed oil in their food to cause a free action of the bowels. Turn them out where they will get plenty of exercise and grass, and the symptoms will soon disappear. Diseases causing various symptoms in young pigs are caused by faulty digestion, which is usually produced by want of exercise and green food. Where conditions of this kind are unavoidable, trouble can usually be prevented by feeding a few roots or something to take the place of grass, and feeding regularly enough of the following mixture to keep the bowels acting freely: equal parts of sulphur, Epsom salts and powdered charcoal.]

WORMS IN SOW.

I have a sow, in good condition, with pigs about ten days old. Recently she passed two large worms. One measured 11 inches in length, about 3-16 of an inch through at middle, and tapering to a point at each end. The color almost too light to be called pink. The sow still looks quite heavy, appears to be well, and has great appetite. What can I give her that will clear out the worms without danger of injuring the animal?

2. What are black teeth in little pigs? Do they harm the pigs?

J. H. DEEKS.

[At the end of 12 to 16 hours' fast, give the sow a tablespoonful of spirits of turpentine in two quarts of milk. Six hours later commence to feed her regularly with slops, putting into each pail of slop a tablespoonful of turpentine, and once a day add about a pint of hardwood ashes. Also occasionally throw into her pen a shovelful of charcoal. Some hog-raisers consider that pigs are more liable to have worms when fed largely on shorts.

2. Black teeth are small sharp teeth, black or dark brown in color, found in the sides of the mouths of pigs when born. They continue growing for some time, and drop out of their own accord. They frequently grow in such a manner as to cut the tongue so that they cannot eat, and starvation and blood-poisoning results. Some hog-raisers make a practice of examining all newly-born litters, and when these teeth appear they are pulled out or broken off with a pair of pincers. This we believe to be safe and good practice, as nothing but benefit can arise from the operation.]

CHRONIC COUGH.

What should I do for my horse? He has had a cough for about seven months, and it appears to be just from the throat. When working for a while he coughs a lot. The cough is a dry one.

Strathcona, Alta. [We would advise you, not knowing the history of the case, to get the following made up at a drug store: Muriate of ammonia, two ounces; chlorate of potash, two ounces; fluid extract of belladonna, one ounce; molasses sufficient to make one pint. Give one tablespoonful, placed on the tongue, twice a day. It might be beneficial to stimulate the throat with a liniment such as turpentine and ammonia, two ounces; raw linseed oil, four ounces; mix and apply externally to the throat with the hand once daily. Stop when signs of blistering are seen, and anoint the parts with clean, sweet lard.]

PARALYSIS OF FORE EXTREMITIES IN CALF.

A calf, ten days old, became affected in a peculiar manner. It was apparently all right when fed in the morning, but on going to feed it in the evening its front legs were completely powerless. It could raise up on hind legs and move around with breast and nose on the floor. The front legs were quite limber, and it had no power even to draw them in or to stretch them out. In this condition we let it remain for six days, when we knocked it on the head. Its appetite all these days was as good as usual; digestion, etc., all right, and it seemingly suffered no pain. It had no swelling in any part whatever, the eyes bright, its breathing regular, only it was getting weaker every day. The affected limbs were cold. I used liniment and fed it different things in the milk. We never had the like in our stables before. What was the trouble, the cause, and remedy, as more of our calves might be affected in the same way?

[The paralysis of the fore limbs in the calf was due to an affection of the brain, in all probability a tumor or abscess pressing upon it. Cases of this kind occasionally occur. They cannot be prevented, neither can they be successfully treated.]

SWOLLEN LEGS IN HORSE.

Subscriber wishes to know what is the cause of a young horse, five years old, being swollen in the hind legs? He is a heavy horse, would weigh about 1,300 lbs. The legs have broken out and are running; it started like scratches first. I feed hay and six quarts of oats at a feed, working every day, farming. What shall I do with them? Is there any cure? I wash with castile soap and lukewarm water, and I apply Egyptian liniment. Please let me know as soon as possible. I have taken the ADVOCATE nearly four years and like it well.

[Cases of this sort that are of long standing are difficult to deal with effectively. Feed nothing but a little bran for twelve hours, then administer a purgative of ten drams of Barbadoes aloes, two drams of ginger, mixed with soap or treacle and made into a ball. Allow nothing to eat but a little bran and give water in small quantities until purgation commences (generally about twenty-four hours), then feed grass and bran. When purgation ceases, give one of the following powders every night in damp food: Soda bicarbonate, 6 ozs.; powdered nitrate of potassium, 3 ozs.; powdered resin, 3 ozs.; arsenious acid, 4 drams; mix and make into twenty-four powders. It is a mistake to wash the legs; in fact, they should be kept dry, but clean. Dress the raw surfaces with butter of antimony, applied with a feather, once daily for four days. Then poultice with ground linseed five parts, powdered charcoal one part, continuously for three days, and then apply the following lotion three times daily: Sulphate of zinc and acetate of lead, of each 1 oz.; carbolic acid, 2 drams, and water, 1 pint.]

SKIN DISEASE IN CATTLE.

My calves and yearlings, during the past winter, have been troubled with two varieties of skin disease. 1st. The hair came off around the eyes, nose and ears, and scabs formed and spread more or less. The surface of scab was rough like a grater. In descriptions of ringworm, the hair is said to come out in circles, but this came off in irregular blotches.

2nd. The hair came off them also along the backbone, but here the skin seemed to dry up and come off in scales. The cattle had good feed (turnips and hay) and warm stable, with exercise every day.

[The first trouble mentioned is undoubtedly ringworm, although the hair does not fall out just as is described in the descriptions you have read. It is due to a vegetable parasite, and is very contagious. Treatment consists in removing the scales by washing with soap and warm water, and then applying a dressing to kill the parasite. Dressings do no good until the scales are removed, as the parasites are under the scales, and thereby escape. A very effectual dressing is composed of one part white hellebore mixed with six or eight parts vaseline. Tincture of iodine also acts well. Apply twice daily. If you use the ointment, rub it on with your fingers; if the iodine, apply with a feather.

The second trouble is probably a form of eczema, or possibly an extension of the first. Rub the following ointment well into the parts twice daily: one part carbolic acid to sixty parts vaseline. Keep the animals on grass and no internal medicines will be necessary. Keep affected animals away from healthy, and disinfect the stalls in which they stood, or you will probably have a recurrence next year. A thorough washing with one part crude carbolic acid to one hundred parts water will do as a disinfectant.]

SCROTAL HERNIA IN FOAL.

I have a colt, two weeks old, with badly swollen testicles. The morning he was foaled he got a box between his legs, and I think it was nothing else that hurt him. He doesn't walk lame or show any soreness. Please prescribe, and oblige.

Alberta, N.-W. T. [Your foal has scrotal hernia (rupture), which is not infrequent. Unless the hernia be very large and interfering with the animal's action, or is gradually becoming larger, leave it alone and nature will gradually effect a cure by a natural shortening of the omentum which draws the intestine up into the pelvic cavity. If the rupture be very large or gradually increasing in size, it will require an operation, which can be successfully performed only by an expert, as it consists in casting the animal, cutting down on the intestines, returning them through the inguinal canal into the pelvic cavity, and stitching the inguinal ring and scrotum.]

KINGBONES ON ALL-FOURS.

I have a driving horse which is ringboned on all-fours. He has been like this for about two years. He is stiff on the front legs when he comes out of the stable, but he seems to be all right when he gets out for a little while, only he limps a little. What can be done for him? Will he get worse if let go without doctoring? Can he be cured so as not to be lame, and without leaving the marks? If so, how should he be treated? He will not have much to do but a little driving this summer, and can be spared from that if necessary.

[The probability of the lameness increasing if no treatment is given depends somewhat on the seat of the ringbones. If low down, they will surely become worse; if high up on the pastern, the lameness may not increase to any great extent. The only satisfactory treatment is the use of the firing iron, followed by blistering by a competent veterinary surgeon. This will remove the soreness, but not the enlargement, and scars are almost certain to be left.]

Miscellaneous.

ROUP.

How is the disease known as roup generally contracted, and is there any cure for it?

[As a rule, roup is contracted during the cool, damp weather of late fall. The young chickens crowd together at night, on the ground or in the henhouse, their damp bodies soon become overheated, and roup is contracted. Unless the fowls are very valuable, the best plan is to kill off all the affected ones at once and isolate all suspicious cases, and disinfect the building and runs, as the disease is very contagious. With fully-grown fowls, the first symptoms of roup can be noticed when on the perches at night. The nostrils are clogged more or less, and the affected fowl emits a wheezing sound, which is quite distinguishable to the ear. The discharge has a very offensive smell.]

SUGAR BEETS VS. MANGELS FOR COWS - STERILIZING MILK.

1. Which is the better feed for cattle (milk cows)? Will the beet yield as heavily as the mangel; and if not, will the superior quality of the former make up for the quantity of the latter? 2. Re sterilizing milk. Where can a plant be bought, and what is the probable cost?

[1. Mangels are preferred for cows by most people. Sugar beets are richer, consequently a smaller quantity would be given, but they are more difficult to harvest, and if fed too heavily are apt to cause scouring; hence the preference for mangels. 2. Your question is rather indefinite, inasmuch as no price limit is mentioned. A pasteurizer can be procured, with a capacity of 600 pounds per hour, for \$60 and up, or a complete sterilizing outfit, working 60 gallons per hour, for \$330. Write our advertisers of dairy goods, and mention the ADVOCATE.]

RACE-TRACK CONSTRUCTION.

Kindly give in your paper directions for the construction of a half-mile race-track?

[Lay out two parallel lines 600 feet long and 452 feet 5 inches apart. Midway between the lines at one end place a stake, to which is attached a wire long enough to reach either end. To the free end of the wire may be attached a stake, which is made to describe a true curve. The same method is followed to make the other curve. Posts may be set down at intervals so as to aid in fencing the inner side of the track. The turns should be thrown up 1 or 1 1/2 inch to the foot. The stretches may be 45 to 60 feet wide. The track itself should be perfectly level. If the soil is light and sandy, it will be necessary to lay 8 or 10 inches of clay loam, which should be worked down well with harrow and leveller or grader.]

HEAVY LAND AND DROUGHT.

A fifty-acre wheat field of heavy land on this farm is patchy at present. The low-lying portions of it are quite yellow. Can you give me any idea as to the cause? Some say it is caused by the recent frosts, others attribute it to the drought.

[We find, on this farm, that the low-lying gumbo soils are the first to suffer from the drought, especially if the land is worked when wet. This soil then forms a cake on the surface, and evaporation is very rapid. Should the soil be at all impregnated with alkali, the excessive heat of the past month

would in all probability bring the alkali to the surface in these low spots, and injure the grain more or less. Gumbo soils should only be worked when fairly dry, and every care should be taken to avoid caking the surface.

BEDDING REQUIRED FOR FEEDING CATTLE LOOSE.

I should feel greatly obliged if some who have experience in feeding cattle in loose stalls could give me some information as to the quantity of bedding required. I am about to rebuild my stable, and am thinking of having pens to hold about six cattle each. I am told that unless an enormous quantity of straw is used it is impossible to keep the animals clean. If this is so, I shall have to return to the old method.

[We have interviewed many persons who have wintered cattle loose in box stalls, and we believe from one fifth to one quarter more straw is needed than with tied cattle to keep them equally clean. Some feeders use no more for their loose cattle, head for head, than for tied ones, but, as a rule, they are somewhat dirty before spring, which, after all, may not be a serious objection, provided the animals are comfortable and the pen well ventilated. We will be glad, however, to hear from readers who have tried both plans regarding this question.]

FARM WATER SUPPLY.

I want an increased supply of water at both house and barn, which are about 180 feet apart. How can I get one good well in such a position as will suitably supply both? Can the well be put near enough to the barn so that I can pump water with windmill on barn, which could then be used for other power, and have the water supplied to the house nice and fresh, or would I have to have the well at the house and pump the water to the barn? By letting me know the most economical and convenient way of supplying both house and barn from the same well you will greatly oblige.

[We understand that "Constant Reader" wants a power mill on his barn. This being so, put down the well outside, but as convenient to the barn as possible, at a point sufficiently raised so that there will be no surface drainage into it from the yard. If more than 25 feet deep, you will require to use jerk-rod or wire to pump, but if under that depth, the water can be forced up direct into elevated tank over well. Erect first a round wooden tank about 6x6 feet; then place in the center of it and resting on the bottom a galvanized steel tank 18 inches in diameter and 6 feet high. The water must be pumped up into the steel tank, and by having it one or two inches higher than the wooden tank, the water overflows into the latter. Pipe from the small tank to the house. To complete the job put good roof, with tar paper under shingles, over the tank, to exclude heat. Some surround them with boards as well. If you do not want a power mill on barn, dig the well near house, and with pumping mill raise the water through a small elevated tank in the house (drawing off water with tap for domestic use), and from thence by gravity to barn, emptying into a round outside drinking tank 10 feet across and 3 feet deep. If tank in house be high enough, you can carry the water into troughs before your stock in the stable.]

SKUNK FARMING.

If you can furnish me any information on skunk-raising, or tell where it might be had, I would like it. Have a friend starting in that business.

[We are led to believe that skunk-farming is carried on for the fur of the animals, that has a high commercial value. We cannot, however, furnish any information regarding the unsavory business, but will give space to any who wish to discuss it.]

O. K.

The expression "O. K." is attributed to President Jackson, who is said to have written "O. K." for "all correct." The letters are now used very generally throughout the United States to signify that all is correct. Elsewhere in this issue we show an illustration in connection with which the letters "O. K." are used. The picture shows a farmer providing himself with a binder. With the machine he is buying he will have no trouble in harvesting his grain crops successfully, and any farmer could well afford to imitate this man. For many years the farmer was compelled to resort to hard labor in harvesting his grain and grasses—that was the age of the sickle and scythe. McCormick's inventions have removed that burden, and in comparison with the old way, harvest work now is not irksome, neither is it drudgery. One man with a McCormick machine can do the work of fifteen or twenty men. If you haven't a McCormick, call on the McCormick agent in your locality or write at once to the McCormick Harvesting Machine Company, Chicago, U. S. A. Mention this paper.—Adv't.

Chicago Market.

Chicago, June 15. Cattle—Receipts, 600; Texans, \$5; good to prime steers, \$5.10 to \$6.25; poor to medium, \$4.10 to \$5.30; stockers and feeders, choice firm, \$3.50 to \$5; cows, \$2.75 to \$4.90; heifers, \$2.80 to \$5; canners, \$2 to \$2.70; bulls, choice, \$2.80 to \$4.50; calves, \$1 to \$5.85; Texas fed steers, \$1.40 to \$5.60; do, bulls, \$2.75 to \$3.85. Hogs—Receipts to day, 11,000; top, \$6.15; mixed and butchers, \$5.90 to \$6.12; good to choice heavy, \$6 to \$6.15; rough heavy, \$5.80 to \$5.90; light, \$5.90 to \$6.10; bulk of sales, \$5.95 to \$6.05. Sheep—Receipts, 2,000; sheep and lambs, good to choice wethers, \$3.90 to \$4.25; fair to choice mixed, \$3.65 to \$4.00; western sheep, \$3.90 to \$4.25; yearlings, \$1 to \$4.10; native lambs, \$1 to \$5.10; western lambs, \$1.60 to \$5.10.

British Live Stock Markets.

London, June 12. (Special.) Prices are unchanged, at 10 1/2c. to 12c. per lb. (dressed weight); sheep sell at 12c. to 13c.; lambs, 11c. per lb.; refrigerator beef is 9 1/2c. to 10c. per lb.



THE QUIET HOUR.

False Economy.

"Is thy cruse of comfort wasting? Rise and share it with another,
And through all the years of famine it shall serve thee and thy brother;

Love divine will fill thy storehouse, or thy handful still renew;
Scanty fare for one will often make a royal feast for two.
For the heart grows rich in giving, all its wealth is living grain;
Seeds (which mildew in the garner) scattered, fill with gold the plain.

Is thy burden hard and heavy, do thy steps drag wearily?
Help to bear thy brother's burden, God will bear both it and thee."

Economy is a good thing, of course, but, like many other virtues, it becomes a vice if carried to an extreme. There is a story told of a man who became rich because of his careful economy in trifles. His clerks had to light all the lamps in his store with one match, and the rest of his business was carried on in the same spirit. Men who practice such a rigid economy that they may rightly be called "close," sometimes become rich—although, even in business, such a course is generally fatal to success—but they certainly lose far more than they gain. It is right to be careful in the very smallest matters, to allow no waste in the household. Our Lord taught this lesson when He commanded the disciples to gather up every fragment after the multitudes were fed, although He could easily have made provision for thousands more. Because we have plenty is no excuse for wastefulness, but often apparent economy is really waste.

"We lose what on ourselves we spend
We have as treasure without end
Whatever, Lord, to Thee we lend,
Who givest all."

It is a great mistake to think that God takes no account of what we are pleased to call "trifles." He is interested in even such small matters as the shaking of a tree or the way in which the corners of a field are cleaned. The Israelites were forbidden to make clean riddance of the corners of their fields—something must always be left for the gleaners. A sheaf that had been overlooked in the field must not be fetched. The olive trees were not to be shaken a second time, nor the grapevines clean stripped. These things were certainly not left to be wasted. They did not belong to the farmers at all; they were the property of the poor gleaners—the stranger, the fatherless, and the widow. Boaz was a rich man who fulfilled the law generously, for he told his young men to let fall some handfuls on purpose for a poor girl to glean. This law should be carried out now in the spirit rather than in the letter. It would be waste to leave good grain in the fields where there are no gleaners to gather it, but in many ways we can see that the poor are not defrauded of their lawful portion. The grain is scattered in the fields that it may increase, and surely this is a parable to encourage liberality in everything: "There is that scattereth and yet increaseth; and there is that withholdeth more than is meet, but it tendeth to poverty. The liberal soul shall be made fat, and he that watereth shall be watered also himself." If we sow sparingly, it is no use expecting to reap bountifully. This holds good in both natural and spiritual things. Don't leave your grain, fruit, vegetables or flowers in the field to be wasted, but see that they do good to somebody. In many cases you will find that your own supply will last longer if you pick things freely, not allowing them to go to seed. This also is a parable.

If you are not prosperous, if your crops are cut down by frost or injured by drought, don't sit down and grumble, but "Consider your ways. Ye have sown much, and bring in little; ye eat, but ye have not enough; ye drink, but ye are not filled with drink; ye clothe you, but there is none warm; and he that earneth wages, earneth wages to put it into a bag with holes." Thus saith the Lord of Hosts, consider your ways." The Israelites thought the cause of their trouble was the want of rain, but the prophet told them that the real cause was their neglect of God's honor. They built their own houses, but allowed the house of the Lord to lie waste. God had warned them long before that if they did not obey and serve Him, the heaven should be like brass, the earth hard as iron, and the rain should be powder and dust. They should carry much seed into the field and gather little in: the worms should eat their grapes, and the olive trees should cast their fruit. On the other hand, if they obeyed God, He would send his blessing on the increase of their fields and cattle, and would bless all the works of their hands. When Elijah found a poor widow preparing to cook her last handful of meal, he asked her for a share of her scanty stock of food, and she gave it to him. If she had practised a rigid economy then, she and her son would probably have starved before the famine was over. It is always false economy to be niggardly, but very few of us could stand such a test of generosity as that. The very poor are generally more willing to give of their little than the rich. One who had a great deal of experience in the New York slums, said that it was wonderful to see how many were eager to

help others who were "poorer than they." One German family, nearly starving, themselves, took in an old man, who was past work, and kept him all winter. They hardly knew him; it was enough that he was lonely, hungry, and cold.

"We need—each and all—to be needed,
To feel we have something to give
Towards soothing the moan of earth's hunger;
And we know that then only we live
When we feed one another, as we have been fed
From the Hand that gives body and spirit their bread."

