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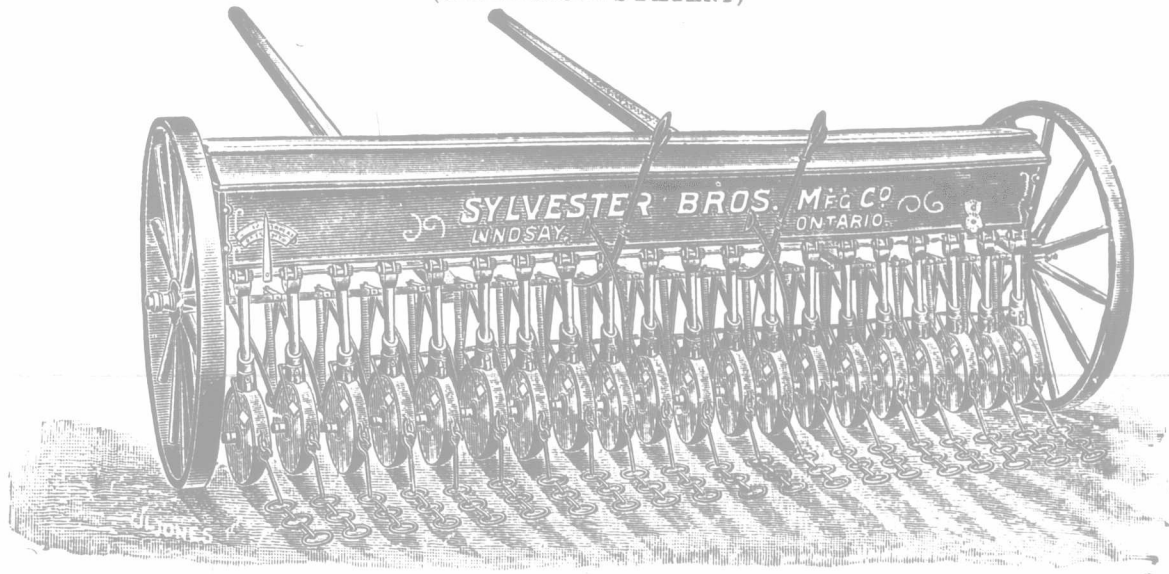
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- Creelman—March 7.
- High River—March 7.
- Saskatoon—March 7 and 8.
- Stoughton—March 8.
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- Okotoks—March 8 and 9.
- Arcola—March 9.
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- Saltcoats—March 10 and 11.
- Didsbury—March 11.
- North Portal—March 13.
- Olds—March 13.
- Tantallon—March 13.
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J. R. O'NEWMAN,
Deputy Commissioner.

Department of Agriculture, Regina, N.-W. T.,
February 14, 1905.

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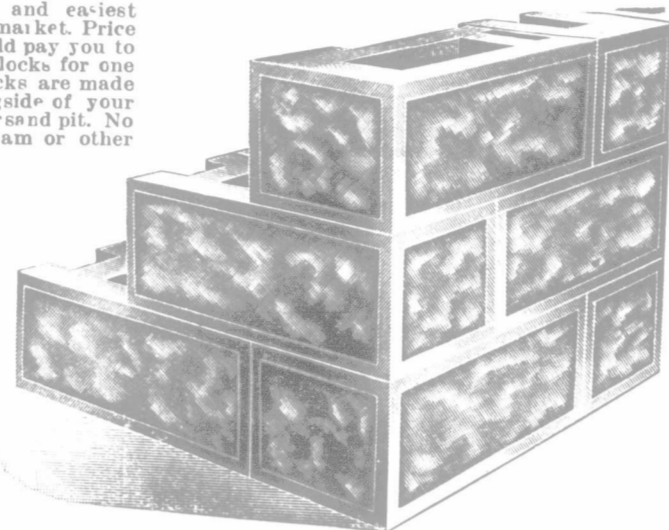
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THE SPICE OF LIFE.

Israel Zangwill, the author, at the Franklin Inn, a literary club in Philadelphia, told a story of a crafty political boss.

"This boss," he said, "desired votes for his candidate and stopped at nothing to get them. He sent for a poor man one day, and asked for his vote.

"Oh, no," the poor man said, firmly. "I can't do that. I am already promised to the Opposition."

"You are, eh?" said the boss. "And how much is the Opposition paying you?"

"Twenty dollars," the poor man answered.

"The boss assumed an expression of disgust.

"That was a low price, my friend, an unfairly low price," he said, "to give you for your vote. We'd have done better by you. We'd have given you twenty-five dollars."

"It was not too late. The election was two days off. The poor man wavered.

"Would you?" he said. "Would you?"

"To be sure we would," said the boss. "Here, it isn't too late yet. Give me the other party's twenty, and I'll give you our twenty-five now."

"The poor man made the exchange joyfully, and thus the crafty boss had the satisfaction of causing his opponents to pay four-fifths of one of his own bribes."

HOG NOTES.

Thrift, not hunger, should prompt exercise.

Sows that have very nervous temperaments should be avoided.

Growing pigs should have a dry, warm, bed, kept clean and free from dust.

Keep the fattening hogs away from the manure heap.

Wet stalls and sheds are always filthy, and filth breeds disease.

Do not make growing pigs' slops too rich, nor make too sudden changes in their diet.

Whenever a farmer feeds a pig beyond nine months, he is needlessly throwing away his profits.

If lean pork is desired, we must begin to cultivate the grazing hog, and the disposition to exercise must be encouraged.

The acid contents of an old swill barrel is not necessary to produce sweet and healthful pork.

Hogs can live in filth, and eat and drink filth for a while, but the chances are that they will not live so very long.

Close confinement being an unnatural condition to swine, it is liable to lead to sterility.

The brood sow should receive carefully selected and concentrated food, containing the full maximum of nutritiousness.

You can help growing pigs along in two ways; one by feeding the sows liberally on milk-producing foods, and by learning the pigs to eat themselves.

So far as is possible it pays to keep old sows for breeding. They may be bred twice a year and will produce litters of constantly increasing value.