One kind of false economy is economy in wages. To withhold from your helpers the money honestly earned, or to pay them just as little as you can possibly get them to work for, is not justice. Do not fancy that God overlooks such things. He says: "Thou shalt not oppress a hired servant that is poor and needy. * * * At his day thou shalt give him his hire, neither shall the sun go down upon it: for he is poor and setteth his heart upon it: lest he cry against thee unto the Lord." And again, He pronounces woe upon him "that useth his neighbor's service without wages, and giveth him not for his work."

Perhaps the worst kind of economy is trying to save by making our offerings to God as small as possible. It harms ourselves terribly, both temporally and spiritually. We can't transfer our obligations, either. If one person in the seat puts 10 cents on the plate, that is no reason why another should give nothing. A little girl put sixpence into the bag at church and whispered: "That's all right, grandma! I paid for two."

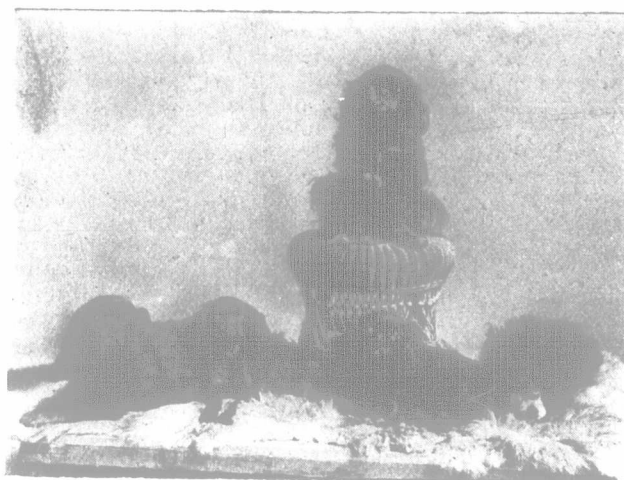
"That man may last, but never lives,
Who much receives but nothing gives;
Whom none can love, whom none can thank,
Creation's blot, creation's blank."

HOPE.

THE CHILDREN'S CORNER.

What Would You Do?

I am not quite sure whether Marian was cross that morning or not, but it is quite certain that she looked so. "Oh, dear," she said, pouting. "Seems to me some people have everything."



GROUP OF FAVORITE KING CHARLES SPANIELS.
OWNED BY MRS. W. S. LISTER, "MARCHMONT FARM,"
MIDDLECHURCH, MAN.

By "some people" she meant May Wilson; by "everything," the pair of black ponies which May had received on her birthday. And, indeed, I think that almost any fifteen-year-old girl, finding herself sole mistress of those sleek ponies, and the gay little cart with the yellow wheels, would have felt that her most ambitious dream of pleasure had been fully realized.

"Yes, May has everything nice," assented Jessie with a sigh. Jessie was Marian's bosom friend, and, except on rare occasions, they agreed perfectly. "If you owned those ponies, now," she went on, musingly, "what would you do with them?"

"Take you riding every single day," answered Marian promptly. "Wouldn't the other girls be jealous, though!"

A rattle of wheels in the street below prevented Jessie's reply, and the two girls ran eagerly to the window. "There she is now," Marian exclaimed, half resentfully, as the gay little turnout passed. May, glancing back, waved her whip laughingly at her friends, who looked at each other doubtfully. "Who is that with her?" Jessie asked, staring hard after the white-faced little girl closely wrapped in shawls in spite of the warmth of the day.

Marian reflected. "Oh, I know. She's the daughter of that little bit of a woman who comes here to help about the cleaning sometimes. They live over the grocer's on the corner, and the girl's been sick ever so long. How funny for May to take her riding!"

A couple of days had passed, and the girls were resting on the front lawn one afternoon, when May again drove by. This time her companion was a little old lady, from under whose quaint bonnet looked out the happiest wrinkled face imaginable. Her lap was piled with golden-rod, and purple asters, those late darlings of autumn, whose wide-awake faces seem to defy frost and cold alike.

"Doesn't it look as if we had brought the fields home with us?" called May, while the little old lady laughed and hugged her treasures closer. And

after they had passed, Marian asked, in an odd voice, "Say, Jessie, isn't that the old Mrs. Winter who lives at the poorhouse?"

Jessie nodded. "Yes. Mamma says they were really well off once, and were always helping everybody, but Mr. Winter died, and somebody cheated her out of all her property. I suppose she's unhappy up there. You know she's lame, and can't even go to church."

It was Saturday, I believe, when they again met May down town, and she stopped to speak with them. The little cart seemed overflowing with children. There were three on the seat with May, and a sturdy four-year-old was perched on a stool in front.

"I want to come and take you driving some day next week, girls," May said with her quick, bright smile. "I should have come before, but Mrs. Waldo—she's our minister's wife, you know—has been sick for two or three days, and it worries her to hear the children playing around. So I take them out with me, and as long as I'll drive them they'll be perfectly good;—won't you, Robbie?" with a laughing glance toward the little man in front.

"Yes. We're perfectly good," Master Robbie assented promptly. Then he added, with the air of one whose patience was nearly exhausted, "Now please say gedap, and don't talk any more."

May laughed and obeyed. And as the ponies trotted blithely away, Jessie said as she had said a week before: "Yes, May has everything nice." But her voice had an argumentative sound, as if she were replying to some unspoken thought.

Marian answered promptly. "Yes, she has everything, and she deserves it. Oh, Jessie, how different she is from the rest of us. When we get something nice we think what fun we and our particular friends can get out of it, but May just thinks what she can do for other people."

Jessie was silent, in her loyalty to her friend unwilling to admit that any girl could be more unselfish than she. "Perhaps if you had as much as May, you'd do as much for other people," she suggested feebly at length.

Marian shook her head, determined not to accept the undeserved comfort. "No, Jessie; if I'm selfish with what I have, it wouldn't make me unselfish to have more. Why, I can hardly bear to let the children take my checker-board or my croquet-set. But I'll tell you, Jessie," she added, lowering her voice, for, like most girls of her age, Marian found it hard to tell her best thoughts even to her most intimate friend, "I'm going to try after this to be unselfish enough so—well, so that I could be trusted even with a pony-carriage."

COUSIN DOROTHY.

A Message from Mollie.

If Mollie's promised "Notes" do not reach us in time for this issue, a message from her will serve to prove to her readers that she has not forgotten them, and this message they shall have. Under date of 22nd May, Mollie writes from London: "I wonder what you will think of my long silence! But the fact is that I have been sight-seeing with a vengeance ever since I landed in England. Everything is so overpowering, that even if one did not come in tired out in mind and body, as I literally have done daily for the last six weeks, it would seem impossible to find the right words with which to give a readable account of one's varied experiences. Now, Oxford, for instance, from which I have but just returned: I should want columns of space, instead of only the limited amount which is all the ADVOCATE can allot me, to give my dear readers any conception of that marvellous seat of learning. As we walked around that fine old city, through the quads, gardens, halls, libraries and chapels of its glorious colleges, the thought would obtrude itself, how can I attempt to tell them all about it? My own heart was overflowing, and I wanted to share with my Canadian sisters the pride of heritage with which it was surcharged as tale after tale was unfolded of the past history of the Oxford I was visiting to-day—a history which my eyes could read as well as my ears hear. But presently I will collect my jottings into a less disjointed record than I can attempt to send you by this mail, just only adding now that my enjoyment of it all was greatly enhanced by the pleasure of having for my hostess and cicerone one who, like myself, hailed from the Forest City of Ontario, and who, as the wife of a resident Oxford professor of note, not only gave me the glad hand for old sake's sake, but who could so thoroughly enter into the feelings of a Canadian on visiting for the first time one of the two great universities of the motherland."

We hope to have a nice long letter from Mollie in time for our next issue.

Humorous.

An excursionist newly arrived from the coast after a week's holidays was accosted by a friend as to what kind of weather he had. He replied—"Man, there wis only wan shoor, bit it lasted a' the time."

It was a moonlight night, and two farmers, who had been in Aberdeen and got a little intoxicated, were proceeding homeward with the train. Just as the train was crossing a river one of them chanced to look from a window of their compartment, and on seeing the reflection of the moon in the water, exclaimed to his neighbor—"Losh keep's, Sandy, whaur on earth can the train be takin' us till! It his us above the moon already."

A literal copy of a letter sent to a parish clerk is rather quaintly amusing: "Mister, mi wief is dede, and wants to be berriet, digg a grav for her, and she shall come and be berriet two-morro at wan o'clock; you know where to digg it, by my other wief, but let it be dip."

The Right and the Wrong.

This afternoon, sisters, I was glancing through the columns of the "men's" portion of the ADVOCATE—not because of any mere curiosity—oh, dear, no! nor yet because of any insane would-be-masculine desires in regard to farm management, but solely and simply because, like many another farmer maiden, I choose to be interested in the dear, beautiful country, and the farms and all that pertains to them. However, this is nothing to the point! What I'm coming to is this: In my peregrinations through the pages, the "Beet Culture," the "Corn Planting," and all the rest of it, one thing struck me forcibly—in fact, almost glared at me from every paragraph—viz., this truth: that there are two ways of doing everything—a right way and a wrong way; that the right way is essentially sensible, economical, scientific, and must lead to the best results; that, on the other hand, the wrong way is invariably foolish, extravagant, haphazard, yielding only, in a greater or lesser degree, failure and discouragement in the end. So much for a preamble!

Now, following this idea out, I began to wonder how many of us farmer women ever pause to think that this same system of opposites runs into our work as well—into the tiniest detail of it, and that it is both to our interest and our profit to find out the very best way of doing everything, and to be contented with no other. To our interest, I say, and repeat it, for housekeeping, buttermaking, gardening, and all the rest of it, can never become mere drudgery to the bright, intelligent woman who is determined to make of her work an art. To our profit, I say, and repeat it, because the best way is invariably labor-saving, "worry-saving"—and is the sparing of strength and of "nerves" no small gain? Of course, from this point of view one cannot mark down the profit in hard dollars and cents, but, as Kipling says, "that's another story," and there is much to be said of it too, but not here and now.

Laying down, then, as an axiom, that, in housekeeping as in all other things, there are two ways of doing things, a right and a wrong, let us look for a moment at the different conditions brought about by each. I have seen, and so have you, again and again, these two homes: In the first, everything runs quietly, comfortably, smoothly, as by machinery oiled. The house is, except on rare, unavoidable occasions, in perfect order, and spotlessly clean; the meals are invariably cooked to a turn, with the "right taste" to the dishes served; and the people themselves bear about with them an unruffled cheerfulness that makes one feel the better for having been in the same atmosphere with them for a while. In the second, on the contrary, bustle and confusion seem to reign continually. The place is clean enough, but "mussy." The meals always seemed to be "slopped" up, and the people, especially the women, if caught unawares, are perceptibly worried and preoccupied in manner, as though conscious of deficiency in the appearance of things, and, consequently, ill at ease.

Now, in both of these cases the people are equally respectable—fine, upright persons, whom to know is to respect—and yet one cannot help feeling that in the second home there is an element of unrest and discomfort wholly absent from the first. One cannot help seeing, also, that this discordant element is probably due, in some way, to some lack upon the part of these same ruffled women, who ought to be the true homemakers. The men must provide, the women must dispose of the provision. Their failure to do so in a comfort-giving way may be due, occasionally, to carelessness or sheer want of energy; but in nine cases out of ten the whole fault comes of lack of system, or lack of knowing how to do things in the right way.

Now, there is really no excuse for this. There are good books on housekeeping in the world, and there are good housekeepers at our very doors who are only too willing and too glad to tell anything which may help others. Any woman, therefore, who has good common sense, sharp eyes, willing hands, and a tongue to ask questions, may become a good housekeeper. Even if she be able to keep servants, she should make a point of understanding how everything is done in the right way. Of course,

the whole art of domestic science cannot be learned in a month, nor a year, nor in five years even. But that is where the interest comes in. Some of our very best housekeepers go on learning a little here, a little there, perhaps during all their lives. Hence, there is no need for any to give way to discouragement. All things become easy with practice.

It is impossible, in a single letter, to touch upon more than the barest outline of "the right and the wrong" in this line. To the whole of us the thing immediately necessary is to realize that there is a right and a wrong. The rest has to be learned in the concrete, one thing at a time. Hence I shall close by promising to give a bit of personal experience in my next letter, which may help someone afflicted, as was I, in the matter of cakemaking! Don't laugh, sisters, at this sudden drop. Only be satisfied if the cake does not drop, should you try it. My homely old name is— "CLARISSY ANN."

"Parting of Edgar and Lucy of Lammermoor."

Scott's loveliest and profoundest tale—the im-

and such younger disciples as Charles Collins, in the formation of the "Pre-Raphaelite School." The views of the enthusiasts cannot be fully explained in a paragraph; suffice it to say that, discontented with academic teaching, or the tradition of art based upon the Greek sculpture, were unearthed the Botticellis, the Peruginos, and the Bellinis. The new theory took different forms with the several practitioners. In the clear and practical mind of Millais it assumed the shape of photographic minuteness and accuracy. Accordingly, he produced an "Ophelia" drowning once more in a bleak gray enumeration of willow leaves; a "Proscribed Royalist" in which a royal oak and not the skulking lover was the true hero of the picture; and a subject of "Huguenots" in which, again, the accessories, the dresses, the still-life of the composition, distracted attention from the main subject. Violently championed by Ruskin, the "Pre-Raphaelite" clique had a great success of eclat, until it failed from self-fatigue and exhaustion. Millais himself, the most famous and intelligible of its adherents, changed his style, and instead of the old, insipid enumeration of the details of nature,

gives us now a broad impression and a sympathetic view. This almost single-handed war with the Academy did not prevent that magnanimous body from electing him an associate as early as 1853.

The painting here presented is to be found in the collection left by the late Mr. W. H. Vanderbilt.

Housecleaning.

"So many men, so many minds, every man in his own way." I suppose it is the same with us women, and if we only used those minds to advantage always, there would be fewer "squabbles" and consultations about those men, for if we would but remember that "discretion is the better part of valor," and that "every wise woman buildeth her house"—but there, it is about the house that I intended to talk, or, rather, the cleaning of it, about which there are "so many women, so many minds, every woman in her own way."

However, most women agree on two points, viz., that there must be a spring cleaning sooner or later, and that the men, for a few blissful weeks, must submit to feminine authority, and never say "boo." They usually do behave very creditably, too, poor things, lending all the assistance they can, despite the fact that for them "the melancholy days are come, the saddest of the year." It is we women, however, who have the greater right to such a martyr spirit, but it is a strange fact (one of the compensations that Emerson speaks of, I suppose) that those who perform the disagreeable tasks in life seldom feel the discomforts as keenly as do the onlookers. Some housecleaners proceed from garret to cellar; others vice versa. We prefer the former way, as there is less likelihood of littering the already clean rooms, and besides, the "downhill path" is easy, and one has no desire to "turn back" in housecleaning time. Some take one room at a time; others seem to take the whole house. Some burrow into the corners with a stick like a knitting needle, while others circle gracefully around them, with all due respect to the feelings of spiders, etc. Some look trim at their work, in neat collar and dusting-cap, while others tie a red bandanna about their heads and clutter about in "pa's" old galoshes. "So many women, so many minds." We always make it a point to paper and paint, more or less, in the spring, and in choosing colors, contrive to get combinations that will harmonize with the various lights of the rooms. There is no reason why we farmers' wives and daughters shouldn't have our houses as artistic as those of our city sisters. For instance, a soft yellow or pink, or some shades of red, suit a north room; blue, gray or tan, an east or west room; and dull greens and some blues give a depth and coolness to rooms facing south. In painting, we always use boiled linseed oil as a medium, as turpentine is apt to destroy the gloss, and is injurious to brushes.

It is better to begin housecleaning as early as possible, and then when it is over one has time to appreciate the delights of spring. But even while housecleaning, one can always take little sips of joy, as it were, from the cup of beauty, and



By the late John Everett Millais.

"PARTING OF EDGAR AND LUCY OF LAMMERMOOR."

mortal "Lucy of Lammermoor"—has gone around the world in every form: in opera, in picture, in prose translation. The painting shows the last stolen interview of the lovers. Edgar of Ravenswood, by his look of gloomy foreboding, seems to predict his future horrible death in the quicksand; while Lucy's air of utter and hopeless desolation is a fitting prelude to her madness and early grave. The painting, which is imbued with an intellectual depth of expression hardly to be found in the works of continental painters, shows at the same time a slightly artificial arrangement in its bowery ferns and branches, which reflects the formal traditions of the antique English school.

John Everett Millais, the most popular portraitist and genre painter of recent days, was remarkable also as one of the most precocious. He was born at Southampton in 1829, and was a boyish prodigy at the age of eleven, when he entered the Royal Academy. At the age of seventeen he exhibited a picture at the Academy, "Pizarro Seizing the Inca." In 1849 he produced his "Isabella," from Keat's poem, and about the same time associated himself with Holman Hunt, Rossetti,

wisdom that nature is forever holding out to us. The other morning I was washing windows. There was work to be done that day, any amount of it, and there were worries, any number of them, too; but at one window I rested and looked. It had rained the previous night, and for miles to the south the hills and valleys wound about each other, the long shadows of the trees stretching across them, and I thought of Wordsworth's lines:

"The hare is running races in her mirth,
And with her feet she from the plashy earth
Raises a mist that, glittering in the sun,
Runs with her all the way wherever she doth run."

The woods were clad in tender greens and browns and ecrus and crimsons, with here and there a mass of white, and the red of the maple blossoms. The sky was flecked with soft, slow-moving cloudlets, and down in the hollow lay the pond, like a second sky, with the white ducks floating about on its surface. I felt like taking my paint-brush and sitting down to enjoyment, but those windows were to be cleaned, and there was churning, and ironing, and the chickens to chase out of the front yard, and a score of other diversions; and, in any case, as Ruskin says, "all art, even at its best, is but imitation, and can never be as true as nature." It was only a sip, but all the day was the sweeter for it.

CHRYSOLITE.

Ingle Nook Chats.

MY DEAR GUESTS,—

June, fair queen of all the months, has been ushered in with a glorious flood of song from myriad voices, and regally she holds her sway, crowned with Nature's most royal gift—the ruddy-hearted, balmy-breathed roses. A spirit of perfect enjoyment broods lovingly o'er the land, and all of poesy that in us lies wakens from latency into vigorous life, and although they may not find expression in never-dying verse, our very thoughts at such a time are poems of gratitude and praise. Spring has many ardent wooers, but the sweetest strain in every song is reserved for beautiful June—

"When the breeze which comes, seems a heavy breath
From the lungs of the earth o'ergrown
With the fairest things and the sweetest things
That ever were seen or known."

I do not think it possible that any one could be a poet who did not love Nature in some of her various phases; certain it is that many of the most charming passages in the works of standard poets are descriptive of some of her wonderful works.

Since poetry—that of sun, sky and field—is the order of the day, let me present you with the following tiny bouquet culled by the way. The bud grew in James Russell Lowell's garden:

A week ago the sparrow was divine:
The bluebird shifting his light load of song
From post to post along the cheerless fence,
Was as a rhymer ere the poet came.
But now O rapture! Sunshine winged and voiced,
Pipe blown through by the warm wild wind of the west
Shepherding his soft doves of fleecy clouds,
Gladness of woods, skies, waters all in one,
The bob-o-link has come, and, like the soul
Of the sweet season vocal in a bird
Gurgles in ecstasy we know not what
Save June, dear June! Now God be praised for June."

Celia Thaxter gives us this little spray:

"Hark, how sweet the thrushes sing!
Hark, how clear the robins call!
Chorus of the happy spring,
Summer's madrigal!
Storm the earth with odors sweet,
O ye flowers that blaze in light!
Crowd about June's shining feet,
All ye blossoms bright,
Shout ye waters, to the sun!
Back are winter's fetters furled,
Summer's glory is begun,
Beauty holds the world."

The following flower is from a current journal:

"A new confusion burns the rose's cheek,
Aglow with dimpled petal blushes pink;
Love stirs the sleeping sedges by the creek,
And makes the heavy laurel buds to think
Thoughts that are songs, unuttered to the ken
Of all save such as, in the inviting hours,
Can quit the noisy intercourse of men
And listen to the language of the flowers."

It were easy to add buds and blossoms, but there!—I shall leave to each the greater pleasure of collecting for himself, only pausing to offer dear old Longfellow's prescription for the "blues":

"If thou art worn and hard beset,
With sorrows that thou wouldst not forget,
If thou wouldst learn a lesson that will keep
Thy heart from fainting and thy soul from sleep,
Go to the woods and hills! No tears
Dim the bright look that Nature wears."

OUR COMPETITION.

I herewith announce a new contest certain to find favor with many of our readers. Prizes are offered for the three best sets of Memory Gems selected for the three best sets of poetry, subject to rules given below. As the "gems" are not original work, we shall not make any age distinction, but shall give three prizes for the three best sets received. Each set must contain ten, and only ten, gems, but any contributor may send more than one set if desired. Each quotation should contain some beautiful or ennobling thought, and should be of a length that may be, without much trouble, committed to memory. The author's name should be affixed to each quotation, and the whole written on one side only of paper. This contest, No. XII, will be open until August 5th. Verne Rowell acknowledges receipt of prize, and is in the field again for No. XV. Nothing like sticktoitiveness, is there, Verne? "Morag," I may be at the capital very soon, and shall try to obtain for you the desired information.

Very sincerely yours,
Ingle Nook Chats, Pakenham, Ont. THE HOSTESS.

Anyone can have a light step who will be at the pains to set the foot down right. In that lies all the difference between a tramping, lurching gait and the light tread that makes people call you "velvet-footed." The whole art and mystery lies in a single sentence. Put the ball of the foot down first, throwing the weight upon it and letting the heel come to the floor the hundredth part of a second after.

Women in Agriculture.

Perhaps amongst the many subjects brought up for discussion at the annual congress of the National Council of Women of Canada, lately held in London, all more or less of vital importance to the well-being of our country and of our homes, none created a deeper interest than those treated of at a crowded public meeting held in the large hall of the Normal School, on the evening of the 20th June, by Miss Fowler, of Winnipeg; Mrs. Jean Joy, Mrs. J. L. Hughes, and Mrs. Fitzgibbon, the latter better known, perhaps, under her pen name of Lally Barnard. Whether the subject was Domestic Science and Household Economics, or Agriculture and Horticulture, each speaker pleaded for definite training if adequate results of any real or permanent value could be hoped for. The manifest unfairness of expecting of our girls what is not expected of our boys, that they should know by intuition how to fulfil the duties of their future vocations, was very especially emphasized. The boy destined for mercantile career, as a necessity goes through a special course to prepare him for the same, and if he is to be a lawyer, a doctor, or a clergyman, it is recognized that he must spend several years in training for the chosen work of his life. Knowledge is power, upon the farm as it is in the counting-house, the office, or in the pulpit, and it was urged that a practical training in such branches of farm work, within doors and without, as falls naturally to the share of the farmer's wife and daughters would relieve them of much of their drudgery and foster a sense of the dignity of such labor in the minds of those whose tastes and inclinations may not have a natural bent in that direction. Tasks are easy, it was said, when we bring to their accomplishment knowledge and skill. Drudgery is the result usually of incompetence and inexperience. The present outlook is very encouraging for an increasing demand for produce which the skilled hands of the women of our farms could offer if they set their minds to the not unpleasant and certainly not unwomanly task of sending the best, and nothing but the best, to the markets now more freely opening up to them in the lighter departments of poultry and beekeeping, of the dairy and the garden. Mrs. Fitzgibbon in this connection said that "work done by women in close contact with nature must elevate and not unsex a woman; that the present feeling of restriction and monotony in farm life was due to want of training for such work, which, if scientifically carried out, would provide variety and interest greater than can be realized, besides serving to allay in the young daughter of the farm that spirit of unrest (but too often fostered by her mother, whose own ambitions have been laid aside long ago) which drives her to leave her home in the country to encounter many a bitter experience and to meet with many a disappointment in the city life for which she is equally unfitted.

Surely the farm is as wide a field for the realization of any wholesome ambition as can be found in any city, the wide world over, and here let me quote more directly from my notebook, and ask my readers to give their attention to what I culled for their benefit on the evening of the 20th instant.

Note No. 1 is from remarks made by Mrs. Fitzgibbon, who has made the subject a special study:

"What an extraordinary people we are, when one comes to think of it! Agriculture is the basic industry of Canada, and for over twenty years we have deliberately educated the people away from the soil, and it is only to-day that we are beginning to discover our mistake. The co-operative system will in the future lighten tremendously the 'drudgery' of the woman's life on the farm, and this may possibly make rural and agricultural life more popular with the up-growing men and women. The man who can hold what was formerly perishable farm products for 'a rise' will be able to hold his own with the middleman, and the 'by-products' of the farm will represent a larger percentage of profit. This too, it seems to me, opens up a great chance to intelligent, well-educated women to turn their energies, and possibly capital, to account in this field, and the growing demand for the 'special article' which can only be procured close to the locality where it is produced and under conditions which preclude its manufacture in large quantities."

Note No. 2 has this:—"There is a tremendous impetus given to all sorts of industries connected with the food supply by the increasing demand for pure hygienic foods, and people are beginning to inquire carefully into the conditions under which food is prepared. I was much struck, not many months ago, while in a country town, to hear a domestic in the house where I was staying refuse to eat any butter which did not come from her father's farm. On inquiring the reason, I was met with the startling explanation that she had seen enough of the conditions under which milk was kept and butter made in many houses to prevent her from touching this farm produce without knowing all about the buttermaker! This was a revelation, and one not likely to be forgotten."

My third and last note may not be new to the readers of the other pages of the ADVOCATE, but it may not be without a suggestive meaning for those to whom our Home Magazine is more especially addressed:

From Siberia during the last year no less than 200,000 cwt. of butter, worth nearly one million pounds, was brought to England, and this excludes the large amount which came by way of Hamburg and Copenhagen. So important do the Russian authorities consider this export that they are

constructing special trains, with refrigerating cars, for the Siberian railway, and a new line of steamers has just been fitted out for the special purpose of carrying this class of produce from Riga and the Baltic direct to England. Some years ago the Russian Government sent Danish instructors among the peasants in western Siberia, and a large English firm is starting a dairy in central Russia this year, and so great is the output that much Russian butter comes into England via Denmark and Germany, labelled as coming from those two countries. Why does not Canada contrive to capture this butter industry? Is it because we as a nation dislike to learn new methods and to adapt our produce to the market now secured by Russia? We have a country as well suited for dairy produce as Siberia, and surely if the colonies, or branches of the Empire, as I believe we prefer to be called, would take the trouble, we could compete with the foreign produce in the motherland."

Now, what have the women of our farms to say to this? Will the intelligent women of Canada, who are as good buttermakers, if not better, than any in Russia, allow such an opportunity to pass them by?

H. A. B.

Recipes.

Rhubarb is one of the earliest things to make its appearance in the country gardens in springtime. In its crisp, tender stalks nature has distilled that peculiar acid which her children all demand at this season of the year. There are many excellent ways in which it may add a desirable touch to the family fare. The recipes given below are particularly choice:

RHUBARB SAUCE.—Cut the rhubarb into half-inch pieces, leaving the skin on. Put in a stewpan, and cover thickly with granulated sugar. Do not add any water; the juice from the rhubarb will soon flow. This is delicious.

RHUBARB BLANCMANGE.—Prepare rhubarb as for sauce, stew until in a pulp, sweeten, and thicken with cornstarch which has been dissolved in cold water. The amount of cornstarch used depends upon the juiciness of the rhubarb. Pour into moulds while hot. Serve when cold, with sweetened or whipped cream. This is very dainty.

RHUBARB PUDDING.—Place a large spoonful of stewed and sweetened rhubarb in small baking-cups. Pour boiling water on one pint of bread crumbs; when softened, drain if necessary, add one beaten egg, one tablespoonful of sugar, a little nutmeg, and beat well. Turn this upon the rhubarb in the cups, and bake. Serve with any pudding sauce.

RHUBARB DESSERT.—Make a rich syrup by adding sugar to water in which long strips of orange peel have been boiled until tender, place in it a single layer of pieces of rhubarb three inches long, and stew gently until clear. When done, remove, and cook another layer. This makes a handsome dessert dish by ornamenting with puff paste cut in fancy shape.

BAKED RHUBARB.—Cut in pieces an inch long, put in a cake-dish in layers with an equal weight of sugar; cover closely, and bake.—*Chaperone Magazine.*

A Garden of Long, Long Ago.

BY ALICE CARY.

I can see long back in fancy, in kaleidoscopic view,
Mid the circling disc of time-rings that my mind is gazing through
A fairyland of beauty which my early childhood knew,
Where the purest, sweetest flowers and the softest mosses grew.

The paths were stilly outlined by a bordering of box,
The flower-beds flashed brightly with marigold and phlox,
While the grapevines grew precisely, in a fashion orthodox,
To evade the crafty cunning of each spoiling two-legged fox.

I can see the drooping pear-tree stooping low to touch the ground,
And deposit ripened sweetness where it soonest could be found;
While the honeybees grey heavy, as they circled round and round,
And clapped their wings in soft applause, with hazy, happy sound.

The currants flushed to crimson 'neath the brightness of the sun,
Until, all red and rosy, they shook their heads for fun,
And tumbled off demurely in the green grass, one by one,
To wait until the children adown the path would run.

And then—the very best of all—the merry little brook
That dashed along and splashed along with circling curve and crook
Yet held its little mirrors where the lilies bent to look,
And gave us tiny concerts from a natural music-book.

As I tell myself the story, my heart is all aglow
With reverberating pleasures, that from the mem'ry grow,
So I write down glimpses of it, that others too may know
The sweetness and completeness of the distant long ago.

Where He Made His Mistake.

One of the store windows down town displays an elaborate set of furniture of a style and arrangement that would be suitable either for a wedding-chamber or the sleeping-room of a wealthy bachelor. On a soft Turkish rug stands a richly-carved bedstead with a bed upon it seemingly ready for use, several fragile chairs with gilt frames, a big lounging chair, and a handsome dressing-case with a lofty mirror. Scattered about in picturesque confusion are many dainty bits of bric-a-brac.

A motley crowd stood in front of the window the other night, gazing admiringly at this picture of comfort. In the center of the crowd stood a big man with long flowing side whiskers. He was talking in a loud voice to a modest-appearing woman who clung to his arm.

"It's wonderful how they get up things nowadays," the man was saying. "Why, when I was a boy no one would ever think of chipping out grooves and hollows in a good solid piece of walnut like that bedstead there, and nobody would dare to put gilt on a chair for fear of ruining his friend's clothes. And just look at the images! Their downright deceitful. Anybody can tell that that cat over there wasn't real. Everything about her's so natural except her tail, which is too short. Nobody ever seen a regular live cat with a tail like that. It's honest to have it that way, though, for it shows the firm's trying to do business on a square basis, and ain't trying to deceive no one."

The big man's discourse came to a sudden end, for the cat rose to its feet, stretched itself lazily, and walked away.

A good-for-nothing fellow who used to dress like a sailor and did nothing but beg, came to the house of a lady who had the reputation of being very benevolent. He thought he would melt her heart with a rather clever dodge. Reaching the lawn in front of the window where the lady was sitting, he began eating the grass. Presently she came to the door and asked why he ate the grass. He replied, because he had nothing else to eat.

"Oh," said she, "my poor dear sailor man, come into the house," and leading him through the hall she took him to the back door, and opening it, remarked, "Go outside, you will find the grass longer there."

GOSSIP.

Hartney Agricultural Society has purchased a plot of land from the C. P. R.

W. S. Styles, Rosser, reports sales of Shorthorns to the following parties: A bull to J. Yonard, Wavybank P. O.; a bull, Ben Bolt, to A. G. Campbell, Argyle, Grosse Isle Knight, first prize bull at Woodlands Fair, to J. A. Mitchell, Balmoral; Tractor, first prize, Stone-wall, to Richard Greenway, Blythfield; Arbor Knight, to W. F. Smith, Rosser. All of these bulls are got by Knight Templar, who was bred by J. G. Washington, Ninga, Man. Knight Templar is a half-brother to Jubilee Knight, also a Washington, who sold him to N. P. Clarke, St. Cloud, Minn., who afterwards sold him for \$1,200. Mr. Styles reports a heavy crop of bull calves this spring.

South-east of Deleau the pleasantly-located farm and buildings of Fred West are located. Mr. West is an Englishman by birth, and lived for some years in Ontario, being engaged as a cheese buyer with the Ballentynes. In Manitoba, however, he has taken the other side of farming, going in for wheat-raising, steer feeding and the breeding of Herefords; on account of the latter note his advertisement in our columns. Several bulls are here for sale. A blocky two-year-old, a good handler, and with square rumps and deep twist, is among the list. Two others are available, so that anyone desiring males with white faces should write Mr. West. As evidence of the value of good blood, a fine lot of grade feeders were seen. One hundred and eighty acres are in wheat, two crops being taken and then fallow, or which is preferred by the owner, seeding down to timothy or Bromo grass. A windmill cuts the feed, which is essential for economical feeding. One of the matrons of the herd, a Hereford, shows considerable of the beef type, having a wide, low, deep twist, and wide, lengthy rumps. Mr. West is quite engrossed in the breeding of Barred Rocks of good blood and purity.

The stock cars, with Wm. Sharnan as cicerone, for the Pure-bred Cattle Breeders' Association, left Brandon on Saturday, June 11th, where all the cars were gathered from the branches. Steel Bros., of Glenboro, send the Ayshire bull, Cock-a-bendie, referred to in Gossip of June 5, and a heifer, to A. J. Lovelidge, Grenfell. J. Turner, Carroll, sends a Polled Angus to Thomas Houston, Edmonton. Geo. Jacques gets two Shorthorns, one from Jas. McFadden, Methven, and the other from J. Kinnear, Souris. Walter Lynch, of Burnside, sends a bull to Chas. B. Phillips, Asher, Alta. Harry Waller, Carberry, sends two Galloway bulls to Richardson & Gillis, Rush Lake, Assa. Andrew Graham, Pomeroy, sends a bull to John Robertson, Kinistino, Sask. John G. Barron, Carberry, consigns a bull to J. J. Caswell, Saskatoon. Albert Dunn, Aldina, Sask., gets a bull from Jos. Cannon, Cypress River, Man., while George Richardson gets one from John G. Barron, Carberry. Herefords are sent by J. E. Marples, Deleau, to John Wilcocks, Lamerton, Alta.; by Wm. Sharnan to Jas. Tough, Edmonton, Alta., who also sends two bulls to Jas. A. Goff, Maple Creek, Assa., and one bull to R. Wilson, Caron, Assa. J. Wallace, Carberry, sends a bull to J. Batty, Saddle Lake, Alta. W. J. Shannon, Medicine Hat, gets a bull from J. Dolmage, Souris. J. & G. Spring-Rice, of Pense, Assa., will get a bull from J. Havenor, Souris. Alex. Stevenson, of Wakopa, sold and shipped two bulls to F. S. Blake, Livingstone, Alta., and one bull to Jas. Wilson, Innisfail, Alta. H. O. Azeart, Middlechurch, consigns two bulls to John McKay, Wetaskiwin, Alta. D. Fraser & Sons, Emerson, send a bull to T. R. Miles, Livingstone, Alta. W. J. Shannon, of Medicine Hat, also gets bulls from D. M. Stewart, Russell; Wm. Chambers, Oak Lake; Thomas Speers, Oak Lake; Geo. Gordon, Oak Lake; and three from R. L. Lang, Oak Lake. J. Clark, Jr., Crowfoot, Alta., gets the nucleus of a Shorthorn herd from the following breeders: A bull from J. Kinnear, Souris; two cows, with calves at foot, from D. M. Stewart, Russell; two cows and one calf from R. J. Phin, Moosomin. The Prince-Kerr Ranch Co., Calgary, are getting bulls from R. J. Foxhall, Brandon Hills; Wm. Ireton, Moosomin; and R. J. Phin, Moosomin. James Bray, Longburn, sends by the same consignment a registered Yorkshire boar, and Wm. Wallace, Niverville, a Shropshire ram. Francis Noble, Wawanesa, also sends a bull to W. J. Shannon. Walter Fee, Wishart P. O., gets a bull from A. R. Speers, Griswold.

The Eastern Stock Growers' Association meets at Yorkton, June 20th.

Gladstone creamery opened the end of last month, with S. Bruce in charge.

Thos. Morrison, Elgin Ave., Winnipeg, is having good patronage accorded his Coach horse, Edzardus.

Jas. Yule has bought the bull, Sittyton Hero 7th, from F. Mead, of Pincher Creek, and has sold Imp. Jubilee to the same gentleman.

Ed. T. Petar, late of Souris, has moved his cattle down close to Winnipeg, where he has purchased a farm on the Red River, in the parish of St. Andrews.

Wm. Scott reports an ever-increasing demand for U. S. cream separators. A piece of apparatus which should be more generally used by dairy farmers is the separator, by the use of which stable odors and other unpleasant and unprofitable flavors may be got rid of. The price is a mere bagatelle when the difference between making a good and bad product is considered.

W. L. Trann, of Crystal City, in changing copy of advertisement in this issue, says: "I have the best lot of pigs this season I ever raised. Somebody is going to get something good, or I miss my calculations badly." The feed bin may be a little low, but now is the time to buy the pick of the litters, and everybody will want a few pigs this fall.

Dr. Fraser, the veterinarian accompanying Col. Dent on his horse-purchasing tour, is a Canadian by birth, who went to the Old Country and graduated in veterinary medicine. Dr. Fraser was President of the Royal College of Veterinary Surgeons in 1900, thus receiving at the hands of his colleagues the highest honor that they could confer on him. The Doctor hails from Woodstock, Ont., and is located at St. Albans, near London, Eng.

The new and up-to-date farm power is the gasoline engine. In our advertising columns will be seen the advertisement of the Lightning gasoline engine made by the Kansas City Hay Press Co., Kansas City, Mo., who also turn out hay presses, scales, pumps, stump-pullers, and other useful farm implements. Parties wanting such articles, especially gasoline engines, should write this firm. Mention our name and ask for a copy of the neatly-gotten-up catalogue. The engines of this firm are constructed with a view to the greatest utility and wearing power, at a minimum of cost for operating. Be up-to-date, and run the cream separator, the pump or the churn with a gasoline engine.

In our advertising columns will be noticed the announcement of R. J. Phin, Moosomin. Pure-bred Shorthorns and Berkshires will be offered at this venture, which will give prospective breeders chances to obtain a nucleus for a herd. The three-year-old Victor 30271, by British Victor 22059, the head of the herd, will be included in the sale. All the cows have calves at foot or are in calf to this bull. A Berkshire sow and some young boar pigs of the same breed are included in the sale. Roan Duke (6522), the sire of five of the cows, was bred by Jas. Hunter, Alma, Ont., and is descended from the favorite Mantalini tribe. Sir Knight, the sire of some of the cows, is a grandson of Imp. Knight of Warlab. Farmers are not rushed with work at the time of this year, June 25, so that they will doubtless find it a profitable outing to attend this sale. The terms of sale are reasonable.

The prize list of the Edmonton summer fair is to hand. The prize list is a very creditable one, especially in view of the newness of the institution; the directors are evidently hustlers. If we might criticise, it might be that classes for light horses, such as Hackneys or Thoroughbreds, are not provided, and a less desirable (speaking generally from the farmer's standpoint) class is provided for. It is a pity that Class XI. does not call for registration, as outside of town cows, the two breeds are not to be desired in this western country. Pedigrees should be insisted upon for rams. Under the second section it is hard to see how any judge can work and do justice, as pure breeds are not called for. We bespeak the patronage of the stockmen and farmers for Alberta's grand summer fair, to be held at Edmonton, July 1st to 14th.

The Brandon Fair, promises to be the usual great success. A thrilling programme of attractions is promised, and the live-stock and industrial departments will be better and more largely patronized than ever. The new Dominion building will contain exhibits from the experimental farms, etc.

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.