To give the pigs a good start in life, the sow must be well fed, both before and after farrowing. It is not necessary that she be fat, but very essential that she keep in good flesh.

Never let hogs or any other animals shift for themselves while young, and think you can make up for such neglect at the end.

A most excellent slop can be made of four parts wheat bran and one part linseed meal mixed dry and then made into slop with sweet skim milk.

Charcoal or coarse coal and wood ashes should always be kept where the hogs can reach them. It is one of the best preventives of worms.

A hog as well as any other animal will thrive best when its surroundings are clean. A clean, dry pen is a profitable investment.

Even with fattening hogs, it is a good plan to feed a liberal ration of good slop before giving the grain at each meal. But it should be rich and not simply dish water.

March is often a boisterous month, and if sows are to farrow during this month, especial care should be taken to provide warm, dry quarters.—Live-stock Journal.

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VOL. XL.

REGISTERED IN ACCORDANCE WITH THE COPYRIGHT ACT OF 1875.

NO. 650.

WINNIPEG, MAN. MARCH 8, 1905. LONDON, ONT.

Editorial.

The Manitoba Live-stock Breeders' Convention.

After two weeks of curling, and the invasion of a horde of curlers, Winnipeg settled down to receive, during the last week in February, the staid, sober farmer representatives, dubbed by politicians, the backbone of the country, but generally known as the live-stock breeders of the Province.

The horse-breeders conducted a quiet, orderly and harmonious meeting, as will be seen by the report in another column, and gave some attention to the matter of enrollment of stallions, and veterinary inspection of all such standing for hire. The Territories have now a stallion-enrollment ordinance, which has accomplished and promises to accomplish a vast amount of good, and the Manitoba horse-breeders feel that a combination of the Lien Act and some enrollment plan would be feasible and desirable, an opinion to which we subscribe. The proposition to enforce a veterinary inspection of stallions is quite radical, and we opine the country is not yet ready for it, but think such might well be applied to stallions for breeding purposes, admitted free of duty at the various ports of entry; beyond that we should not care to go at present.

The cattle-breeders' meeting was livelier, and while it cannot be called inharmonious, certain resolutions and notices of motions, some ostensibly to facilitate business, precipitated the meeting into discussions which wasted a lot of time. The cattle-breeders would do far better to adhere to the system of open nominations, the names being plainly displayed on a blackboard, and have their elections by ballot, the man getting the majority of votes cast to be considered elected, in place of requiring one to have fifty per cent. of the total vote. Neither the fate of the live-stock industry, nor the future of the country, depends altogether on who is elected president or vice-president, and so long as a live, far-seeing secretary is elected there is little need for fear by the members, if they will keep in view the desirability of introducing new and young blood to the various offices from time to time.

A large number of new faces were seen at the meeting to discuss the nationalization of the records, which project was unanimously endorsed by resolution.

Several other important resolutions were passed, including one which practically endorsed the position taken by this paper on the administration of the Dominion Experimental Farms in the West.

Score-card work was handled this year better than ever before, the convention having the advantage of having before it superb animals of three beef breeds (Aberdeen-Angus, Hereford and Shorthorn), contributed by Messrs. Yule, Chapman and Sam Martin.

The Live-stock Commissioner addressed the meetings on topics connected with his work, and explained the method by which equitable representation for each Province would be had in the different record associations. The Angus breeders of Manitoba and the N.-W. T. met the Commissioner, and asked him to take control of the recording of the breed in Canada. It was decided by the cattle-breeders to hold a combination sale of live stock, leaving the details and exact date to be settled by the executive.

The sheep and swine breeders' meeting was uneventful from the standpoint of business, the wolf question being discussed at length. The resolution regarding the experimental farms' work with live stock passed by the cattle-breeders, was added, calling upon the Director to see that build-

ings were provided at Brandon suitable for live-stock experiments. The city tendered the usual banquet to the visiting stockmen.

To Assist in Controlling Weeds.

The question of weed destruction and control is the all but universal problem in Manitoba, and it helps nothing toward the mastery of the situation that grain-growing is the most popular branch of farming in this Province. Successive crops of spring-sown grains provide the most favorable opportunity for such weeds as wild oats, French weed, Canadian thistle, etc., to produce seed and to propagate themselves from year to year. The situation has become positively serious, and the public is open to any suggestion and will support any practical scheme that will assist in the war on these parasites of the grain field.

A hint as to the course to pursue comes from the State of Texas. Down there the U. S. Department of Agriculture is establishing demonstration farms, apart and distinct from experimental farms, for the purpose of demonstrating the system of farming it will pay best to pursue in that State. This idea applied to Manitoba would mean that the Government select certain farms throughout the Province to be used to illustrate what methods of cultivation and cropping would be most practical and profitable to follow, in order that the invasion of weeds might be checked and the minimum grown. These farms would not necessarily be owned by the Government, for there are plenty of such places throughout the Province where weeds are being controlled, but the detail work of each farm might be compiled by the Department, and a report issued weekly or fortnightly during spring, summer and fall.

Spring Stallion Shows.

At the recent convention held in Winnipeg, the question of holding a Provincial spring stallion show was mooted, and the opinion expressed that the time was ripe for such a show. The holding of a Provincial stallion show is of sufficient moment to merit considerable thought before it is ventured upon. Shows of this character, no doubt, do considerable good, but it is an open question whether this is the best way to advance the interests of a breed or the horse-breeding industry of the country. Ontario has had an experience with Provincial spring stallion shows that is not altogether encouraging. They were inaugurated and first held with the object of facilitating trade, particularly among the small breeders, but it was very soon evident that the larger importers reaped all the benefits in the way of sales, and these, again, claim that the extra feeding, fitting and expense of exhibiting is out of proportion to the business done.

Spring stallion shows that would do considerable good, and that we would like to see encouraged, are those of a more local nature, where the horses that are to stand for the patronage of a certain district would be compared, and where the awards would be of interest and value to every horse-owner in the community. Such shows would stimulate local ambition to provide the best stallion purchasable, and would discountenance the use of inferior sires. These shows could be held just before seeding, when the horses would be fitted for the season. The work of conducting them would be light, and they could be held in one day. By holding shows of this nature, it would not be long before certain localities would become famous for certain classes of horses, and these in turn would compete with each other at the larger fairs. This would still further arouse interest, and produce a far-reaching effect for the efforts expended.

The Manitoba Experimental Farm and Live Stock.

The recent editorials in this paper, dealing with the Western Experimental Farms, have advocated more experiments with live stock as part of the scheme to improve things at the farms, so that Western farmers may be benefited thereby. While in earnest regarding such need for live-stock experiments, we would draw attention to the inadequate provision in the way of buildings made for conducting such experiments at the Brandon Farm. The buildings for live-stock purposes at the above farm may be summed up in one barn (which is 111 feet by 50 feet, on a stone basement 10 feet, and has accommodation for 40 cattle and 12 horses—vide report 1890), such as may be seen on many Western farms today, some of which are not more than 320 acres in extent, and on which only sufficient stock is left for working purposes. The barn at Brandon houses the horses and cattle, and is even too small for the number of stock which should be kept on any up-to-date farm of its size.

It looks very bad to any thinking person that in a system of farms instituted with a view to improve the agriculture of a country, at one or more of these farms ordinary provision is not made to house the number of stock that should be kept for working and experimental purposes, and we might here add that a similar condition of things to that at Brandon exists at the B. C. farm, as seen by editors of this paper.

The farmer who is convinced of the necessity of keeping live stock as part of his farming operations, is so largely because of his recognition of the fact that manure is necessary to keep up the fertility of the land. Such a farmer stocks up to what he considers the limits of his holding, and erects buildings to house the animals, and in so doing demonstrates that he is up-to-date. In a previous issue we took the charitable view that the Director was content to keep up with agriculture in the West, but are forced to admit that if the provision made for live-stock work at Brandon is a fair criterion of his idea of the importance of such work, then he is hopelessly behind the times in his ideas as to the needs of Western agriculture, unless we except poultry, the provision made for which is probably sufficient, seeing that two poultry stations (Morden and Virden) have been established in the Province.

We do not suggest the erection of elaborate buildings or edifices on the church order of architecture, but are convinced that the farms specified should have these pressing needs attended to, and would suggest that the farmers' organizations memorialize the Minister of Agriculture regarding this matter, and that individual farmers write their representatives at Ottawa, and instruct them to look into these things.

The keen interest manifested by stock-breeders and grain-growers in the work of the conventions recently assembled at Brandon and Winnipeg augurs well for the future of farming in Western Canada. The resolute firmness of their reasonable demands for their rights in the matter of grain-shipping privileges, fair rates of transportation, for cheap lumber for building purposes, and of the breeders for adequate representation on the boards of the so-called Dominion Stock-breeders' Associations, and a voice in the distribution of their funds, will doubtless serve to emphasize the fact that they mean business, and will have those rights or know the reason why.

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THE FARMER'S ADVOCATE AND HOME MAGAZINE.

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AND N.-W. T.

PUBLISHED WEEKLY BY
THE WILLIAM WELD COMPANY (LIMITED).

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A. G. HOPKINS, D. V. M., B. Agr., EDITOR.
F. S. JACOBS, B. S. A., ASSOCIATE EDITOR.

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Horses.

How Draft-horse Breeding is Handicapped.

Almost any farmer can afford to own a pair of pure-bred draft mares, or, at least, high-grades, that will more than pay their way in work on the farm, and, if bred to the right kind of a stallion, will produce valuable colts. These same colts will go to work the spring they are three years old, and much more than pay the cost of their rearing. At six years old they are ready for market, and will yield a handsome profit to the producer, for there is never a surplus of really good horses.

A great drawback to the business of horse-breeding is the dearth of really good breeding stallions. In my immediate neighborhood there is not a single good, first-class draft stallion, to my knowledge, within a radius of ten miles. There are several reasons for this. For instance, a few years ago an agent for an importing firm came into the neighborhood and organized a company of farmers, twenty-five of them, who put in \$100.00 each, and purchased a horse of the firm which the agent represented—\$2,500 for a horse that would have been dear at \$500. The horse did not prove a good foal-getter, and after a few years of wrangling and dissatisfaction among the shareholders the horse was sold at public auction for \$90.00. Now, this is not an extreme or unusual case, as I personally know of three such cases within the circle of my acquaintance. Such business methods are calculated to injure rather than help the horse-breeding industry. The common result is that farmers are shy of these high-priced horses, and they breed their mares to the home stallions at a less fee, and produce a horse for which there is no market demand. Let importers and stallion-breeders offer our farmers good stallions at a reasonable price, and in a few years the Ohio farmer will produce as high a type of market horse as can be found—C. B. Stewart, at Ohio Horse-breeders' Association.

Horse-breeders' Convention.

The annual meeting of the Manitoba Horse-breeders' Association was held in Winnipeg on Tuesday, February 21st, with the President, Mr. W. W. Fraser, of Emerson, presiding. In his annual address, Mr. Fraser said he was delighted to see so many manifesting an interest in horses by attending the judging classes during convention week, but regretted that more of the younger men of the Province did not avail themselves of this means of acquiring the power of knowledge. He also deplored the continued practice by dealers of syndicating inferior stallions for very long prices.

The secretary, Mr. Geo. H. Greig, read the minutes of the last meeting, after which Mr. Andrew Graham asked if there was no explanation of the fact that the proceedings of last year's convention were not published. The Deputy Minister of Agriculture, Mr. W. J. Black, promised to look into the matter.

At a meeting of the executive in April, the prize list, rules and regulations governing the Dominion Fair, held at Winnipeg, were very carefully revised, and many amendments to the rules, and additions to the prize list throughout the horse department were recommended, special emphasis being laid upon the importance of offering large prizes in the class for Clydesdales. The use of silk ribbons in place of the old cards was also urged, and the Association's silk rosettes were offered as champion prizes in the pure-bred classes. The judges of all the horse classes at the Dominion Fair were secured on the recommendation of the Association, as was also the heavy-horse judge at Brandon.