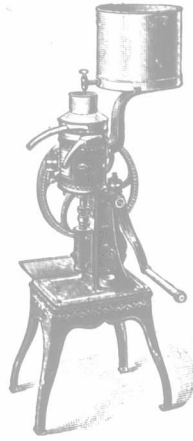
"Canada's Columbian Victors"—13 celebrated Ayshire cattle.

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

The William Weld Co., Ltd., Winnipeg.

20TH CENTURY

De Laval "Alpha" CREAMERY SEPARATORS.



THE word De Laval has always been synonymous with progressive development. Every year has marked some new improvement or step of advancement, bringing the "Alpha" De Laval machines still nearer to literal perfection. By the adoption to the "Alpha" disc system the new Split Wing Tubular Shaft invention, the milk is more evenly and thoroughly distributed in the separating bowl than heretofore. This improvement effects generally every feature of separator practicability, affording considerably greater capacity, with still more exhaustive thoroughness of separation, particularly under the harder conditions of heavy cream and low temperature.

The New Capacities, dating from June 1st, 1901, are as follows:

"BABY" OR DAIRY STYLES.

Table listing various De Laval separator models and their prices, such as 'Alpha' Crank Humming Bird, 'Alpha' Iron Stool, 'Alpha' High Frame, etc.

Great as has been the previous superiority of the "Alpha" De Laval machines to other separators, the 20th Century "Alpha" developments place them above the possibilities of attempted competition from anything else in the shape of a cream separator. 30 to 35 per cent. increase in capacities. No increase in price.

The De Laval Separator Co.

Western Canadian Offices, Stores and Shops: 248 McDermott Ave., Winnipeg, Manitoba. CHICAGO. NEW YORK. MONTREAL.

Advertisement for Lightning Hay Presses, featuring an illustration of a horse-drawn press and text: 'LIGHNING HAY PRESSES HORSE AND STEAM POWER CATALOG FREE KANSAS CITY HAY PRESS CO 439 MILL ST KANSAS CITY MO'.

Inter-Western Pacific Exhibition

WILL BE HELD AT Calgary, Alberta, July 10, 11, 12 and 13, 1901.

\$10,000 IN PRIZES.

MAGNIFICENT PROGRAMME, CONSISTING OF Trotting and Running Events, Roping Contests, Cowboy and Indian Races, Broncho Busting, and Numerous Other Attractions.

Special passenger and freight rates on railways. Exhibits returned free. FOR PRIZE LIST AND FURTHER INFORMATION APPLY TO JOHN DE SOUSA, SECRETARY.

Mr. John T. Gibson, Denfield, Ont., has recently purchased from H. Cargill & Son, Cargill, Ont., the imported roan 3-year-old Shorthorn cow, Clipper 2nd, and the roan 7-months-old heifer calf by the \$1,500 imported bull, Golden Drop Victor 32065 (76780). Clipper 2nd is of the favorite Crank-shank Clipper family, and was sired by Christmas Cup (70155), by Christmas Present by the Brawwith Bud bull, Graves end, and out of a daughter of the famous Princess Royal, by Champion of England. As the cow is again in calf to Golden Drop Victor, Mr. Gibson's purchase is a valuable one and an important acquisition to the Manor Farm herd.

Jas. Cannon, of Cypress River, has purchased Royal Lustre, a good yearling Shorthorn bull, from Kinnear & Son, Souris. The C. P. R., with its characteristic energy and advocacy of up-to-date agriculture, is working up the scheme of farmers' excursions to the Brandon Experimental Farm somewhat on the plan of those now being held in Ontario, by which the Ontario Agricultural College is visited annually by 30,000 farmers. A visit to the farm by an observant farmer or his wife will mean pointers aiding them to enjoy life better and make more money on the farm.

Prevention of Disease.

Keep the Stomach Right.

It is surprising what a safeguard a healthy stomach is against disease. And, again, it is not so surprising when it is remembered that the only way we get pure blood, strong nerves and firm flesh is from wholesome food, well digested.

The safest cure for indigestion is Stuart's Dyspepsia Tablets, composed of vegetable essences, fruit salts, pure pepsin and golden seal.

Stuart's Dyspepsia Tablets cure indigestion and increase flesh, because they digest flesh-forming foods like meat, eggs, etc.

Sold by druggists at 50 cents per package. Absolutely safe and harmless.—Adv't.

GOSSIP.

Edmonton is working for a market place and woolen mill.

The output of the Brandon Creamery Co. was 37,800 lbs. in May, one day's make being 2,410 lbs.

A binder-twine factory is mooted for the Wheat City, and the farmers are being asked to subscribe for shares.

T. E. Kelly uses a Spermator to white and blue wash his commodious stables. "Cleanliness is next to godliness," says Mr. Kelly by his actions.

The Macmillan stallions are doing stud work and getting ready for the shows. Look out for Hillman and St. Christopher.

Mr. A. M. Robertson, proprietor of Caledonia Poultry Yards, Caledonia, Ont., breeder of Black Minorcas and Plymouth Rocks, writes us as follows: "I am pleased to report hatchings coming off good. We have over 500 chicks out. We had over 300 chicks in April."

Few people are aware that in the hitherto despised country west of Hurtney is to be found not only pure-bred herds of Herefords, but also one of the coming dairy spots of Manitoba. We are informed by Mr. Abraham, of the little village of Deleau, it would not be inappropriate to term it Deleau Creamery.

Brandon is hustling for the front-rank position in Canada as a manufacturing center. The Brandon Machine Works are about to enlarge their plant, in order to keep up with their rapidly-increasing business.

Business principles are essential in farming in order to be successful. A knowledge of such principles can be obtained by any young farmer, farmer's daughter or the farmer himself by attendance at the Winnipeg Business College.

Dr. A. G. Hopkins, of the ADVOCATE staff, has been appointed director in charge of the stock-judging competition at Brandon Fair. These competitions have been much in favor at the big shows, the first big competition being held at the Trans-Mississippi Exposition at Omaha three years ago.

A few miles away is the pretty homestead of Jas. Duncan, whose herd contains a few Short-horns, among which is a bull of serviceable age for sale. Mr. Duncan works a large number of acres, has 150 in wheat, 60 in oats and barley.

Close to Jas. Duncan's is the farm of Wm. Gordon, a veteran Short-horn breeder. The matrons were away at the home of Robt. Gordon, so as to be convenient to the new stud bull.

GOSSIP.

The Chicago Sale of Canadian Short-horns.

To state that the auction sale at Chicago, on June 5th, of Short-horns from the noted herds of Messrs. W. D. Flatt, Hamilton; H. Cargill & Son, Cargill; M. H. Cochran, Hillhurst; and W. C. Edwards & Co., Rockland, was a great success, is to state it mildly. It was a success quite beyond the most sanguine of expectations.

CONSIGNED BY W. D. FLATT.

- Imp. Daisy 3rd; roan; calved January 8, 1898; and b. c.—James Watters, Mineral Point, Wis.; an averaged specimen with five calves present, and the general average for the 60 head sold of \$748.33, is a magnificent result, while Mr. Flatt's average of \$1,073 breaks the record of 18 years, and beats by \$280 his own score of \$793 at his last year's sale, which was considered a remarkable one.

CONSIGNED BY H. CARGILL & SON.

- Imp. Myrtle; roan; March 30, 1898; and b. c.—A. Alexander, Morning Sun, Ia., \$1,270
Imp. Meadow Perfection 2nd; roan; Jan. 1, 1899—Geo. M. Woody, Clyde, Ia. 900
Imp. Mand 8th; roan; March 2, 1898—Dawdy & Rydon, Abingdon, Ill. 930
Imp. Ruby of Brabant; roan; March 28, 1897; and b. c.—J. G. Withers, Milford, Ill. 825
Imp. C. and C. Corn; roan; March 18, 1898; and b. c.—E. S. Donahay, Newton, Ia. 755
Imp. Lobelia; red; Feb. 7, 1898; and b. c.—E. P. McAdoo, Indianola, Ia. 780
Clara 58th (imported in dam); roan; Feb. 25, 1900—Korns & Lee, Hartwick, Ia. 755
Imp. Daydream 5th; red, little white; April 21, 1898; and b. c.—Geo. M. Woody, Clyde, Ia. 715
Imp. Belladonna; roan; March 13, 1899—Korns & Lee. 700

- Imp. Leila; red and white; March 9, 1898; and b. c.—Shipman, Bradt & Gustenson, De Kalb, Ill. 600
Early Bull 5th; roan; Feb. 2, 1900—George M. Woody. 190

Bulls.

- Imp. Fashion's Favorite; roan; March 18, 1899—S. S. Shelby, Westport, Mo. 825
Scotch Pine (imported in dam); roan; Magh 22, 1900—H. Vanlandingham, Winchester, Ind. 500
Lovat's Heir (imported in dam); red; March 12, 1900—Wm. Scott, Grand Rapids, Wis. 130
Missie Champion (imported in dam); red; March 31, 1900—Shipman, Bradt & Gustenson, De Kalb, Ill. 350

CONSIGNED BY M. H. COCHRANE.

Females.

- Imp. Mary Anne 7th; red; Jan. 1, 1899; and b. c.—T. H. Canfield, Lake Park, Minn. \$1,280
Imp. Rosemary 13th; roan; March 18, 1899; and h. c.—A. G. Leonard, Chicago 840
Imported Hylthesome 28rd; roan; Feb. 12, 1899—C. C. Norton, Conning, Ia. 810
Imp. Agnes 7th; roan; April 30, 1899—Roy E. Cable, Phelps, Ill. 710
Imp. Consuelo 2nd; red; March 2, 1898—A. Chrystal, Marshall, Mich. 675
Imp. Fairy Maid 3rd; roan; April 30, 1899; and h. c.—W. I. Wood, Williamsport, O. 620
Imp. Clarinda 3rd; red; April 18, 1899—W. H. Neese, Macomb, Ill. 560
Imp. Carnation; roan; Feb. 23, 1899—F. P. McAdoo, Indianapolis, Ia. 535
Hillhurst Beauty (imp. in dam); roan; March 12, 1900—Chamberlain & Rosay, Beloit, Wis. 350

Bulls.

- Scotch Blend; roan; July 23, 1900—J. P. Sandy, Liberty Center, Ia. 350
Hot Scotch; roan; May 11, 1900—A. E. Wehrle, Naperville, Ill. 260

CONSIGNED BY W. C. EDWARDS & CO.

Females.

- Imp. Flower Girl 11th; June 6th, 1899—A. Chrystal, Marshall, Mich. 900
Imp. Scottish Rose; red; Feb. 13, 1899; and b. c.—M. E. Jones, Williamsville, Ill. 825
Missie of Anoka; roan; Jan. 8, 1900—J. G. Withers, Milford, Ill. 735
Imp. Marigold 4th; roan; Jan. 23, 1900—Fred. Ayres, Athens, Ill. 700
Imported Minorca 2nd; red; April 30, 1899—M. E. Jones, Williamsville, Ill. 655
Rosette; roan; May 8, 1900—E. R. Stangland, Marathon, Ia. 650
Minnie Leslie; roan; Sept. 11, 1899—C. R. Steele, Ireton, Ia. 615
Trout Creek Lady; roan; April 23, 1899—A. G. Leonard, Chicago, Ill. 600
Imp. Ruby 29th; red; March 3, 1900—J. F. Prather, Williamsville, Ill. 600
Louise; red; March 19, 1899—J. D. Roger, Naperville, Ill. 595
Orinda of Pine Grove (imp. in dam); roan; March 16, 1900—Geo. M. Woody, Clyde, Ia. 505
Imp. Countess Cashmere; roan; Dec. 6, 1898—N. A. Lind, Rolfe, Ia. 505
Lovely Maid 2nd (imp. in dam); roan; April 9, 1900—E. R. Stangland, Marathon, Ia. 480
Mystic Maid (imp. in dam); red; March 11, 1900—Coffman Bros., German Valley, Ill. 410

Bulls.

- Imp. Oxford King 2nd; red; April 12, 1899—Otto Bros. & Stevey, Clarinda, Ia. 640
Imp. Gustavus; red; June 24, 1900—P. N. Aggergaard, Irene, S. D. 550
Imp. Scotch Minstrel; roan; March 30, 1899—B. Mitchell, Vail, Ia. 500
Imp. Galway; red; Feb. 17, 1900—L. Nelson, Centerville, S. D. 300
General Hutton; roan; Feb. 2, 1900—J. E. Francis, New Lenox, Ill. 180

W. D. FLATT'S SUMMARY.

15 females brought... \$16,065; average... \$1,073 00
H. CARGILL & SON'S SUMMARY.
11 females brought... \$ 8,765; average... \$ 796 81
1 bulls brought... 2,170; average... 526 25
15 animals brought... 10,870; average... 724 66

M. H. COCHRANE'S SUMMARY.

9 females brought... \$ 6,380; average... \$ 708 88
2 bulls brought... 610; average... 305 00
11 animals brought... 6,990; average... 635 15

W. C. EDWARDS & CO.'S SUMMARY.

11 females brought... \$ 8,775; average... \$ 626 78
5 bulls brought... 2,170; average... 434 00
19 animals brought... 10,945; average... 576 05

GENERAL SUMMARY.

19 females brought... \$40,015; average... \$ 816 63
11 bulls brought... 4,885; average... 444 09
69 animals brought... 44,900; average... 718 33

Among the Canadians present at the sales we noticed Hon. John Dryden, Minister of Agriculture for Ontario; J. Ira Flatt and W. D. Flatt, Hamilton; R. Gibson, Delaware; Jas. A. Cochran, Compton; W. D. Cargill, Cargill; Capt. T. E. Robson, M. P., Ilderton; Arthur Johnston, Greenwood; A. W. Smith, Maple Lodge; H. Smith, Hay; W. G. Pettit, Freeman; John T. Gibson, Denfield; John Isaac, Markham; J. C. Snell, London; J. Flatt, Jas. Smith, Millgrove; N. F. Wilson, Cumberland; J. W. Barnett, Rockland; J. Clancy, Walkerton; John Mitchell, Nelson; Edward Robson, Markham.

A few miles from Deleau, ensconced in a delightful grove of poplars, is to be found the farm-stead of J. E. Marples, known throughout the West for his herd of Herefords. At this time we shall not particularize as to the cattle, save that the females are all breeding regularly, that the demand is greater than can be met, and that a new herd-header is soon to arrive from the east. In addition to the cattle portion of his work, Mr. Marples farms extensively, and consequently needs lots of implements. In this respect we find the proprietor strictly up-to-date, wide-tire waggons, a cream separator, a gasoline engine to run the small threshing machine, incubator and brooder, besides cultivators of the Planet Jr. and other patterns are all kept and found work for. Mr. Marples is a great advocate of wide tires, believing that they are better for the land and for the roads, besides lightening the draft.

HORSEMEN!—THE ONLY GENUINE IS

GOMBAULT'S CAUSTIC BALSAM.

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

THE LAWRENCE-WILLIAMS CO., Toronto, Ont.

KEMP'S INSTANTANEOUS Sheep Dipping Fluid

kills ticks, lice and all parasites or insect life on sheep, hogs, horses, and cattle; destroys mange on dogs.

The best dip in the market. Thorough, permanent, effectual. Cheapest and best disinfectant for surgical and medical purposes, barns and outhouses. Used in the proportion of 1 to 100.

ONLY RELIABLE CATTLE FLY KILLER. If your druggist does not keep it, we will express a half-gallon tin (prepaid) to any address in Manitoba, B. C., or the Territories, for \$1.25. Elsewhere in the Dominion, \$1.00.

W. W. STEPHEN & CO., MEAFORD, ONT. AGENTS FOR THE DOMINION.

Binder Twine SEASON 1901.

"FARMER'S SPECIAL" binder twine supplied to Farmers only at 8¢ per lb., in two-bushel, cotton, 16-oz. grain bags, bound with two-rope snap-halters, and weighing 60 lbs. each, length over 500 feet per pound, quality and length guaranteed. Cash with orders; purchaser pays freight. Address orders: J. T. GILMOCK, Warden, Central Prison, Toronto. Further particulars address JAMES NOXON, Inspector Parliament Buildings, Toronto. J. R. STRATTON, Provincial Secretary, Toronto, June 8th, 1901.

Butter Flavor Windsor Salt

Windsor Salt is an absolutely pure salt. Because there are no foreign substances in Windsor Salt, your butter will have the rich, delicate flavor that a pure salt alone can yield. Successful butter-makers use it. Best grocers sell it.

American Guernsey Cattle Club Meeting.

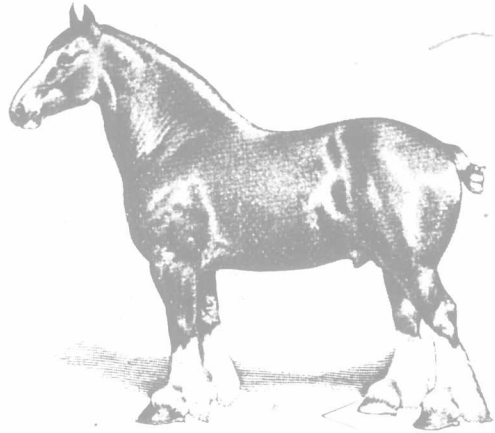
The 24th annual meeting of the American Guernsey Cattle Club was held in New York, May 15th; President Codman in the chair. During the past year 1,733 transfers were recorded, and 886 bulls and 1,316 cows registered; membership, 143; receipts, \$8,058.35; expenditures, \$8,629.05 (\$3,611.13 of which was for salaries); balance on hand, \$1,981.21. It was decided to adopt an advanced registry, and Mr. Hill, of Wisconsin, and Secretary Caldwell were appointed a committee to perfect details. All milk and butter records, to insure publication, must equal or exceed the following schedule:

Table with 5 columns: Year's milk record, 6,000, 7,000, 8,500, 10,000; Year's butter, 300, 350, 400, 450; 7-day, 14, 15, 16, 18.

The above yearly standards are based upon one complete year's record from the time of beginning, regardless of the time lost by cow being dry or calving during that period, should such be the case. In all records, the quantity of butter shall be estimated by adding one-sixth to the quantity of butter-fat found in the milk given—the per cent. of butter-fat to be determined by the Babcock test. Cows that made butter tests in 1900 and 1901 will be admitted to advanced register, if records meet all requirements.

The following officers were elected: President, James M. Codman, Brookline, Mass.; Vice-Presidents—A. J. Cassatt, Philadelphia, Pa.; Sidney Fisher, Knowlton, Can.; Secretary, Treasurer, Wm. H. Caldwell, Peterboro, N. H.; Executive Committee—Howard Tuttle, Nantuck, Conn. in place of E. N. Howell, Poughkeepsie, N. Y. (resigned), and N. K. Fairbank, Chicago.

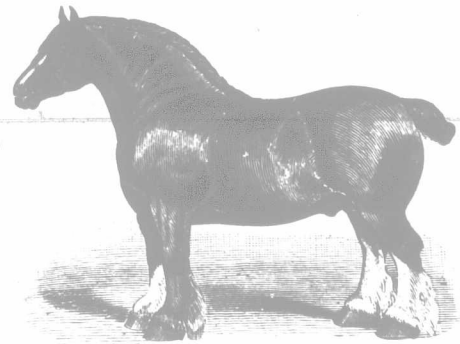
Roxey Stock Farm,
BRANDON, MAN.
J. A. S. MACMILLAN,
IMPORTER AND BREEDER OF PURE-BRED
Clydesdales, Shires, Hackneys.
STALLIONS AND MARES.



Shorthorn Cattle, Shropshire Sheep

INSPECTION INVITED.
CORRESPONDENCE SOLICITED. **Prices Right.**
TERMS EASY.
FULL PARTICULARS ON APPLICATION.
APPLY P. O. BOX 403.

J. E. SMITH

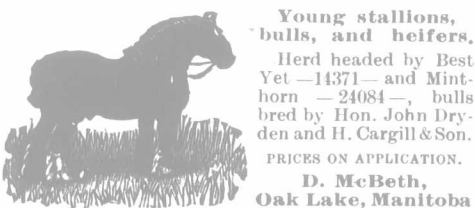


SIR ARTHUR.