The sale barn, of which there was some promise



Stephen Benson, Neepawa, Man.

President Manitoba Horse-breeders' Association for 1905.

last year, is now an accomplished fact, the C. P. R. having completed a very suitable building, 50 by 170 feet, with accommodation for 78 head of horses or cattle, and a large sale-ring in amphitheatre style. This building is located at the west end of the stock-yards, and has been placed at the disposal of the live-stock associations. Members of the executive visited the building at the time of the meeting last December, and the advisability of using it for winter meetings was fully discussed, but it was finally decided that until the street car line is extended, that locality is too distant for other purposes than sales. The question of holding a spring stallion show was mooted, but no action was taken upon it.

Dr. S. J. Thompson, as representative of the Horse-breeders' Association to the Winnipeg Fair, reported a large and satisfactory show, despite the fact that much work had to be done to get the ground in shape. He particularly urged upon the convention the necessity of having the racing horses stabled apart from the breeding classes, on account of the character of the stablemen who follow the racing stables. Mr. Henry Nichol, representative at Brandon Fair, and other representatives supported this suggestion. A committee was finally appointed to frame a resolution to be presented to the Winnipeg Fair Board, regarding the allocation of stalls and the providing of more exits from the stables.

Under new business, the secretary called attention to the weakness of the Lien Act, in that it does not compel the enrollment of stallions, and recognizes studbooks of doubtful standing. Dr.

McGilvray, of Binscarth, endorsed the idea of the revision of the studbooks, and urged the inspection for soundness of all stallions. Mr. G. N. Stewart, Deloraine, supported this idea, but Mr. Stephen Benson, of Neepawa, although favoring compulsory enrollment, thought farmers and breeders should inspect the stallions themselves for soundness. Dr. A. G. Hopkins, of the "Farmer's Advocate," thought the two ideas might be reconciled, and a middle course pursued, providing for the enrollment of all stallions, and the inspection of those coming in duty free.

The attention of the Association having been drawn to the resignation of Mr. Heubach from the management of the Winnipeg Exhibition, the convention passed a resolution expressing its regret and appreciation of Mr. Heubach's efforts on behalf of the horsemen.

The election of officers for the following year resulted as follows: President, Stephen Benson, Neepawa; Vice-president, W. G. Washington, Ninga. Representatives of Breeds—Clydes, A. Graham, Pomeroy; Shires, J. J. Whiteman, Boissevain; Percherons, Lowe, Killarney; Hackneys, John Wishart, Killarney; Coachers, Dr. Stephenson, Carman; Thoroughbreds, R. I. M. Power, Carberry; Standard-bred, Dr. Little, Winnipeg; Suffolk Punch, Graham Galbraith, Brandon. Representative to Winnipeg Fair Board, Dr. S. J. Thompson, Winnipeg; Brandon Fair Board, Henry Nicholis. Representatives to other fair boards to be appointed by the executive.

The Functions of the Pastern.

The pastern, next in importance to the foot, should be oblique—sloping—and springy, viewed from the side. It is made up of the long or pastern bone, articulating at its upper end with the lower end of the cannon bone at the ankle or fetlock joint, the smaller pastern bone bearing on this at its upper end and below with the coffin-bone enclosed in the hoof, and should stand at an angle of 45 degrees with the ground surface of the foot. It is plain to be seen—and all experience bears unquestioned testimony—that this sloping of the pastern in conjunction with the cushion structure of the frog is the main dependence of the horse from all jars in movement and concussion of the joints of the feet and legs to prevent founder and navicular troubles. The pastern bones, as it were, are suspended in a mass of ligaments and tendons, and when placed at the proper angle greatly relieve the bones of the foot from severe concussion, irritation, and possible inflammation, as well as relieving the sensitive frog from injury by reason of such suspension at that angle. Ringbones, sidebones, and joint troubles are generally associated with straight pasterns. Horses with springy pasterns have more freedom of action in their legs, are better walkers, smoother trotters and pacers, and the springy pasterns are indispensable to the easy riding horse. The pasterns should be of medium length in draft horses, but this essential springing down of the pasterns at every step, or in pulling heavy loads, is of great importance in their lasting qualities or for breeding purposes. The straight-pasterned colt will come more so as he advances in age and use. Straight pasterns bring the greater jar or concussion within the bones of the foot, and thereby have the greater effect on the coronary and navicular bony tissues.—[Farmer and Stock-breeder.

Stock.

Mexican Cattle.

Mr. W. R. Hull, of Calgary, has had a long and extensive experience in ranching and the cattle trade of the West. In reviewing below the past, and the outlook for the future, he considers that the importation of Mexican or Texas cattle into this country cannot but prove disastrous to the cattle industry of this Western land, and a great loss to the country at large.

In Canada, not only in the older Provinces, but in Manitoba and the Territories, men of experience looking forward to Alberta and the West as a country of promise in growing cattle, situated so favorably regarding its rich, nutritious grasses and climate conditions, saw the necessity of breeding the very best, and have invested large amounts of money in importing the choicest beef strains of pure-bred cattle, from the breeders of the choicest herds in the Old Country, and turned them loose upon the ranches in many cases, in order to improve the native and grade stock of our rich prairies, and producing a class of cattle which, for size and quality, would compete with the best cattle of any other country, and give us a world-wide reputation for producing the best.

Regarding those southern cattle, while they are great rangers, light and active on foot, and also good rustlers, adapting themselves very readily to our climatic conditions, they are a small race, and produce a very tough, poor quality of beef.

Their conformation is undesirable and unfit for our trade in foreign markets, where we must compete with the best beef of England, Argentina,

idea of the inspection of the stock, but Mr. G. N. ... but Mr. ... favor- ... farmers and ... themselves ... the "Farm- ... might be ... ed, provid- ... and the ...

and other countries, if we expect to make our cattle profitable. The lesson we are learning to-day is that by importing those cattle, and turning them loose on our prairies, we have become overstocked with a class of cattle unfit for the export trade, and so are confined to our own local markets, which means there is an over-production of butchers' beef, ruinously low in price, and a limited demand. Our ranchers are compelled to sell at a serious loss, as they are unable to unload their surplus stock, and in the end have to accept a small price, such as the local buyers are warranted in paying for their home trade. If these cattle were of a better class, they could always be exported at fair prices. Our ranchers would find a ready market at all times for their surplus stock in a finished condition, and relieve themselves in many cases of financial obligations, which they are unable to meet promptly, and which, in the end, possibly results in sad disaster to many.

Scale of Points of a Typical Galloway.

The following is the scale of points of a typical Galloway, as drawn up by the Board of Directors of the American Galloway Breeders' Association, December 2nd, 1904, which will be submitted for adoption thereof at the next annual meeting, 1905. This scale of points is based on the original scale of points drawn up by the Council of the Galloway Cattle Society of Great Britain, April 18th, 1883:

- Color.—Black, or black with a brownish tinge.
- Head.—Short and wide, forehead broad, crown wide and oval, not rising to a point. Any trace of scurs or horns debars an animal from registration. Face clean, muzzle broad, and nostrils large.
- Eye.—Large and prominent.
- Ear.—Moderate in length and broad, pointing forward and upward, with fringe of long hairs.
- Neck.—Short, clean, and filling into the shoulder in such a manner as to make the neck and shoulder of fleshy animals appear moulded as one piece. The top of the neck in line with the back in a female, and in a male gradually rising with age.
- Body.—Deep, wide, well rounded, moderate in length, and symmetrical.
- Shoulders.—Broad, but well laid into body, joining smoothly; compact and deeply fleshed on top.
- Ribs.—Deep and well sprung, crops deeply fleshed, making width of shoulders and body at ribs uniform.
- Hook-bones.—Not prominent, in fleshy animals not visible.
- Loin.—Moderate in length, wide and deeply fleshed.
- Hind Quarters.—Long, wide and well filled.
- Rump.—Straight, wide, carrying width of body out uniformly; well filled with flesh.
- Thighs.—Broad as viewed from side, thick as viewed from behind; straight and well let down at hock; rounded buttocks very objectionable.
- Legs.—Short and clean, with fine bone.
- Tail.—Straight and smoothly laid in with flesh at sides. A high tail-head very objectionable.
- Skin.—Mellow and moderate in thickness.
- Hair.—Soft and wavy, with mossy undercoat. Harsh or wiry hair is very objectionable. Curly hair, if soft, is not objectionable.

POINTS TO BE AVOIDED.

Mr. James Biggar, "The Grange," Dalbeattie, Scotland, who was judge of fat classes at the 1902 International Live-stock Exposition, Chicago, prepared the following list of "Points To Be Avoided" for McCrae's History of Galloways twenty years ago. With very slight revision, they are as pertinent to-day as the day they were written.

- 1st—Long, narrow head, with light crown.
- 2nd—Narrow, tapering muzzle.
- 3rd—Long, drooping ears.
- 4th—Small, deep-set eyes.
- 5th—Small, light neck.
- 6th—Light, scraggy breast.
- 7th—High, narrow shoulders.
- 8th—Flatness behind shoulders.
- 9th—Light fore or back ribs.
- 10th—Square and prominent hook-bones.
- 11th—High or drooping rumps.
- 12th—Weak or slack loins.
- 13th—Rounded buttocks.
- 14th—Fleshy double thighs.
- 15th—Big, coarse bones.
- 16th—Thick, stiff skin.
- 17th—Hard, wiry hair without soft undercoat.

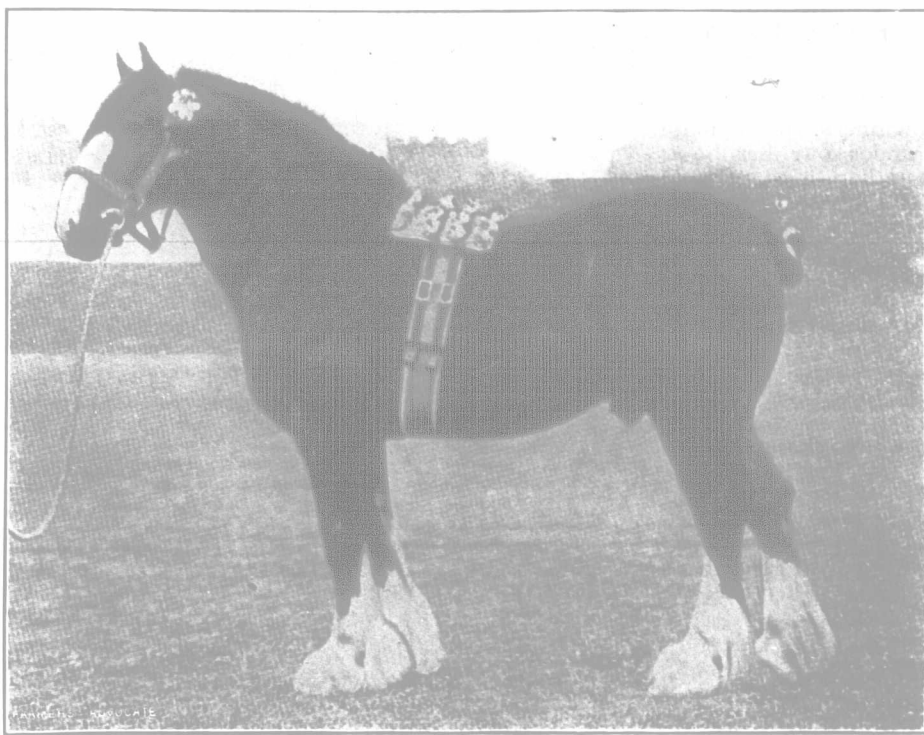
It's Good Fare.

We take your paper, and thoroughly masticate and digest its valuable contents.
Grayson, Assa. D. R. McDOUGALL.

Registration Standards.