Offers for sale three Clydesdale stallions all prize-winners, and fit to head any stud. Two of them imported from Scotland. Three to six years of age. These stallions all of good form. Ample weight, good colors, and choice quality. Were personally selected, and the best that money could buy. In order to make quick sales, will be sold on a very small margin. Intending purchasers of a good useful stallion would consult their own interests to inspect these stallions before buying. Also for sale, fillies and mares all ages. Shorthorn bulls, cows and heifers all ages; sired by Lord Stanley 2nd and Golden Measure (imp.). A useful lot of breeding Shorthorns can be seen at Smithfield. All are kept in breeding trim. Buyers in search of moderate-priced cattle should not fail to see them. Come and see the stock. You will find it just as represented, and prices right.

J. E. SMITH,
Telephone 4. Smithfield Ave., BRANDON.
P. O. Box 274.

Clydesdales and Shorthorns.



Young stallions, bulls, and heifers.
Herd headed by Best Yet—1371—and Mint-horn—24084—bulls bred by Hon. John Dryden and H. Cargill & Son.
PRICES ON APPLICATION.
D. McBeth,
Oak Lake, Manitoba

GOSSIP.

PRIZEWINNING SHEEP AT NOTTINGHAM.
At the Nottingham County Show, May 28th and 29th, the following awards were made in the *Livestock* class: Shearling ram—1 S. E. Dean & Sons; 2 Tom Caswell; 3 H. Dudding; reserve, Dean & Sons. Shearling ewes—1 and 3 Dudding; 2 & highly commended, Dean & Sons. *Shropshires*.—Shearling ram—1 and 3 Bernard Wall; 2 P. L. Mills; reserve and highly commended, R. P. Cooper (2), W. F. Inge (2); highly commended, Mrs. Barr; commended, J. Harding. Shearling ewes—1 R. P. Cooper; 2 P. L. Mills; 3 W. F. Inge; reserve, B. Wall; highly commended, Mrs. Barr.

PIGS AT NOTTINGHAM.
Following are the awards at the Nottingham Show the last week in May:
Forksires.—Three breeding pigs of the same litter, farrowed 1901—1 and 2 D. R. Daybell; 3 S. Spencer; reserve, P. L. Mills. Boars under one year—1 Nottingham Corporation; 2 and reserve, P. L. Mills; 3 S. Spencer. Boars above one year—1 John Barron; 2 and 3 S. Spencer; reserve, P. L. Mills. Sows—1 and 2 D. R. Daybell; 3 S. Spencer; reserve, A. Armitage.
Berkshires.—Three breeding pigs of the same litter, farrowed 1901—1 P. L. Mills; 2 Sir H. F. de Trafford; 3 Earl of Carverton. Boars under one year—1 Sir H. F. de Trafford; 2 Earl of Carnarvon; 3 J. Jefferson. Boars over one year—1 Earl of Carnarvon; 2, reserve and commended, J. Jefferson; 3 Sir H. F. de Trafford. Sows—1, 2, and very highly commended, J. Jefferson; 3 and very highly commended, Sir H. F. de Trafford; reserve, Earl of Carnarvon.

THE WESTERN FARMER'S LIVE STOCK INSURANCE CO.

D. PRITCHARD, PRESIDENT. H. S. PATERSON, SECRETARY, P. O. BOX 1382.

The best insurance is when risk is greatest. Claims paid for six months ending June 1st, 1901, \$3,000.00.

Write for particulars. LOCAL AGENTS WANTED.

NOTICES.

Massey-Harris Mowers.—The bundles of orders which have been forwarded by the Northwest branch of the Massey-Harris Co. to the factories at Toronto and Brantford for Massey-Harris mowers speaks for the popularity of these excellent grass-cutting machines in the Canadian Northwest. The Massey-Harris new No. 7 mower, which was first introduced to the trade last season, was declared on every hand to be a great success. Among the many new features embodied in this new machine are: New foot lift, new draft attachment, splendid range of tilt, hollow steel pitman, V-shaped coupling-bar. The gearing is very simple and powerful, and roller and ball bearings have been scientifically applied wherever friction and wear are likely to occur. The farmer who has his order with Massey-Harris Co. for one of their new No. 7 mowers is making no mistake.—Adv.

The Waggoner Ladder.—There are few farmers or householders but fully realize the awkwardness of handling the ordinary ladder used to reach the top of the barn, top of the house, or the highest fruit trees. It usually requires two men to carry, and about three to set it up, so that not infrequently work that should be done high up is neglected. The Waggoner ladder, made at London, Ont., possesses more desirable qualities than any other we have seen. It is constructed in sections, and can be extended to any reasonable length with the greatest ease. A 40-foot ladder can be easily carried and set up by one man. It is also extremely light, the side rails being carefully made of Norway pine, spruce or linden of the best obtainable quality. It is also very strong and stiff, by reason of the side rails being reinforced by heavy wires let into the backs. This ladder has to be seen and handled to be fully appreciated, but the pamphlets sent out by the manufacturers describe the ladder very fully. See their ad. in this issue.

Western Agricultural College.—In our issue of April 5th, 1901, under the heading "Proposed Western School of Agriculture," an extended reference was made to what is now termed "Western Agricultural College." It was then pointed out that the course of study will include correspondence, mathematics, bookkeeping, physics, chemistry, geology, botany, zoology, agriculture, drawing, and a few lectures on general topics. The principal, J. H. Smith, M. A., announces in our advertising columns in this issue that the college is in operation at Ridgely, Elgin County, Ont. A card addressed to him, with a desire expressed for information concerning the institution, will be promptly attended to.

GOSSIP.

Hon. F. G. M. Deschene, Commissioner of Agriculture for the Province of Quebec, has appointed Mr. Robt. Ness, of Howick, to make selections of live stock in that Province intended for the Pan-American Exposition. Transportation of accepted stock to and from Buffalo will be paid by Government. Application must be made, through Mr. Ness, to Mr. E. B. Elderkin, Superintendent Can. Live Stock.

The Northwest Territories will make an exhibit of live stock at the Pan-American at Buffalo. The exhibit will comprise 100 ranged wethers, four carloads of steers—grade Galloways and Shorthorns. Horses will include a four-in-hand team of westerners, a carload of range horses, selected heavy draft; Coach and Hackney bred teams, some Thoroughbreds, cavalry chargers and gentlemen's saddle horses. The exhibit will be sold by auction as soon as the show is over. C. W. Peterson has the matter in charge.

George Isaac & Bros., Bomanton, report the following sales of Shorthorns in addition to those reported in our last issue: To Mr. Ed. Robinson, Markham, Ont., one imported yearling bull, bred by Geo. Campbell, Harthill, of Cruickshank Secret family; one 2-year-old imported heifer of Cruickshank Orange Blossom, one 2-year-old imported heifer and bull calf of Kinellar (Cromer) family; one roan bull calf, imported, to Samuel Allin, Bowmanville, Ont., of Cruickshank Broadhooks family; one bull calf, imported, bred by Jas. Hay, Little Ythsie, Aberdeen, to Mr. Rosevear, Roseneath, Ont. One imported roan bull calf, bred by T. A. Anderson, Ballachraggan, Alesse, Scotland, sired by Challenger (74199), dam Silver Gem, by Silver Star (7327), sold to John Taylor, Rockwood, Ont. We expect our next importation to arrive about midsummer.

SOME OLD-TIME RECORD SHORTHORN SALES.
At the sale at Chicago, April 18, 1883, the following average was made:

No. of head	Amount received.	Average.
R. Gibson..... 29	\$20,339	\$1,016
R. Huston..... 9	14,450	1,611
Total..... 29	\$34,789	\$1,199

In June, 1873, just 28 years ago, Mr. Richard Gibson made his record-breaking event (the New York Mills record), and the history of cattle sales will probably never again chronicle such a success. It was the time when 110 head (all but two or three were of Bates breeding) sold for the prodigious sum of \$383,000, or an average of a trifle over \$3,482 per head. One cow, 8th Duchess of Geneva, sold for \$40,600, a price never equalled before nor since; 10th Duchess of Geneva sold for \$35,000, and another Duchess sold for \$32,000.

June 11 and 12, 1884, A. C. Hamilton held a two days' sale of Shorthorns at his farm near Lexington, Ky., at which an average of \$832.30 was made on 109 head.

In 1876, at Springfield, Ill., J. H. Kissinger sold 22 head for an average of \$1,152; and on May 25th of the same year, Col. Robert Halloway sold 43 head at Dexter Park, Chicago, for an average of \$1,087.

At Cochrane, Beattie & Hope's sale in Canada, 1876, Albert Crane paid \$21,000 and \$23,600, respectively, for Airdrie Duchesses 2nd and 3rd.

THE
MELOTTE
CREAM SEPARATOR

Turns SO EASY.
SKIMS SO CLEAN.

A FAVORITE WITH THE FARMER'S WIFE.

A NEW COLORED BOOKLET JUST OUT. SEND FOR ONE.

MELOTTE CREAM SEPARATOR CO., LIMITED,
COR. KING AND ALEXANDER STS., WINNIPEG, MAN.
P. O. BOX 604.

Rat Portage Lumber Co. (Limited).
Do you want Cedar Posts?
Write Direct: JOHN M. CHISHOLM, Gladstone and Higgins Sts. WINNIPEG.
Formerly Manager for Dick, Banning & Co.

W. S. LISTER, MARCHMONT STOCK FARM, MIDDLECHURCH, MAN.
BREEDER OF.....
Scotch Shorthorns
80 HEAD TO SELECT FROM.
Offers for sale 12 young bulls, and cows and heifers of all ages, of the most approved breeding, bred to (imp.) Prince Alpine—28871, at head of herd. Farm seven miles north of Winnipeg. Telephone connection.

PRAIRIE HOME STOCK FARM
CLYDESDALES, SHORTHORNS, SHROPSHIRE, BERKSHIRES and YORKSHIRES.
Shorthorn herd headed by Judge, imp. Jubilee, and Ribbon's Choice. Ayrshires of the best quality; herd headed by Surprise of Burnside. Oak Lodge Mighty 7th and a large number of high-class sows represent the approved bacon type of Yorkshires. The Berkshire boar, Victor (Tea-hale), sweepstakes at Brandon and Winnipeg, 1900, and 30 sows of faultless conformation and superior breeding, make up the Berkshire herd. Farm one mile from the station. Visitors welcome. Prices and quality right.
THOMAS GREENWAY, PROPRIETOR,
Jas. Yule, Manager. Crystal City, Man.

Please Mention The Farmer's Advocate.

FOR SALE:
Registered "Klondyke"
Guernsey Bull

Three years old. Two first prizes in succession at Winnipeg Exhibition. For particulars and price:
P. D. MCARTHUR,
324 PORTAGE AVE., WINNIPEG, MAN.

For Sale: Clydesdales, Shorthorns.
Exceedingly well-bred mares, fillies, one (imp.) two-year-old stallion. Bulls, cows, heifers (all ages) from Caithness. Apply: **PURVES THOMPSON,**
Pilot Mound, Man.

GALLOWAYS.
BULLS AND HEIFERS FOR SALE. APPLY TO
T. M. CAMPBELL, St. Jean Baptiste,
"Hope Farm," Manitoba.

Dispersion Sale
OF
SHORTHORNS
JUNE 25, 1901,

AT
Moosomin, Assa.

HAVING decided to sell my farm, four miles north of Moosomin, I will offer at public auction my entire herd of Shorthorns on June 25th. The Shorthorns are a well-bred, useful lot, mostly sired by the Hunter-bred bulls (Roan Duke - 16522 - and Sir Knight - 16521 -), and the cows are all in calf, or with calf at foot, to the grand young bull, Victor - 30271 - bred by A. & F. Bolton, of Guelph, Ont., sired by British Victor - 22059 - by that well-known son of Imp. Indian Chief, British Chief. This handsome three-year-old bull will also be sold. In all there are thirteen pure-bred Shorthorn females and several good grades. A Berkshire sow and several young pigs, and some useful farm horses. The sale will commence at 2 p.m. On amounts over \$10, 5 months' credit will be given on approved notes with 8% interest; 5% discount for cash. For full information apply to

R. J. PHIN, Prop., GEO. F. DUNN,
MOOSOMIN, ASSA. AUCTIONEER.

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.

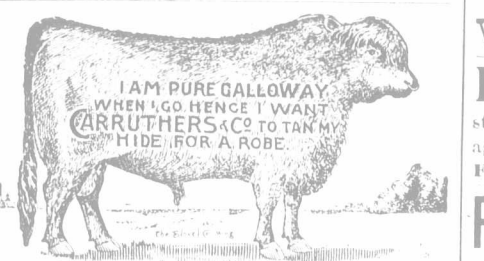
MAPLE GROVE
STOCK FARM.

7 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.

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.

SHORTHORNS FOR SALE
2 young bulls 9 months old, got by Crimson Chief 24057. Several cows and heifers.
ALEX. STEVENSON, "Brookside Farm,"
Railway Station, Ninga. Wakopa P. O., Man.



"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.

Thorndale Shorthorns.
8 BULLS, under one year, and about
100 FEMALES, of all ages, to choose
from.

JOHN S. ROBSON, Manitou, Man.

SHORTHORNS
Gold Medal herd of 1899-1900. Bulls in service are: Nobleman (imp.) and Topsman's Duke. Some good young bulls for sale.
J. G. BARRON, Carberry, Manitoba.

Shorthorns
and
YORKSHIRES

Choice heifers by Imp. Knuckle Duster and Lord Lossie 22nd. Bows and prizewinning sows now due to farrow. Order early. White Plymouth Rock cockerels and eggs.

JAS. BRAY, Longburn.

Canadian Pacific Railway
Are prepared, with the
Opening of
Navigation
MAY 5th,
To offer the Travelling Public

Holiday
Rates
Via the
Great Lakes

Steamers
"ALBERTA,"
"ATHABASCA,"
"MANITOBA,"
Will leave Fort William for
Owen Sound every
TUESDAY, FRIDAY
and SUNDAY.
Connections made at
Owen Sound for
TORONTO, HAMILTON,
MONTREAL,
NEW YORK
AND ALL POINTS EAST.

For full information apply to
WM. STITT, C. F. McPHERSON,
Asst. Gen. Pass. Agent. Gen. Pass. Agent.
WINNIPEG.

D. FRASER & SONS,
EMERSON, MAN.
Breeder and importers of Durham Cattle, Shropshire and Southdown Sheep, and Pure-bred Poland-China Pigs a specialty. Young stock for sale.

I HAVE FOR SALE
SHORTHORNS
My herd bull, King Christopher (22964), 1 young bulls (reds and roans), and a few females. Write for prices.

Wm. McDonald, Pilot Mound, Man.
Herefords. The meat-makers. Range favorites and stock-getters. FOR SALE: bulls of the right age and type. Also Barred Rocks - eggs or chickens.
FRED WEST, DELEAU, MANITOBA.

FOREST HOME FARM.
SHORTHORNS, YORKSHIRES
AND B. P. ROCKS
at reasonable prices. A few choice young cows, heifers and heifer calves, Yorkshire pigs, both sexes, sired by Imp. Summer Hill Premier, and out of the choicest sows. Two young sows in pig for sale.

ANDREW GRAHAM,
CARMAN, C. P. R. POMEROY P. O.
ROLAND, N. P. R. MANITOBA.
HEREFORDS.
The range favorites. Good rustlers and feeders. Prizewinning, either male or female, for sale.
JOHN WALLACE, CARTWRIGHT, MAN.

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.
J. E. MARPLES,
Deleau, Manitoba.

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.

FOR
Seeds, 1901
SEND TO
KEITH & CO.,
WINNIPEG, MAN.
Catalogues mailed on application. P. O. Box 456.

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.

HILL GROVE SWINE HERD
O. I. C.
Of pure-bred Ohio Imported Chester Swine. Young stock for sale. Pairs and trios not akin. Call on or address: A. E. THOMPSON, Prop., Hannah, N. D.

Boundary Herd of Poland-Chinas and Model Tamworths.
Forty head, as good as any and better than some is what I am offering. Never had a more uniform lot of pigs to offer the trade. Prices reasonable. Correspondence and inspection invited.
W. L. TRANN, CRYSTAL CITY, MAN.

Yorkshires.
Spring pigs of choice quality. Also two boars fit for service, and sows ready to breed, from large sows. Address:
King Bros., Wawanesa, Man.

TWIN GROVE FARM.
Young Yorkshire pigs, stock bear two years old, and year old sow. Prices still lower. Also Buff P. Rock cockerels. Write
J. S. LITTLE, Proprietor, Oak Lake, Man.

Chambers' Barred Rocks are winners. The shows prove it. Read the record. Has also Blk. Minorcas, Hamburgs, S. C. B. Leghorns, and S. L. Wyandottes. Eggs, \$2 a setting. See my exhibit at the next Brandon show. Stock bred by me is fit to head any yard. Write for particulars.
THOS. H. CHAMBERS, Brandon.

EGGS From Andalusians, Black Minorcas, Cochins, Partridge-back and white.
\$2.00 A SETTING. STOCK FOR SALE.
WM. ANDERSON, BRANDON.

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

MAW'S POULTRY FARM
WINNIPEG, MANITOBA.

I keep acclimatized utility breeds only of the very best, and can supply you eggs guaranteed to arrive in good order. Mammoth Bronze turkeys, Toulouse geese, \$2.00 per setting. Very large, deep-keeled Pekin ducks and English Rouen ducks, \$1.00. English White Leghorns, \$1.00. Large pure White Wyandottes and Laced, great winter layers, great table fowl (they pay to keep), \$2.00. Plymouth Rocks, straight "Hero" strain. They are the ideal fowl. Cockerels, last season, weighed nine pounds. Great egg strain. Great winter layers. Eggs, \$2.00 for 15; \$3.00 for 30. Large illustrated catalogue mailed free. You want to keep poultry for profit? The varieties mentioned in this ad. will suit you.
M. MAW, Manager.

STAY AT
HOTEL LELAND
The Leading Hotel of the West.
ALL MODERN CONVENIENCES. RATES, \$2 TO \$4 PER DAY.
BUS MEETS ALL TRAINS.
W. D. DOUGLAS, Prop., Winnipeg, Man.

UNION MUTUAL
LIFE INSURANCE CO'Y,
PORTLAND, MAINE.
(Incorporated 1848.)

JANUARY 1, 1901.
Assets \$ 8,482,038.00
Surplus, 4 Standard 586,040.24
Paid to Policy-holders 32,738,402.97
Outstanding Insurance 50,191,853.00
New Insurance Written 10,988,132.00
Income 1,959,882.01

EXTRACTS from Directors' Report of business for the year 1900. Comparing the figures for December 31, 1903, with the standing on December 31, 1900, the period covered by the present administration, there appear these **SEVEN-YEAR INCREASES.**

Gain in Insurance in Force, 13,975 Policies; \$14,277,436 Insurance.
Gain in Assets, \$2,028,728.44.
Gain in Surplus, \$356,747.28.
Growth of Annual Premium Income, \$610,975.17.

Insurance in Force in Maine } Gained
Premium Income in Maine } 300%
"A satisfactory increase, year after year, has been shown in dividends paid by the company during the above term."
"Among the death claims paid during 1900 were 20, under policies aggregating \$36,500 of insurance, all of which had been kept in force by the terms of the MAIN LAW FORFEITURE LAW, the payment of premiums having been discontinued months or years before the deaths occurred."

Total payments under the MAIN LAW, 421 claims, representing in Insurance, \$ 865,757.

Address: A. D. IRISH, Manager.
Grain Exchange Building, Winnipeg, Man.

STEAMSHIP
Tickets

If you are going to the Old Country, or sending for your friends, apply to our nearest railway or ticket agent, who can supply outward and prepaid tickets at lowest rates.
Steamers leave Portland, Maine, every Saturday; St. John, every Wednesday; New York, every Wednesday and Saturday.