Considerable discussion has taken place in the agricultural press in recent years regarding the standard of registration for pure-bred stock in Canadian and United States records, and especially those for Shorthorn cattle. The standard of the English herdbook for that breed admits to registry approved animals having five crosses by pure-bred registered sires of the same breed. This rule has been a standing one since the establishment of the herdbook, and causes no serious complaint in the country which is the home of the breed. The editing committee of the Shorthorn Association, we understand, receives evidence and passes judgment upon applications for the admission of foundation stock for new families, but we are informed there have been very few such applications in recent years, and that abuses of the privilege have been exceedingly rare. An equally liberal standard obtains in the conduct of other pedigree records in Great Britain, notably those for the heavy draft breed of horses. Many imported and registered Clydesdales show three crosses only, but are admitted without question by breeders, many of whom are also interested in Shorthorns. When the first Canadian Shorthorn Herdbook was instituted, the standard was made uniform with that of the English herdbook, and there was little cause for complaint of the admission of inferior animals with short pedigrees, but the United States being our best market for that class of stock, and their herdbook being at that time of a somewhat higher standard in some respects, a new record association, namely, the British American, afterwards the Dominion, was organized by Canadian breeders, and a new herdbook

ly twenty years ago, it would appear to be a reasonable proposition to advance the line of demarkation by ten or fifteen volumes, or as many years, which we verily believe might be done to the great advantage of the breed and the interest of the breeders of this country. As the case stands at present, Canadian and United States breeders in purchasing Shorthorns in Great Britain for importation have to pass by some of the best animals, some that have been winners at the Royal and other leading shows, because they do not conform to this rule requiring that they have ancestry on record previous to 1874. There are animals of this class in some of the most noted herds in England and Scotland, and they are among the very best individuals in those herds. Many of the leading breeders in Britain and America firmly believe that the rule of the English herdbook, admitting new blood through the well safeguarded channel of short-pedigreed sires or dams, has a saving influence on the breed, serving to offset the enervating effect of close or consanguineous breeding, imparting virility and maintaining the constitutional vigor of the stock. If the effect of this liberal regulation has proved satisfactory to British breeders, to whom we look for seed stock to renew the vigor and improve the character of our cattle, why should we not place ourselves in a position to share in their best by modifying our registration rules to the extent of admitting these to our herdbook. The only objection we have heard advanced is that until or unless the directors of the American herdbook modify their rules to the same effect and extent, American breeders would not buy cattle having in their veins the blood of this class, for the reason that they would not register in the American herdbook. The question for Canadian breeders to decide is whether they shall lead or follow in this matter, whether they shall wait the pleasure of the close corporation governing the American herdbook, which taxes its own patrons by imposing a one-hundred-dollar entry fee on animals imported from Great Britain, and circumscribes their field for selection of seed stock by antiquated registration rules, or whether we shall go our own way, building up our stock to a high standard of individual excellence on intelligent lines of breeding. It is reasonably certain that in the future, as in the past, United States breeders will look to Canada for fresh blood and vigorous seed stock to renew the constitutional sturdiness of their cattle, which under their system of feeding so freely with heating corn, are burnt out and constantly degenerating. The history of American herds and show-rings clearly indi-



Marcellus (11110).
Champion Clydesdale stallion and winner of 100 guineas Challenge Shield, Glasgow Stallion Show, 1905. Bay, foaled 1898; sire Hiawatha (10067).

founded, the standard of which admitted only animals tracing in all lines to animals imported from Great Britain. This ruling proved a great hardship and loss to many breeders who then had excellent stock having a cross of one or more of the short-pedigree sires, in some cases practically wiping a whole herd from the record, and placing them on a par with grades in selling value. This action proved to be much more drastic in its effect than its promoters anticipated, proving disastrous to many breeders, and, in fact, entailing an injustice which probably would not have been inflicted had its final effect been fully foreseen. The standard at that time adopted was really higher than that of the American herdbook, the pedigrees of some cattle in that book being ineligible to the Canadian record. And while the two books to-day have practically an identical standard for new registrations, there are yet pedigrees on record in the American book that are barred from the Canadian, owing to their origin, and the Canadian record now has really the highest standard of any on either side of the sea.

A rule of both the Canadian and American herdbooks is that no recorded animals in the English herdbook that have not ancestors on record, or eligible to record, previous to Volume 21 of the E. H. B. will be admitted to registry in these records. Volume 21 of the English herdbook was published in 1874, thirty years ago, and there are now fifty volumes in print. Why the line has been drawn at Volume 21, or the year 1874, does not appear clear to the casual observer, but, assuming that this rule was considered safe and satisfactory to the directorate of the Shorthorn Breeders' Associations at the time it was adopted, which must have been near-

ly twenty years ago, it would appear to be a reasonable proposition to advance the line of demarkation by ten or fifteen volumes, or as many years, which we verily believe might be done to the great advantage of the breed and the interest of the breeders of this country. As the case stands at present, Canadian and United States breeders in purchasing Shorthorns in Great Britain for importation have to pass by some of the best animals, some that have been winners at the Royal and other leading shows, because they do not conform to this rule requiring that they have ancestry on record previous to 1874. There are animals of this class in some of the most noted herds in England and Scotland, and they are among the very best individuals in those herds. Many of the leading breeders in Britain and America firmly believe that the rule of the English herdbook, admitting new blood through the well safeguarded channel of short-pedigreed sires or dams, has a saving influence on the breed, serving to offset the enervating effect of close or consanguineous breeding, imparting virility and maintaining the constitutional vigor of the stock. If the effect of this liberal regulation has proved satisfactory to British breeders, to whom we look for seed stock to renew the vigor and improve the character of our cattle, why should we not place ourselves in a position to share in their best by modifying our registration rules to the extent of admitting these to our herdbook. The only objection we have heard advanced is that until or unless the directors of the American herdbook modify their rules to the same effect and extent, American breeders would not buy cattle having in their veins the blood of this class, for the reason that they would not register in the American herdbook. The question for Canadian breeders to decide is whether they shall lead or follow in this matter, whether they shall wait the pleasure of the close corporation governing the American herdbook, which taxes its own patrons by imposing a one-hundred-dollar entry fee on animals imported from Great Britain, and circumscribes their field for selection of seed stock by antiquated registration rules, or whether we shall go our own way, building up our stock to a high standard of individual excellence on intelligent lines of breeding. It is reasonably certain that in the future, as in the past, United States breeders will look to Canada for fresh blood and vigorous seed stock to renew the constitutional sturdiness of their cattle, which under their system of feeding so freely with heating corn, are burnt out and constantly degenerating. The history of American herds and show-rings clearly indi-

Shorthorn Breeders in Manitoba Discuss Breed Problems.