W. P. F. CUMMINGS,
General Agent, C. P. R. Offices,
WINNIPEG.

NATIONAL TRUST COMPANY
LIMITED.

OFFICE AND SAFE DEPOSIT VAULTS,
323 AND 325 MAIN STREET, WINNIPEG
CAPITAL—\$1,000,000. RESERVE—\$270,000.

Authorized to act as Executor, Administrator, Trustee, Receiver, Guardian, Committee of Lunatic, Liquidator, General Agent, etc.
Accepted by the Courts as a Trust Company for the Provinces of Ontario, Quebec, and Manitoba.
Official Administrator and Guardian ad-litem for Manitoba.
Trust Funds invested and guaranteed.
Money to loan on Farm Security.
Solicitors bringing Estates, Administrations, etc., to the Company are continued in the professional care thereof.
Correspondence invited.
Boxes in Safe Deposit Vaults for rent at \$5 a year.
ARTHUR STEWART, MANAGER.

Winnipeg's Industrial EXHIBITION,

JULY 29 TO AUGUST 2, 1901.

LIVE STOCK,
AGRICULTURAL
AND
INDUSTRIAL
PRODUCTS.



RACES,
PLATFORM
ATTRACTIONS
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PYROTECHNICAL
DISPLAY.

EDUCATION, IMMIGRATION, BUSINESS, PLEASURE.

The People's Carnival.

For Prize Lists, Programmes, and all Information, Apply to

F. W. THOMPSON,
PRESIDENT.

F. W. HEUBACH,
GENERAL MANAGER.

WINNIPEG, MANITOBA.

GOSSIP.

The prospect is that the International Live Stock Show to be held in Chicago, November 30 to December 7, will be the greatest show of the kind ever projected in America. The management of the Union Stock Yards, of Chicago, is more than doubling the building capacity for the exposition, and will have the carcass contest and display on Dexter Park grounds, so that all of the Exposition will be together. Canadian breeders will, it is believed, make a much more extensive showing than they did last year, and the best of the United States studs, herds and flocks will be represented, and cheap railway rates from Canada as well as the United States will be secured.

Mrs. E. M. Jones, Brockville, Ont., writes of her favorite Jerseys: "Pressure of family cares renders it almost impossible to keep up my immense correspondence and then find time to report sales, which have been most satisfactory, thanks to the *Advocate*. I sold a young cow, which has since dropped her second calf, and owner writes me that she made in one week 10½ lbs. of butter, in cold, wet weather. If anything else but grass was fed, he did not mention it. The dam of this cow, 5 years old, milked for me last night 22 lbs. at one milking. I sold her bull calf as soon as born, for \$35. To same purchaser a lovely golden-fawn heifer calf, a week old, at \$50. To Mr. Hurst, Carman, Minn., a 6-month-old heifer that I will back against anything in the Northwest. Her show of udder is phenomenal. Owner is delighted; no wonder. To a gentleman in Vermont, U. S., just sent another. I will report a number of sales to you later on, and will soon advertise some fine horses that are hard to beat."

W. G. Pettit & Son, Freeman, Ont., report the following sales of Shorthorn cattle since last October: Nineteen bulls, imported and home-bred, and 30 imported and home-bred cows and heifers. These have gone to the following Provinces and States: Ontario, Quebec, Manitoba, Nova Scotia, Indiana, Iowa, Illinois, Michigan, Kentucky, Pennsylvania, and South America. The South Americans are now looking to this country for their supply of good bulls, and the breeders of this country should be prepared to supply the demand. They want good, large bulls of good quality, from 2 to 4 years old, and in prime condition. They want the best, and are prepared to pay good prices for them. We have now on hand and for sale 20 choice 2- and 3-year-old imported heifers, from three to six months gone in calf to our best imported bulls. A large number of them were bred to Imp. *Pure Gold*, the bull we sold at a long price to go to South America. The young calves we have from him are very promising. We have a nice bunch of home-bred heifers, nearly all bred to *Pure Gold*. We have six young imported bulls, old enough for service and good enough to be valuable herd bulls. If we get this South American trade in bulls, good ones will be much higher than they have been in this country. See change of advertisement on page 388.

THE ARGENTINE CATTLE TRADE.

A meeting of breeders of pure-bred cattle of the beef breeds was held at the Transit House, Union Stock Yards, Chicago, on June 4th, for the purpose of considering the best means to adopt with a view to cultivating the Argentine market for pure-bred bulls. After discussion, a resolution was adopted, favoring the appointment of one or more delegates to visit the Republic, to make enquiry into the possibilities of the trade, to disseminate information, and to invite the stockmen of that country to attend the fall shows of stock in the United States and Canada, at the expense of the live-stock associations. A resolution was also passed, authorizing the executive committees of the various associations to select a representative to visit South America for the purpose indicated. During the discussion, a suggestion which met with the favor of many breeders was that the British dealers who had been prosecuting this trade before the embargo was imposed, and who understand all the requirements, should, if possible, be induced to open the trade, as, indeed, they have already done to the extent of one shipment of bulls by Messrs. Nelson, of Liverpool, and Bruce, of Dublin, as reported in our last issue, and which, it is hoped, will be so successful that it may be followed by others.

GEO. E. WARD'S SHORTHORN SALE—DEATH OF THE CHAMPION BULL, ST. VALENTINE.

A grand success was the sale at Chicago, on June 4th, of 44 head of Shorthorns from the herd of Mr. George E. Ward, of Sioux City, Iowa, when the handsome sum of \$31,900 was realized for the number above named, an average price of \$725 each. The highest price in the sale, \$2,500, was paid by Randolph Bros. & Brown, Indianola, Iowa, for the red 3-year-old cow, Duchess of Gloster 34th, by Gowrie, with her roan bull calf by St. Valentine, and she in calf again to the same sire. Nine other females sold at prices ranging from \$1,000 to \$1,700. The highest price for a bull was \$725, for Mary's Valentine, a red 14-months son of St. Valentine, and of the Young Mary family. An interesting feature in this sale to Canadian breeders was that a very large proportion of the animals were the offspring of the noted Canadian-bred bull, St. Valentine 121014, whose breeding was a mixture of Scotch and Booth blood, and who was bred by the Messrs. Gardhouse, of Highfield, Ont., sired by Imp. Guardsman, and out of Verbena's Lady, by Imp. Reporter. St. Valentine's dam, bred by Messrs. Gardhouse, was a yearling heifer in the show herd of Messrs. Robbins & Son, of Indiana, which won the \$1,000 grand sweepstakes herd prize for the best bull and four females of any beef breed at the World's Fair at Chicago in 1893, and was at that time carrying her first calf, the future champion bull of America, Saint Valentine, who proved not only a first-class show bull, but also a first-class sire, as the uniformly good quality of his get in Mr. Ward's late sale amply evidenced. The death of St. Valentine from stone in the bladder, at the age of 7 years, was announced at the opening of the sale, and as he had met with an accident last fall, having sprained a stifle and become incapacitated for service for several months, the calves in sight were among the last of his get likely to be available. This circumstance, together with the grand character of his calves, gave a special value to them, so that in several cases from \$400 to \$500 each was offered for calves of his a few months old, being sold with their dams. Such offers, some of which were accepted and others refused, added greatly to the prices realized for the lot.

A FEW FACTS

About the New Catarrh Cure.

The new Catarrh Cure is a new departure in so-called catarrh cures, because it is actually a cure, and is not simply a temporary relief.

The new Catarrh Cure is not a salve, ointment, powder nor liquid, but a pleasant-tasting tablet, containing the best specifics for catarrh, in a concentrated, convenient form.

The old style of catarrh salves and ointments are greasy, dirty and inconvenient at the best; the new preparation, being in tablet form, is always clean and convenient.

The new Catarrh Cure is superior to catarrh powders because it is a notorious fact that many catarrh powders contain cocaine.

The new Catarrh Cure is called Stuart's Catarrh Tablets, a wholesome combination of bloodroot, beechwood tar, guaiac, and other antiseptics, and cures by its action upon the blood and mucous membrane, the only rational treatment for catarrhal trouble.

You do not have to draw upon your imagination to discover whether you are getting benefit from Stuart's Catarrh Tablets; improvements and relief are apparent from the first tablet taken.

All druggists sell and recommend them. They cost but 50 cents for full-sized packages, and any catarrh sufferer who has wasted time and money on sprays, salves and powders will appreciate to the full the merit of Stuart's Catarrh Tablets.—Adv't.

GOSSIP.

Allin Bros., of Lakeview Farm, near Oshawa, Ont., have for over 20 years been engaged in the breeding of high-class Shorthorn cattle. Among their earlier dams was the roan Cruickshank, Duchess of Gloster 12th, sired by Athelstan 7th 6522, dam Duchess of Gloster, by Red Duke 3888. She was a deep, heavy, short-legged animal, and her progeny have inherited those qualities of conformation. Another excellent dam was Duchess of Gloster 15th, of the same tribe, sired by Imp. Duke of Albany 47709, a Cruickshank-bred bull, dam Duchess of Gloster 12th. A very pretty, well-balanced cow is Strawberry, imported by W. D. Platt, sired by Roscommon 71406, dam Matilda, by Locksley 62849. This cow is of the Miss Ramsden family, that has produced so many prizewinners, including Challenge Cup, Royal Winner, Brave Archer, etc. The stock bull at present in use is *Quarantine King*, so named on account of being born in quarantine, having been imported in dam. He is sired by Wrestler 65382, a grandly-bred Hample bull, dam King's Magic 4th. Quarantine King is a perfect model of the up-to-date Shorthorn. Among the young bulls are three really good yearlings: Lord Kitchener, sired by Arthur Johnston's imported stock bull, since sold for \$500, dam Duchess of Gloster 34th, by Grand Sweep (imp.). Lord Roberts, another yearling, is sired by Grand Sweep, dam Duchess of Gloster 24th, by Duke of Lavender 51135 (imp.). General Buller 38802 is a very choice yearling, sired by Bonnie Lad 25927, by Imp. Blue Ribbon and of the Kinellar Bessie tribe, dam Susie Logan 19760, by Duke of Lavender. These yearlings are now offered for sale, and are well worth looking after, being choice animals of famous Cruickshank families.

MORE MONEY FOR REMOUNTS.

In the British House of Commons an additional vote of £15,779,000 has been made for transports and army remounts. More horses will be wanted from Canada. Mr. Brodrick, the War Secretary, said the War Office paid for horses in England £12, in Canada £30, and in Australia, the United States and Hungary, from £20 to £25. During the debate, Sir Blundell Maple (Conservative) asserted that British officers who had been sent to Hungary and Austria had purchased broken-down animals at extravagant prices, and divided with the sellers the price charged the British Government above the actual cost. He demanded the appointment of a committee of inquiry. Lord Stanley, Financial Secretary of War Office, said an inquiry would be made in the matter, and he believed that the accusations of corruption brought against British officers would be disproved.

WM. SMITH'S CLYDESDALES AND SHORTHORNS.

Mr. Wm. Smith, of Columbus, Ont., is one of the pioneer breeders and importers of Clydesdale horses and Shorthorn cattle, and throughout the long years Mr. Smith has been associated with the pure-bred stock industry, he has only had the one object in view: to breed the best possible from the best procurable. In Clydesdales, Mr. Smith has imported a large number of both stallions and mares, and his present stock, which includes some very choice heavy animals, are all from imported animals. The imp. mare, Glengow Jennie 212, bred by Mrs. Sturdy, of Drawdykes Castle, Eng., sired by Scotsman 1293, dam Lochend Champion, has left some really extra good produce. A very nice, smooth 2-year-old filly is Glengow Jennie 4th, sired by Granite 1917, dam Glengow Jennie 3rd, by Pride of Perth 282. This filly's equals are few indeed. Another good one is Newbie Jean 3rd, sired by Sir Arthur 6292, dam Newbie Jean 2nd, out of Imp. Newbie Jean. This mare is a massive, well-proportioned, smooth animal. The sire at present used by Mr. Smith is the imp. stallion, Royal Cairnton 10875, bred by Robert Turner, Cairnton, Scotland. He is sired by Royal Standard 9947, dam May Montrose 13646, and traces back to the blood of the famous sires, Prince of Wales and Darnley. This horse has only been shown twice in this country, at Toronto and Ottawa, winning first at both places, and will likely compete for honors at Buffalo this year. He is a large, growthy fellow, with the best of feet and legs, the action of a Hackney, and is as smooth as silk. He is owned by the Columbus Clydesdale Association, of which Mr. Smith is president.

In Shorthorns, Mr. Smith's herd is founded on the Isabella and Mina families, and are from such imported sires as the Duke of Albany, Duke of Lavender, Lord Roseberry, Bright Light, etc. The present sire is Royal Bruce 26018, sired by Royal Member (imp.), dam Imp. Rosalind. Royal Bruce belongs to the famous Cruickshank and Campbell tribe of Nonpareils. He is an extremely long, deep, massive fellow, weighing some 2,400 lbs. His calves are an exceptionally fine lot, testifying to the correctness of that old law of breeding, that "like begets like." Among Mr. Smith's earlier dams was Wedding Gift 8354, bred by Lord Polwarth, Mertoun House, St. Boswells, Berwickshire, Scotland. The breeding dams are of the present up-to-date type: broad, deep, massive, on short, well-placed legs, of the best quality of bone.

U S U S U S U S U

THERE IS NO BETTER INVESTMENT

FOR THE DAIRY THAN THE IMPROVED U.S. CREAM SEPARATOR

S U S U S U S U S

Its substantial one-piece frame and enclosed gears, running in oil, insures the user a long lived machine and few repair bills. Its three-separators-in-one bowl makes it the greatest cream producer on the market, as has been proved many times in competition with other makes. If interested, write for illustrated catalogues.

VERMONT FARM MACHINE CO.
BELLOWS FALLS, VT., U.S.A.



THE IMPROVED UNITED STATES CREAM SEPARATORS are worth more than they cost, and are bought in preference to all others by the best farmers. Nearly every machine sold brings a letter similar to the following:

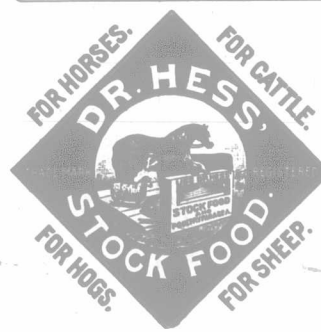
WM. SCOTT, ESQ., WINNIPEG, MAN.

Middlechurch, Man., April 17th, 1901.

Dear Sir,—The Improved United States Cream Separator, No. 7, which I purchased from you a short time ago, is giving perfect satisfaction. As a cream separator I consider it as near perfection as anything could be. It skims exceedingly close; in fact, there is practically no butter-fat left in the skim milk. One great advantage it has over several other makes of machines is the few parts inside the bowl, and the ease with which it can be cleaned. I find that it will skim fully as fast as the makers claim for it (viz., 300 lbs. per hour), as I have timed it several times. It is a machine that is made to last, being very strong and simply made; all running parts being enclosed, which not only protects it from dust and dirt, but renders it impossible for any accident to happen, such as getting wound on a shaft or caught in the gears. It is also very light running, which is a great consideration in a cream separator.

Yours truly, H. O. AYERST, breeder of Shorthorn Cattle.

Enquiries and orders from Manitoba and N.-W. T. should be addressed to the general agent for that part of Canada, WM. SCOTT, 206 Pacific Ave., Winnipeg, dealer in all lines of Dairy Supplies and Farmers' Fresh Separator Butter.



DR. HESS' STOCK FOOD

Is a Guaranteed Flesh Producer.

It makes animals eat well, do well and pay well. It produces that sleek, glossy coat that commands the fancy price. Cows fed DR. HESS' STOCK FOOD give more and richer milk. Make a test: your money back if it doesn't do what we claim. Prices are as follows: 7-lb. sack, 65c; 12-lb. sack, \$1.00; 25-lb. sack, \$2.00; 50-lb. sack, \$3.70; 100-lb. sack, \$7.00. Sold by dealers generally, or address:

THE GREIG MFG. CO., WINNIPEG, MAN.

(W. R. ROWAN, MANAGER, P. O. Box 603.)

For two-cent stamp we will mail you our 64-page veterinary book. Address: DR. HESS & CLARK, Ashland, O., U. S. A.

Your Fire is Good

"Sunshine" furnaces do not require incessant attention to keep them burning.

If, in the rush of the morning and evening chores, the furnace happens to be overlooked, you can count on a "Sunshine" retaining fire three or four hours longer than the ordinary furnace.

Burns coal, coke or wood.

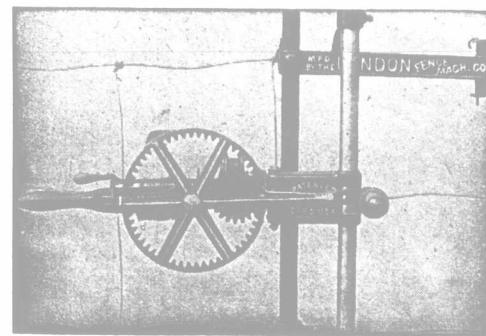
The only specially-made farm furnace in Canada.

Descriptive pamphlets free.

The McClary Manuf'g Co'y.

London, Toronto, Montreal, Winnipeg, Vancouver; St. John, N. B.

LONDON FENCE MACHINES ARE UP-TO-DATE.



WHEN GETTING, GET THE BEST.

COTTAM, MAY 25TH, 1901.

DEAR SIR,—Having purchased one of your LONDON FENCE MACHINES this spring, I have used it to build about 250 rods of wire fence, and consider it the best machine I have ever used or seen used for weaving wire fence. I think that any ordinary man, with 2 hours' experience, could weave from 40 to 50 rods a day easily, and I have no hesitation in recommending it to farmers who are putting up wire fence. Yours truly,

JAS. W. SHEPPARD.

Coiled Spring Wire, Steel Gates, Wire Stretchers, Reels, Pliers, Staples, etc.

THE LONDON FENCE MACHINE COMPANY, LONDON, CANADA.

IN WRITING

Please Mention the Farmer's Advocate.

GOSSIP.

F. Bonnycastle & Son, Campbellford, Ont., breeders of Shorthorns and Colswolds, write: "We have an extra good lot of bull calves, short-legged, blocky fellows. Let me know if anyone will be 'round' before our time expires; if not, what is your price for an inch space."

At Martin Flynn's twenty-third annual Shorthorn sale, at Des Moines, Iowa, May 23rd, the highest price (\$1,035) was paid by H. F. Brown, Minneapolis, for the 3-year-old cow, Minnie Benson 3rd, bred by David Birrell, Greenwood, Ont., sired by imp. Cian Campbell, and of the Mara family. As an evidence of the rising value of Shorthorns in the last two years, it may be mentioned that this heifer was sold at Mr. Birrell's sale in March, 1900, for \$170; at Mr. Platt's Chicago sale in August the same year for \$475, and Mr. Flynn's sale in May this year, with a heifer calf at foot, for \$1,035. Gem of Gloster, a red 4-year-old Duchess of Gloster cow, bred by Harry Smith, Hay, Ont., and sired by Abbotsford, brought the second highest price, \$1,400.

A RECORD HEREFORD SALE.

At a combination sale of Hereford cattle, held at Chicago, May 21st and 22nd, 98 head sold for an average of \$543, and the record price of \$5,000 for a Hereford cow was scored by the sale of the 8-year-old Dolly 2nd, bred and contributed by Mr. John Hooker, New London, Ohio, and purchased by Mr. N. W. Bowen, Delphi, Ind., who not only took Dolly 2nd and her heifer calf at foot for the price above quoted, but also Belle of Maplewood at \$1,900, and three other cows at \$1,000 each, and one at \$800. Imp. Sparkle brought \$325, and the highest price for a bull was \$1,200, for Ike, a 3-year-old, sired by Nutshell, and bought by Wm. George, Aurora, Ill.

NOTICES.

Is All Right for Splint.

I used GOMBAULT'S CAUSTIC BALSAM on a horse last spring for splint and it proved all right. Wm. Reutecke.