The Shorthorn breeders of Manitoba met in Winnipeg during the week of the live-stock associations' meetings, at the call of E. R. James, director representing Shorthorns in the Cattle-breeders' Association, to discuss the subjects mentioned in his letter, which was published in the issue of February 22nd. There were present between fifty and sixty breeders of the reds, whites and roans, the following Shorthorn enthusiasts being noticed: J. G. Barron, Stephen Benson, R. C. Henders, Wm. Ryan, S. English, W. S. Lister, Walter James, Jno. Graham, Andrew Graham, A. Morrison, Jas. Yule, G. H. Greig, R. L. Crisp, Dr. J. G. Rutherford, Less Ferguson, A. Aycarst, Jno. Rankin, Jno. Gordon, Waldo Greenway, and many others, including many new beginners in the breeding of Shorthorns.

The discussions were animated, especially with reference to the apportionment of grants to shows by the Dominion Shorthorn directorate. Much light was thrown on the subject by President J.

G. Barron of the Cattle-breeders' Association, who stated that he endeavored to get a share of the grant for Brandon Show, and that the election of members to the executive of the D. S. H. B. A. was cut and dried, and he and the other director from Manitoba had no voice in the election. Mr. Benson thought that if Brandon was to have a share of the grant, Neepawa and Killarney were equally entitled to such. Some of those present desired the formation of a Provincial Shorthorn Association, which the majority thought unnecessary at present in view of the resolution which was passed unanimously re-nationalizing the records of Shorthorns, as follows:

"Resolved that in the opinion of this meeting of Shorthorn breeders of Manitoba, it is absolutely essential to the future welfare of the interests of the breed in Canada that the Dominion Shorthorn Breeders' Association should be nationalized, and that the head office be moved to Ottawa.

"And further, be it resolved that if the controlling body of that Association refuse to nationalize the Shorthorn records, that a meeting be convened at the earliest possible date, of representatives of Shorthorn breeders of the Northwest Territories, British Columbia and Manitoba, with a view to organizing a national Shorthorn Herdbook, under the provisions of the Act governing live-stock records."

Another important resolution passed by the meeting was introduced by Dr. A. G. Hopkins, and seconded by A. Graham, of Pomeroy, and was as follows:

"Whereas it is yearly becoming increasingly evident that top bulls of the Shorthorn breed are getting harder to get; and

"Whereas the competition of such opulent buyers as the Argentine men and titled Englishmen still further limits the choice of high-class bulls in Great Britain by Canadians wishing to introduce fresh blood; and

"Whereas many of the best British Shorthorns to-day, including many prizewinners, both male and females, are ineligible under our herdbook restrictions to be used in Canadian herds; and

"Whereas all students of the laws of breeding of improved live stock are of one opinion, viz., that it is not wise to narrow the stream of improved blood;

"Therefore, be it resolved that we, the Shorthorn Breeders of Manitoba, respectfully suggest to and urge upon the Dominion Shorthorn Breeders' Association that they remove the present barrier against some of the best British Shorthorns, and make easier the improvement of our Canadian Shorthorn herds by changing the requirements of the rule that all British Shorthorns shall trace to Vol. 20 Coates', to read Vol. 30 Coates', and that five or ten years hence the mark shall be Volume 35 or 40 Coates', and so on, similarly at set periods, depending whether a quinquennial or decennial period be decided upon."

Cattlemen in Convention.

The Manitoba Cattle-breeders' Association, an organization representing the interests of all breeds of cattle, held its fourteenth annual meeting in the warehouses of the Cockshutt Plow Co., Winnipeg, on the evening of the 21st, ultimo. The President, Mr. James Yule, Selkirk, occupied the chair, but refrained from making a formal address, on account of the volume of business to be transacted in the time available. He, however, referred to the loss the association had sustained in the death of the late J. S. Robson, of Manitou, and asked that a resolution of condolence be passed and sent to the widow and son. This was subsequently done, the resolution being moved by Mr. G. N. Stewart, of Deloraine, and was carried by a standing vote.

The Secretary, Mr. G. H. Greig, presented the financial statement, which showed receipts of \$483.48, and expenditures of \$401.90. He then proceeded to read his annual report, in which he called attention to the large number of poor thin cattle that had been marketed from the ranges last fall and during the winter. These cattle have had a most depressing effect upon the prices of better beef cattle without cheapening the cost of meat to the consumer, which conditions emphasize the necessity of establishing the dead-meat and packing business on a better basis. It was pointed out to the convention that the previously existing arrangements, whereby the Territorial Government had transported pure-bred stock from Manitoba to the West at a nominal fee, had been abrogated, and that if the Manitoba cattlemen would capture a larger proportion of the Alberta trade, the Cattle-breeders' Association would have to take some action in the matter, as the Ontario Live-stock Associations were receiving large grants to enable them to transport to the West stock which comes into direct competition with that bred in Manitoba. This question, although an important one, was not acted upon by the convention.