An Expanding Enterprise.—We were pleased to notice, on a recent visit, the great changes now in process in connection with the works of the Ontario Wind Engine & Pump Co., Toronto, manufacturers of the well-known "Airmotor." They erected during the winter a large new galvanizing building, 112x32 ft., and have installed in it one of the largest galvanizing plants in Canada, and capable of not only doing their own work, but also to take care of extensive and important work for outside requirements. They have also installed a new cupola of the most modern type, and are therefore in a position to do all their work in connection with the manufacture of the "Airmotor" from the beginning to completion. They are now building a very large extension to the main factory, 100x12 ft., three stories and basement, fully equipped with a large quantity of new machinery and all modern appliances for the comfort of the employees and rapid execution of orders. It will enable them to fully handle their expanding business, as they have heretofore found great difficulty in keeping pace with their orders. In addition to the above, they have installed some very fine electric motors, and are also having the works lit by electricity, so that when this building is completed it will in many respects be without its parallel in Canada. Not only has their Canadian but also their foreign trade been steadily growing, and recently they shipped a windmill destined for the South Pole, something which no other windmill manufacturer can boast of. This Company is determined to take care of a big share of the windmill trade in Canada, with all its branches, and our readers can depend on the goods being turned out by this Company up to the mark in every respect. They have also added to their extensive business the fanning mill, having purchased the entire business and plant of the Toronto Grain and Seed Cleaner and Grader Manufacturing Co., and this mill will be pushed by them, as it is the very best to-day on the Canadian market.

THE COMMON SENSE BOLSTER SPRING.



FOR TRANSFORMING COMMON WAGONS INTO FIRST-CLASS SPRING VEHICLES. THE BEST FARM-WAGON SPRING IN THE WORLD.

Table listing prices for different capacities of the Windsor Bolster Spring, ranging from \$5.00 for 1,000 lbs to \$12.00 for 7,000 lbs.

The only truly graduated bolster spring in the market. They always afford a spring for light and heavy use. Every set of springs guaranteed to give entire satisfaction. If your dealer does not handle them, write us direct.

Windsor Bolster Spring Co., Windsor, Ont.

Family Knitter

Cheapest, Simplest, Best. Price, \$8.00. Write for circular.

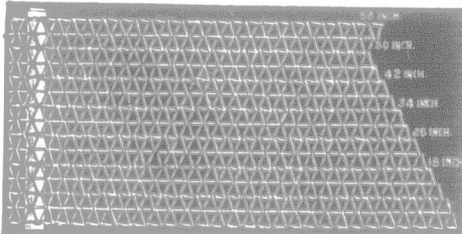
Dundas Knitting Machine Company, DUNDAS, ONTARIO.

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. Station, Stittsville, C.P.R.



MILLIONS OF ACRES fenced with them this year. The fences that grow more popular every season. Real saving, service and satisfaction in Ellwood Steel Wire Fences. Fully guaranteed. Best steel and galvanizing. If you can't find our local agent write to American Steel & Wire Co., Chicago or New York.



BULL-STRONG!

PIG-TIGHT.... An Illinois farmer said that after harvest he had fully 200 bushels of loose oats on the ground that he could not secure any benefit from, because the fence around the field would not turn hogs. Figure the loss for yourself. He also said, all this would have been saved if he had used the Kitzelman Woven Wire Coiled Spring Fence, and the value would have gone a long way towards paying cost of the fence. With the Duplex Machine any farmer can make it himself at the actual cost of the wire. Catalogue free for the asking. C. G. DAVIS & CO., Box C-116, Freeman, Ont.

BIG CROPS OF BIG POTATOES

result from applying about 100 lbs. of NITRATE OF SODA per acre just after the potatoes are well up. Then, too, the potatoes are smoother and more salable. Insures a profitable crop. Our books tell about its use on potatoes, and the profits produced. Send for free copies before you plant, to John A. Myers, 12-Q John St., New York. Nitrate for sale by fertilizer dealers everywhere.

Write at once for List of Dealers.

British Columbia.

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 attainments, 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.

WRITE

HOPE, GRAVELEY & CO.,

536 Hastings St. VANCOUVER, B. C.

Wm. Brash, Ashburn, Ont., BREEDER OF CLYDESDALE HORSES and SHORTHORN CATTLE.

NEWTON'S HEAVE, COUGH, DIS-TEMPER & INDIGESTION CURE

Guaranteed. A veterinary specific for WIND, THROAT & STOMACH TROUBLES. Strong recommends. \$1.00 per can. Death to Heaves. Dealers or direct. Newton Horse Remedy Co. (D), Toledo, O. Trade supplied by Lyman Bros. & Co., Toronto.

Clydesdales and Ayrshires Imported and home-bred. Also Dorset Horned sheep, and the leading varieties of poultry.

ROBERT NESS & SONS, Howick, Que.

4 Imp. Clydesdale Stallions

From such well-known sires as Sir Everard (5353), Prince Roberts 7135, Prince Alexander 8899.

2 Imp. Shorthorn Bulls. 4 Bulls Imp. in Dams. 2 Canadian bred Bulls.

21 Imp. Cows and Heifers. 7 Canadian-bred Cows and Heifers.

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

R. Mitchell & Son,

Burlington Jet. Station, Nelson, Ontario.

Large herd of Scotch and Scotch-topped Shorthorns of the most popular Aberdeenshire tribes, including 4 imp. bulls, 12 imp. cows and heifers. Also a number of home-bred yearling and two-year-old heifers, and 7 good, thrifty home-bred bulls, from twelve to fifteen months old. Write for catalogue.

PLEASE MENTION FARMER'S ADVOCATE.

MAPLEWOOD HACKNEY STUD.

PROPERTY OF FREDERICK C. STEVENS, ATTICA, NEW YORK.

Champions of two continents.

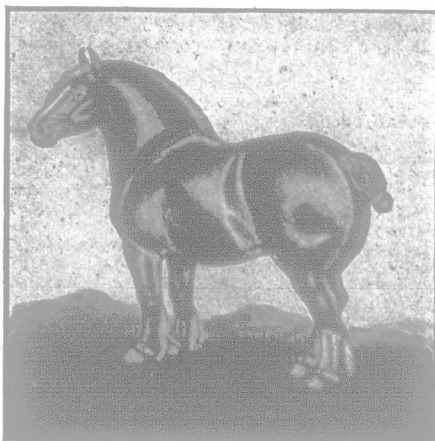
The magnificent LANGTON PERFORMER, the peerless CLIFTON 2nd, and the sensational FANDANGO, all in service for the coming season.

Magnificent young Stallions and Mares for Foundation Stock,

sired by the above champions, and out of mares equally famous; now offered for sale. MAPLEWOOD is truly "THE HOME OF THE CHAMPIONS."

FOR FURTHER PARTICULARS, ADDRESS:

E. T. Gay, Manager, Attica, N. Y.



LATELY IMPORTED A FRESH LOT OF

Glydesdale 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,

Ringwood P. O., Ont.

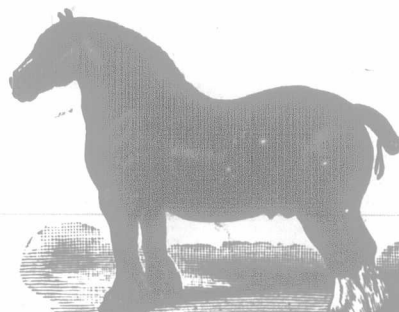
Stouffville Station, G. T. R., and telegraph office.

CLYDESDALE STALLIONS ALL SOLD.

Our importations are always

WELL-BRED BIG GOOD ONES.

The winner for two years at the Canadian Horse Show, Toronto, was imported by us. Early in July we will sail for Great Britain for a new lot, and will earnestly endeavor to make satisfactory selections of mares and stallions for persons who will inform us just what they want.



DALGETY BROS., London, Ontario.

Instant Louse Killer



kills lice on stock and poultry, sheep ticks, bugs on cucumber, squash and melon vines, cabbage worms, slugs on rose bushes, etc.

Can be used on eatable plants with perfect safety.

Put up in round cans with perforated top; convenient and economical.

Price, 35c.

GUARANTEED.

Sold by Dealers Generally, or Address:

THE GREIG MANFG. CO'Y,

W. R. ROWAN, MGR. P. O. BOX 603. WINNIPEG, MAN.

We beg to call your attention to a new and indispensable article in

Barclay's Patent Attachment

FOR THE CURE OF BALKING AND KICKING HORSES.

Will control any vice known to a horse. Invaluable for breaking in colts. Can be adjusted in two minutes, and used with any harness, vehicle or implement. Sent, charges paid, to any part of Canada, with full directions for use, on receipt of price, \$5. Reliable representatives wanted. For further information, address

THE BARCLAY MFG. CO., Brougham, Ont.



WM. SMITH, COLUMBUS, ONT., W. G. HOWDEN, COLUMBUS, ONT.,

IMPORTER AND BREEDER OF Clydesdale Horses & Shorthorn Cattle BREEDER OF CLYDESDALE HORSES, SHORTHORN CATTLE

Chicago Sheep Shearing Machine
1901 Model
Stewart's Pat.



Price \$15

Guaranteed to shear any kind of wool that grows. All gears cut from the solid metal and hardened.

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AGENTS WANTED FOR THE IDEAL STEAM COOKER. REDUCES FUEL BILLS MORE THAN ONE HALF.

Makes tough meat tender. Prevents steam and odors. Whistle blows when cooker needs more water. Burning or scorching impossible. We pay express on

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LOW PRICE IN WIRE FENCE
Building is attracting farmers' and agents' attention. **THE CHEAPEST GOOD FENCE.**

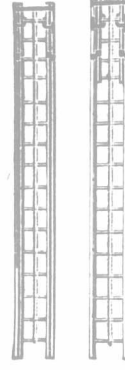
No trouble to answer questions. Write for free Catalog. **McCLUSKEY WIRE FENCE CO. (INC.)**, Box A, Windsor, Ont., Detroit, Mich., Birmingham, Eng., Paris, France. Agents wanted.

THE WAGGONER LADDER CO. (LIMITED)

Manufacturers of the celebrated

Waggoner Extension Ladder

FOR GENERAL FARM USE.



The lightest, strongest and handiest ladder in the market. The only really satisfactory extension ladder made. Reliable, durable, handsome, cheap. Made in all lengths. Also extension Step Ladders. Descriptive catalogue free. Mention this paper.

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Western Agricultural College
RIDGETOWN, ONT.

Farmers' sons who are desirous of securing a good practical training in **BUSINESS METHODS** and in **AGRICULTURAL SCIENCE** should take a course in this college. Circular and information on application to

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WOODSTOCK STEEL WINDMILLS

Galvanized or painted.

For Power or Pumping.



The **DANDY Windmill**

with Graphite Bearings, runs easy and controls itself in the storm.

GRINDERS, PUMPS, WATER TANKS, DRINKING BASINS, AND SAW BENCHES.

WOODSTOCK WIND-MOTOR CO., WOODSTOCK, ONT. (LTD.)



90 HEAD Herefords

High quality, Early-maturing, Prizewinners.

Young bulls, cows, heifers. The blood of "Corrector," "Eureka," "Robert Briton," and "Rupert," on an "Anxiety" foundation. Send for illustrated catalogue.

H. D. SMITH, COMPTON, QUE. PLEASE MENTION FARMER'S ADVOCATE.

GOSSIP.

Statistics as to the breeds of stallions in Ireland are given in the newly-issued agricultural statistics. There were in 1900, 681 Thoroughbreds, 490 half-breds, 115 Hackneys, 62 Shires, 260 Clydesdales, 382 agricultural, and 149 all others.

In the year 1900 there were 1,940 boars kept for breeding purposes in Ireland. Of these, 1,222 were of the White breeds, 76 Berkshires, 3 Tamworths, 451 cross-breds, and 188 not falling under any of these heads.

The difficulties which arose in the dairy test at the Pan-American between the American and Canadian officials and dairymen have been overcome and amicably settled by the appointment of Mr. J. Stonehouse, of the Guelph Dairy School staff, and Prof. Gooderich, of Fort Atkinson, Wis., to conduct the test, much to the satisfaction of all concerned, and matters are now running smoothly.

Durham & Cavan, Berkshire breeders, East Toronto, write: "We are well satisfied with the inquiries the *Advocate* has brought us, and it has made us many sales. Among recent shipments were a boar and sow to Mr. Chatfield, of Michigan; a boar and two sows to Mr. Garbutt, of Michigan; a boar and two sows to Mr. Cheney, of New York; a boar and seven sows to Mr. Willett, of New York; a boar to Mr. Manson Campbell, Chatham, Ont.; besides many shipments nearer home, and most of the credit of these sales must be given to the *Advocate*, as it is the only paper we have advertised in. We have some nice young stock coming on for sale, at reasonable prices."

One of the foremost breeders of high-class Shorthorn cattle in this country is Mr. Chas. Rankin, of Wyebridge P. O., near Midland, Ont. On the occasion of a recent visit, Mr. Rankin showed us six imported Scotch-bred cows that are well worth a visit to his farm to see. *Glady's*, Vol. 43, p. 352, E. H. B., a handsome red 4-year-old, bred by D. C. Bruce, Breadland, Huntley; sired by Sigmund 2nd 69583; dam Fanny B. 20th, by the Duthie-bred Dashwood, by Cupbearer. *Alice*, bred by James Brown, Crovie Farm, Banff; sired by Roslin 6774; dam Bessie Lee 2nd. *Beryl*, Vol. 45, bred by W. A. Mitchell, Auchaugethale, Whitehouse, Aberdeen; sired by Lily 61118; dam Budget. *Tilburies Duchess*, bred by John Young, Tilbouries, Maryculter; sired by Allan Gwynne 66699; dam Rossie 2nd. *Bloomers*, bred by J. B. Manson, Kilblean; sired by Merry Mason, by William of Orange; dam Saunterer Beauty. *Rothnick Rose*, bred by John Young, Tilbouries, Maryculter; sired by Allan Gwynne 66699; dam Rosie Rose. These cows, along with numerous others, both imported and home-bred, constitute a magnificent herd of Shorthorns, and one of which Mr. Rankin is justly proud, for it contains many very choice animals. Mr. Rankin is the breeder of the beautiful cow, Dorothea, winner of second prize at the International Show at Chicago, 1900. The present stock bull is *Gladiator*, imp., bred by Philo L. Mills, Rutland Hall, Nottingham, England, and imported by W. D. Flatt, Hamilton; sired by Pride of Fashion 73239, a son of the noted Highland Society champion, Pride of Morning, and his dam by the great Scottish Archer. *Gladiator* is one of the heavy, deep, thick-fleshed bulls that are so much sought after as sires, and his superiority as such is shown in the excellent calves he is leaving. Intending purchasers should see this herd.

T. S. COOPER'S JERSEY SALE A GRAND SUCCESS.

The greatest sale of Jersey cattle in America for many years was that of Mr. T. S. Cooper, at Coopersburg, Pa., on May 30th, when 108 imported Jerseys were sold at auction, realizing \$18,789, or an average of \$171.75. The 1-year-old imported bull, Golden Monplaisir, sired by Golden Lad, a magnificent specimen of the breed, brought the sensational price for a dairy bull in these days of \$3,500, and was bought by H. N. Higginbotham, Joliet, Ill. The 2-year-old bull, Imp. Golden Fern's Brown Fox, brought \$2,200. Vaneroff Farms, Wellsburg, W. Va., being the purchaser. The highest-priced cow was Golden Rosebay, a 5-year-old daughter of Golden Lad, bought by Biltmore Farms, Biltmore, N. C., at \$2,775. The next highest price was \$1,400, for Golden Beatrice, another 5-year-old daughter of Golden Lad, taken by the same buyer. Eighteen imported bulls sold for an average of \$368.89, and 50 imported cows for an average of \$318.

Mr. Cooper's sale last year of 83 imported Jerseys at an average of \$371 was considered a great success, and many were doubtful of his ability to improve on that record this year, but he promised a better lot of cattle, and the result seems to have fully justified the promise. He is an excellent judge and a master of the art of selecting, preparing and placing his cattle before the public to advantage.

CALEDON CHIEF FOR THE COLLYNIE HERD.

Recently, Mr. Duthie, of Tarves, Aberdeenshire, crossed over to the Emerald Isle for the purpose of inspecting the great champion bull, Caledon Chief, and was so pleased with him that he at once hired him for this season. Caledon Chief 7163 was bred at Caledon, and was calved on the 14th of September, 1898, so that he is only 2 1/2 years old. He has been shown five times, and has won three championships and was twice reserved for champion. He was got by the Scottish Archer bull, Laureate, out of the Sign of Riches cow, Rowena 3th, who was herself a champion, and when exhibited as a yearling at the N. E. Show in 1897, won the challenge cup for the best Shorthorn female bred in Ireland. She is of the same family as the dam of Farrier, who was sold last year for \$1,300 in Buenos Ayres, so that Caledon Chief is just what Mr. Cameron expected to produce from such ancestors. Caledon Chief is a rich roan, with abundance of the best quality of hair, a perfect head and horn, wonderfully level back, and his quarters beautifully turned. He is exceptionally broad, with a perfect under line, and is as gay and proud looking as any of the red deer in the Caledon Park, though he is over 18 cwt. at 30 months old. He shows great substance, quality, symmetry, and vigor, and it is seldom that such a combination is so found in any animal. The selection of Caledon Chief as a stock bull for the Collynie herd is the greatest honor that could be conferred upon him, and we congratulate not only the breeder, but also the Emerald Isle, for being able to breed a sire that would take the eye of such a discerning breeder as Mr. Duthie.



O. K.

- 6 imp. Bulls, 14 months to 2 years.
- 20 imp. Heifers, 2 and 3 years old. Safe in calf.
- 2 Home-bred Bulls, 12 and 16 months old.
- 10 Home-bred Heifers, Scotch topped.
- 25 Choice Yearling Ewes, from imp. Ram.

W. G. PETTIT & SON, Freeman P. O., Ontario.

J. & W. B. Watt, SALEM, ONT., BREEDERS OF

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 **Barmpton Hero 324, Young Abbotsburn 6236, Challenge 2933, Perfection 9100, Lord Lansdowne (imp.) 2712, Clan Stuart 14381, Canada 19536, Sittytton Chief 17069, Royal Sailor (imp.) 18559, Royal George 28513, Clipper King 16293 and Judge 24119**, 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 **Rosa Cloud 31317**, by **Lord Gloster 26995**, and out of **Melody 21992**, 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.

HILLHURST SHORTHORNS

THREE COLLYNIE-BRED BULLS IN SERVICE:
Scottish Hero, Joy of Morning, Scottish Beau,
By **Scottish Archer.** By **Pride of Morning.** By **Silver Plate.**

The herd comprises straight Scotch, Cumberland, Gloucestershire, and Canadian strains; bred to produce the best and most economical **MEAT and MILK MAKERS.**

Shropshire and Hampshire Down Sheep.

M. H. COCHRANE, COMPTON CO., P. Q.,
G.T.R., 117 MILES EAST OF MONTREAL. HILLHURST STATION.

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

SCOTCH IMPORTED.

Young imported cows with calves at foot for sale. A number of the calves are imported in dam.

Some of the families represented in the herd are as follows:

160
Head

AUGUSTAS	ROSEBUDS	MEDORAS
CLARAS	BRAWITH BUDS	MINAS
NECTARS	LANCASTERS	VILLAGE MAIDS
GOLDIES	MAYFLOWERS	BEAUTYS
JENNY LINDS	AMARANTHS	MISS RAMSDENS
VICTORIAS	BUTTERFLYS	FLOKAS
MATILDAS	CLIPPERS	RAGLANS
BESSIES	EMMAS	LUSTRES
CROCUSSES	BROADHOOKS	GEMS OF THE VALE

160
Head

Herd headed by the Imported Bulls, GOLDEN DROP VICTOR and PRINCE BOSQUET.

IF INTERESTED, COME AND SEE US, OR WRITE

H. CARGILL & SON,

CATALOGUE FREE.

CARGILL, ONTARIO, CANADA.

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.

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. Agt. for Manitoba: W. R. ROWAN, 132 Prince St., Winnipeg.

I WILL IMPORT

Shorthorns and sheep. Orders sent to me in care of Alfred Mansell & Co., College Hill, Shrewsbury, Eng., until July 1st, will receive careful attention.

ROBERT MILLER, Stouffville, Ontario.

For Sale: 3 Shorthorn bulls of first-class breeding, sired by such noted bulls as Scotland's Fame (imp.) and Bold Britain, bred by John Isaac, Markham. Also some choice cows and heifers. F. A. GARDNER, Britannia, Ont. PEEL COUNTY.

Shorthorns FOR SALE:

8 Yearling and two-year-old Shorthorn heifers, in calf to imp. bull.

PRICES MODERATE.

on G. A. BRODIE, Stouffville Station, Bethesda, Ont.

BONNIE BURN STOCK FARM 40 rods north of Stouffville Station, Ont., offers two strong, lusty SHORTHORN BULLS, fit for service. Also two year-old heifers with calf, Shropshire sheep all ages and kind.

D. H. RUSSELL, Stouffville, Ont.

For Sale Two choicely-bred SHORTHORN BULLS, 12 and 18 months; also cows and heifers, with calves at foot and bred again to imported Red Duke—36984—(77585). 51 head to select from. DAVID MILNE & SON, Ethel, Ont.

SHORTHORNS: We are offering for sale 8 bulls, from 8 months to 3 years old, by Mungo 2nd and Scottish Bard. Also a few cows bred to Baron's Heir.

ROBT. GLEN, Owen Sound, Ontario.

Live Stock Labels Send for circular and price list. R. W. James, Bowmanville, Ont.

YOUNG SHORTHORNS FOR SALE Our present offering includes several choice young bulls fit for service, sired by "Scotland Yet," and out of Warfare (imp.) dams; also bull calves, from Blue Ribbon (imp.), and out of Royal George cows. Inspection and correspondence solicited.

A. & D. BROWN,

M. O. RAILWAY: IONA, ONTARIO.

WOODSLEE STOCK FARM.

FOR SALE: 3 Shorthorn bulls, 15 months old, two reds and one roan. Well developed, healthy, and thick fleshed.

S. G. LITTLE, Hagerman, Ont.

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Unlonville Station, G. T. R.

RIG. CASTRATION.

DR. J. WILSON, V. S. WINGHAM, ONT., Specialist in the castration of ridgelings. Terms and testimonials on application.

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PLEASE MENTION FARMER'S ADVOCATE.

The National

Cream Separator,

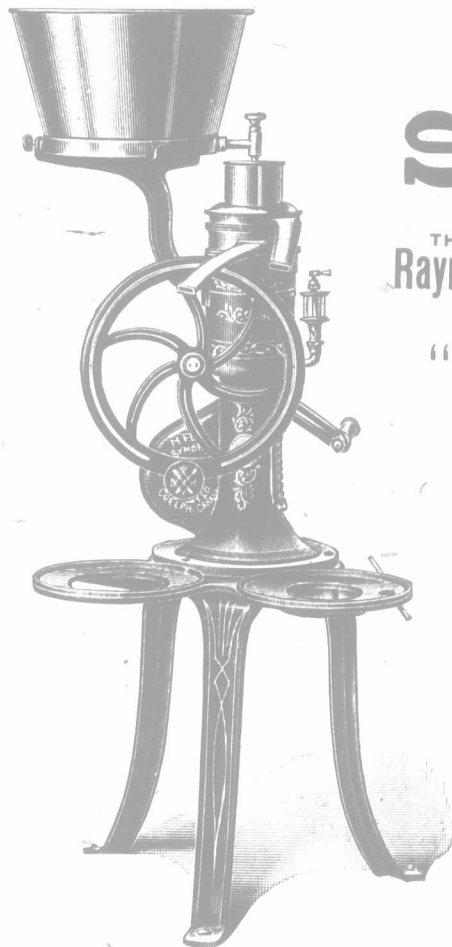
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Raymond Mfg. Co. of Guelph, Can.

ALSO MAKERS OF THE CELEBRATED
"Raymond Sewing Machine."

REPORT FROM WATERLOO COUNTY.
TO THE RAYMOND MFG. CO., GUELPH, ONT.:

GENTLEMEN,—I wish to make a statement that should be of some encouragement to your firm just at this time when your Company is investing a large amount of capital in shops and machinery for the purpose of manufacturing the "National" Cream Separators. I bought a "National" in December, 1898, and received some practical instructions at the O. A. College, Guelph, in the way of making good butter and putting it in neat form for market. The first year I had nine cows and sold \$15.00 worth of butter from each cow, besides keeping the house in butter and having the skim milk fresh, sweet and warm for the calves. In 1900 I received higher prices for the butter, and made \$52.00 per cow from 12 cows, or a total of \$624.73. I market my butter in Toronto and Woodstock, and can find ready sale for more than I can make. Although I am a farmer, I have sold 93 "National" Cream Separators since I got my own, two years ago. The "National" is profitable to a farmer, whether he makes the butter at home or sends the cream to the creamery. I use a Babcock tester, and find the "National" cannot be beat at close skimming. Wishing you success, and hoping you will be able to supply your agents with machines as fast as we need them, I am,

Respectfully yours,
Tavistock, March 20, 1901. CHAS. I. ZEHR.



"NATIONAL" NO. 1 HAND POWER.
Capacity, 330 to 350 lbs. per hour.

Joseph A. Merrick,

BOX 518, WINNIPEG, MANITOBA, Gen. Agt. for Manitoba, N.-W. T., and B. C.

Please Mention The Farmer's Advocate.

SHORTHORNS.

FOR SALE.—Bulls: Two 1 year old and one 8 months. A few heifers of choice breeding and superior quality. AMOS SMITH, Trowbridge P.O., Listowel Stn. om

SHORTHORN BULLS AND HEIFERS FOR SALE.

Choice quality and best Scotch breeding. Imported and home bred. Imported Knuckle Duster (72793) and imp. Royal Prince head the herd, which has furnished the Provincial Fat Stock Show champion three out of the last five years. Catalogues on application.

H. SMITH, HAY, ONT.
Exeter Station on G. T. R., half a mile from farm. om

J. R. McCallum, Iona Station, Ont.
Offers young SHORTHORN BULLS and HEIFERS, of choice breeding, at reasonable prices. Iona Stn. on M.C.R., half a mile from farm.

SHORTHORN CATTLE AND LINCOLN SHEEP.

Imp. Prime Minister at head of herd. Seven young bulls for sale—good ones. Also a few females. Stud rams all imported from H. Dudding, Esq.; the same blood as the 1000-guinea ram.

J. T. GIBSON,
DENFIELD, ONT.

Maple Lodge Stock Farm ESTABLISHED 1854.

SHORTHORNS—Grand young bulls and the first-prize milking strains. Imported Knuckle Duster and Imported Sir Wilfred in service.

LEICESTERS—First-prize flock of Canada for past six years. Imported and home-bred for sale.

ALEX. W. SMITH,
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HAWTHORN HERD OF DEEP-MILKING SHORTHORNS.

We are offering 8 young bulls for sale, of first-class quality, and AI breeding. om

Wm. Grainger & Son, - Londonboro, Ont.

SHORTHORNS: We are offering 3 extra choice yearling bulls, all from imported sires, straight Cruickshank, with Lavendar and Miss Ramsden dams. om

THOS. ALLIN & BROS., Oshawa, Ont.

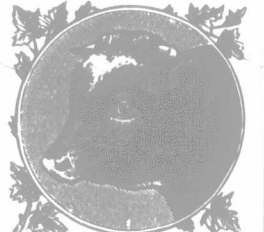
SHORTHORNS (imported)

3 BULLS: 1 two-year-old, 2 one-year-olds. A few cows and heifers om

THOS. RUSSELL, EXETER P. O.

SPRING GROVE STOCK FARM

Shorthorn cattle and Lincoln sheep. Herd prize and sweepstake at Toronto Industrial Exhibition, 1897 and 1898. Herd headed by the Marr Missie bull, Imp. Wanderer's Last, last of the get of the great sire, Wanderer, of the Cruickshank Brawwith Bud tribe. High-class Shorthorns of all ages for sale. Also prizewinning Lincolns. Apply om



T. E. ROBSON, ILBERTON, ONT.

High-class Shorthorns and Yorkshire Pigs.

Just now three 10-months bulls, got by imp. Sirius 15281, great big massive fellows with lots of flesh and quality—away above the average. Also a few superior young cows in calf, and 5 or 6 heifers. We are looking order now for the spring trade. Can ship some in six weeks. om

JAS. McARTHUR, GOBLE'S, ONT.
Goble's Station, G. T. R., 10 miles east of Woodstock, 2 miles from farm. Visitors met. om

JOHN DRYDEN, BROOKLIN, ONTARIO.

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

GOOD QUALITY AND CHOICE BREEDING.

Clover Leaf Lodge HERD OF Shorthorns

A number of choice young bulls, heifers and cows, excellent milking strains. Correspondence invited. R. CORLEY, Belgrave P. O., Ont., and G. T. R.; Wingham, C.P.R. om

T. DOUGLAS & SONS, STRATHROY, ONT., BREEDERS OF

SCOTCH SHORTHORNS.

100 HEAD TO SELECT FROM.
Offer for sale 8 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. om

FOR SALE.

SHORTHORNS—Young bulls and heifers. Leicester and Southdowns, both sexes. Berkshires—Young boars fit for service, young sows in pig and ready to breed. Also choice seed peas. Write for catalogue or come and see.

E. JEFFS & SONS, Bond Head.

A LOST COW.

That can never happen where the cows wear our patented

Swiss Cow Bells

Made from finest quality of Swiss Bell Metal, they are light but strong and lasting. Musical in the extreme. They add to the appearance of herd besides making them tame and tractable. 4, 5 and 6 in. in diameter. Strap with each. Direct in sets of 3 to introduce. Circulars on Cows, Sheep and Turkey Bells Free. Bevin Bros. Mfg. Co., East Hampton, Conn.



SHORTHORNS FOR SALE

Young stock of both sexes, reds and roans. JOHN R. HARVIE, ORILLIA, ONT.

JAS. DORRANCE, SEAFORTH, ONTARIO.

BREEDER OF Shorthorn Cattle and Berkshire Pigs
Young stock always for sale. om

HOLWELL MANOR STOCK FARM.

SHORTHORN CATTLE, SHROPSHIRE SHEEP, YORKSHIRE SWINE, SCOTCH COLLIE DOGS, BARRED PLYMOUTH ROCKS.
Young stock of both sexes for sale, imported and home-bred. Eggs for sale. om

D. G. GANTON, ELMVALE, ONT.

SPRINGFIELD FARM

HERD OF Shorthorns, Oxfords, AND Berkshires.

Young bulls and Heifers on hand. Also a few choice Berkshires.

CHAS. RANKIN, Wyebridge, Ont. SIMCOE Co. om



Aberdeen - Angus Cattle.

Several thoroughbred bulls for sale. Apply to the MANAGER, Grape Grange Farm, or to

om C. W. HARTMAN, Clarksburg, Ont.

Maple Glen Stock Farm.

The home of officially tested, Advanced Registry, dairy test and showing-win HOLSTEINS. A grandsoning herd of Sylva HOLSTEINS, of Carmen Sylva now for sale. Price is in keeping with breeding and performances. om

C. J. GILROY & SON, Brookville, on C.P.R. or G.T.R. Glen Buell, Ont.

WHERE ARE THE BEST HOLSTEINS?

Have you read of Lalith Pauline DeKol's wonderful record? Her sire was bred here. Have you read of Susie DeKol's record? She was sired by a son of our great cow, DeKol 2nd. We can give our customers more of the blood of the greatest producers than can be found in any other herd. Look over official reports and see where the sires of the great producers were bred. We have over 30 young bulls for sale, and a large number of females. Animals shipped to Canada are accompanied by certificate of health, and are subject to no duties or quarantine. If you want the best, write or visit—

BROOKSIDE HERD. om

H. Stevens & Sons, Lacona, Oswego Co., N.Y.

INADILLA FARM.

F. L. GREEN, GREENWOOD, ONTARIO, BREEDER OF

St. Lambert Jersey Cattle and Yorkshire Pigs.

My Jerseys are bred for business. Both sexes for sale. I offer an extra choice bull, dropped Feb. 27th, 1901, for sale, a son of Queen May of Greenwood, who made 18 lbs. butter in 7 days, and is at Pan-American now. A lot of very choice Yorkshires on hand. Also Barred Rocks, Light Brahmas, and Bronze turkeys. Prices right. om

BRAMPTON JERSEY HERD.

For sale: 2 yearling bulls; 8 bull calves, sired by Brampton's Monarch (imp.), and out of first-class cows. A number of cows and heifers in calf. Also some unregistered cows and heifers, fresh-calved and springers—grand family cows. om

B. H. BULL & SON, BRAMPTON, ONT.

SPLendid Jerseys for Sale.

Two bull calves and two heifer-calves that will equal anything I know of. Age, 1 to 3 months; price, \$30 to \$60. One yearling heifer, blood of old Massena, 900 pounds butter in one year, \$100. One yearling bull, extra breeding, \$80. All registered. Crated and put on express car.

MRS. E. M. JONES, Box 321. BROCKVILLE, ONT., CAN.

GLEN ROUGE JERSEYS.

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

Does Quality Count With You?
If so, We Can Interest You . . .

THREE LEADERS FOR 1901:

F. & W. "WINDSOR" DISC HARROW
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These Machines will Save You TIME and MONEY.

THE LITTLE MACHINE THAT CUTS THE BIG STUFF. NO BINDER WAS EVER MADE THAT WILL DO BETTER WORK OR MORE OF IT.

Don't forget that we also manufacture a full line of Light Single Reapers, Steel Plows, Horse Rakes, Corn Cultivators, Spring-tooth Harrows, Potato Scufflers. A post card, with your name and address, to any of our branches will bring you one of our new 1901 illustrated catalogues, now ready. It will pay you to get one.

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Head Office and Works: Smith's Falls, Ontario

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THE COLUMBIA THRESHER

A time and money saver for the farmer. A small Thresher of great capacity, that can be run by light power and operated by few men.

Write for Illustrated Catalogue and Price List—FREE.

SWEEP AND TREAD POWERS

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BELLE CITY FEED and ENSILAGE CUTTER

with blower carrier attachment. All sizes. Catalogue and latest book about ensilage sent free on request. Write for it.

LITTLE'S PATENT FLUID SHEEP DIP AND CATTLE WASH

NON-POISONOUS

THE ORIGINAL Non-Poisonous Fluid Dip

Still the favorite dip, as proved by the testimony of our Minister of Agriculture and other large breeders.

For sheep. Kills ticks, maggots; cures scab; heals old sores, wounds, etc., and greatly increases and improves growth of wool.

Cattle, horses, pigs, etc. Cleanses the skin from all insects, and makes the coat beautifully soft and glossy.

Prevents the attack of Warble Fly.

Heals saddle galls, sore shoulders, ulcers, etc. Keeps animals free from infection.

No danger, safe, cheap, and effective

Beware of imitations.

Sold in large tins at 75 cents. Sufficient in each to make from 25 to 40 gallons of wash, according to strength required. Special terms to breeders, ranchmen, and others requiring large quantities.

SOLD BY ALL DRUGGISTS. SEND FOR PAMPHLET.

Robert Wightman, Druggist, Owen Sound. Sole agent for the Dominion. om

Ayrshire Bulls: Write to J. YULL & SONS, Carleton Place, for special prices on Ayrshire bulls from 14 years to 6 months. Four over 15 months, fit for service, from special milking stock. Sired by prize bull, Jock of Burnside—1684—, also females of all ages. Shropshire sheep of all ages; a number of fine ram lambs. Berkshire pigs of either sex, of the best bacon type. B. P. Rocks. om

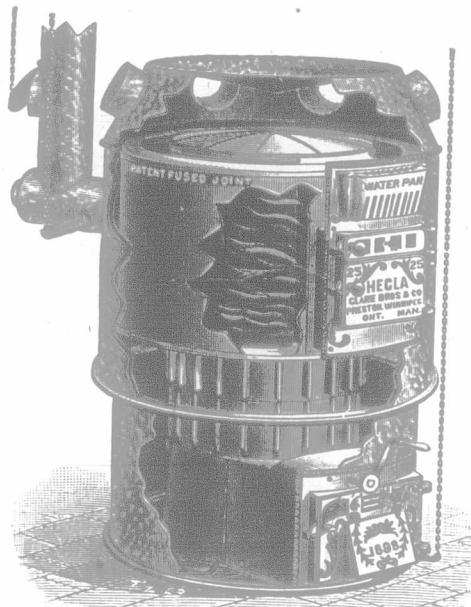
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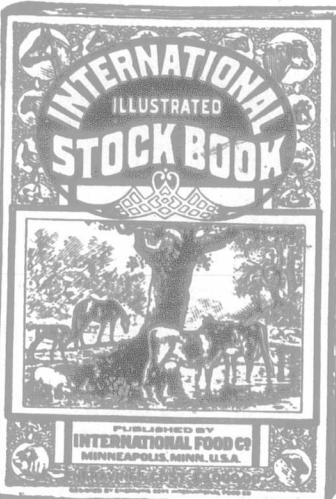
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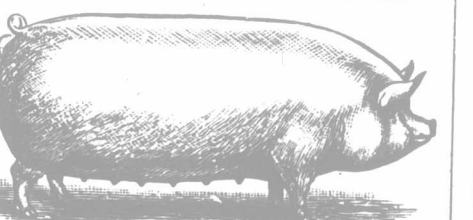
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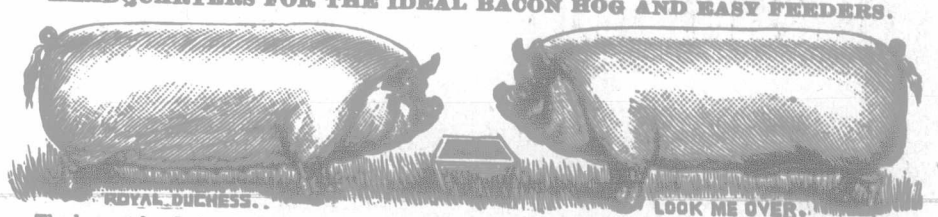


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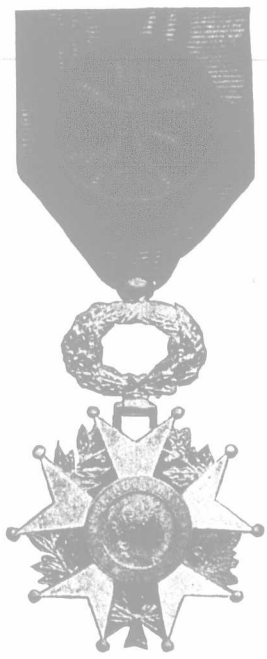
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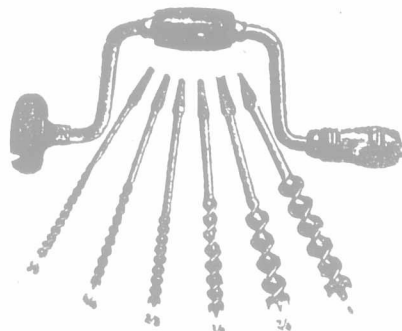


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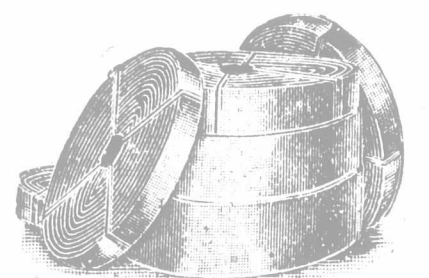
CAPACITY.		
No.	Capacity	Churns from
0	6 gal.	1 to 3 gal. cream.
1	10 "	1 to 5 "
2	15 "	2 to 7 "
3	20 "	3 to 9 "
4	26 "	4 to 12 "
5	30 "	6 to 14 "
6	40 "	8 to 20 "

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