Before proceeding with the election of officers, the following resolutions were adopted:

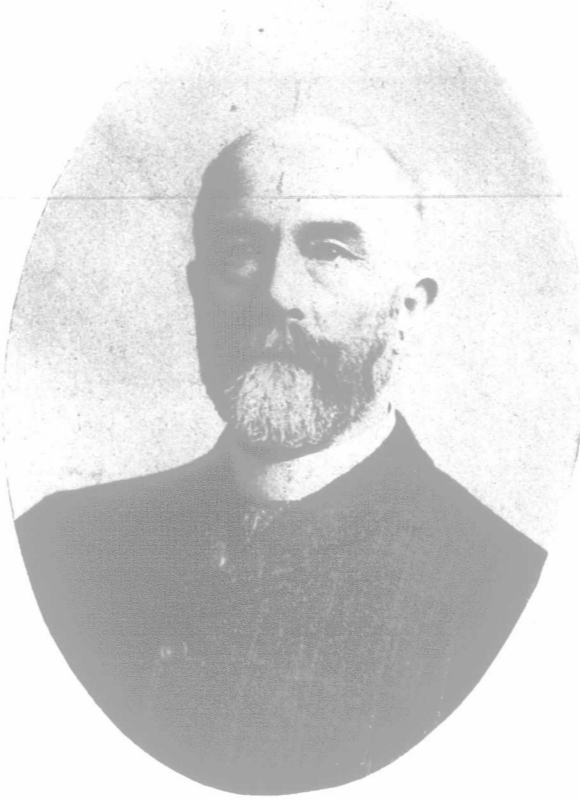
That voting should be by ballot without nomination, and fifty per cent. of the votes should be necessary for election; and

That the Secretary-Treasurer shall, at the close of

each year, mail to each member a statement of accounts outlining the work done and such matters as may be brought up for discussion at the annual meeting.

The election of a President proved a most irksome task, but after several ballots Mr. J. G. Barron, of Carberry, was made the choice of the convention. Other officers are: 1st Vice-President, A. Graham, Roland; 2nd Vice-President, Hon. W. Clifford, Austin. Representatives: Shorthorns, E. R. James, Rosser; Herefords, Bing, of Glenella; Aberdeen-Angus, S. Martin, Rounthwaite; Galloways, Wm. Martin, St. Jean; Holsteins, M. Oughton, Stonewall; Ayrshires, W. Champion, Reburn; Red Polled, H. V. Glendinning, Bradwardine; three additional directors, Stephen Benson, John Graham and R. C. Henders. Representatives to fair boards: Winnipeg, James Bray; Brandon, Wm. Chalmers. The election of representatives to other fair boards was left to the directors.

A discussion relative to the restriction of the importation of Mexican cattle was then conducted, resulting in a committee being appointed to draft a resolution expressing the opinion of the convention. The resolution was finally brought in, moved by J. G. Barron, seconded by Stephen Benson, and read as follows: As the importation of Mexican cattle has flooded the ranges of the Canadian West with a class of very inferior merit, both from the packers', consumers' and breeders' points of view, and whereas the Department of Agriculture is spending money with a view to improvement of Canadian cattle, so that our cattle may capture the British market, and whereas the dumping of such inferior stock is a serious hindrance to the cattle-feeding business; therefore, be it resolved, that the Minister of Agriculture be requested to formulate some measure whereby this dumping of inferior animals to the detriment of the Canadian live-stock breeding industry be stopped.



Jno. C. Barron, Carberry.

The new President of the Manitoba Cattle-breeders' Association.

The following resolution with regard to the work of the experimental farms, which endorses the stand taken by the "Farmer's Advocate" regarding experiments with live stock and the size of samples of seed grain, was adopted by the convention:

Whereas, science and practice teach that permanence and success in agriculture can only be attained by following a system of crop rotation and laying down of grass and clovers, which naturally implies the much more general adoption of mixed farming than is now practised; therefore, be it resolved, that in the interests of advanced agriculture, the Dominion Experimental Farm, which is located in this Province, should carry on more experiments with live stock; and, further, that in the opinion of this convention the present plan of seed distribution in three and four pound lots is conducive to the mixing and deteriorating of varieties, and that the expense of distribution and growing of such small samples is out of all proportion to any benefits that might be attained. Therefore, be it resolved, that the attention of the director be drawn to these matters, with a view to the improvement of the same.

NATIONAL RECORDS.

On the morning of the 22nd the convention took up the question of the nationalization of records. Mr. Andrew Graham reported comprehensively on the attitude of the Western representatives at the National convention in Ottawa last year, and his report was endorsed by the other representatives who were there. Mr. P. W. Hodson, Dominion Live-stock Commissioner, was then called upon to discuss several matters that

were up for consideration at the National Convention, but confined himself more particularly to a discussion of the nationalization of records. After going carefully over the situation, explaining the advantages that would accrue from centralization, and having assured the breeders that with national records there would still be independent action for the provincial associations, and that by providing records for all breeds of stock \$25,000 which was annually paid for registration in American books would be spent at home, the convention passed the following resolution: That the Live-stock Associations of Manitoba, in convention assembled this 22nd day of February, 1905, are in hearty accord with the proposal to nationalize all the live-stock records of Canada, believing that such will assure equitable treatment to all the provinces, and that such nationalization of records will work out to the betterment of the pure-bred live-stock interests of Canada.

Another resolution was passed, asking the Canadian Government to take steps to regulate the importation of horses, cattle, sheep and swine, and to admit duty-free such animals as were pure-bred and registered in the authorized book of Canada, or of the country in which the breed originated, when owned by a bona fide resident of the Dominion.

At a joint meeting of the breeders in Wesley College Convocation Hall, on the evening of the 22nd, Superintendent Bedford presided, and introduced Prof. Boss, of the Minnesota Agricultural College, whose subject was "Some Problems of the Stockmen." Prof. Boss complimented the stockmen of Manitoba on the interest they displayed in their business, and reminded them that all the information they could acquire would be of benefit some time in their lives. Modern education in live-stock husbandry was calculated to enable men to do things to produce wealth easier, and to produce more of it. Manitoba, he predicted, would soon be as far ahead in live stock as is Minnesota, and by the introduction of hardy early-maturing varieties of corn the progress would be much encouraged. Communities were urged to specialize in some class of stock, and to keep a first-class sire in their midst as long as possible, when it was discovered that his stock were coming good. Prof. Boss then outlined the feeding of an International champion, and showed that the production of such an animal was not confined to the corn belt.

Following Prof. Boss, Dr. J. G. Rutherford, Veterinary Director-General for the Dominion, gave a comprehensive outline of the work of the veterinary branch, which includes the inspection of all imported animals, the maintenance of inspection stations, the eradication of infectious diseases, and the stamping out of such diseases as have already become established.

Mr. Hodson concluded the programme, by giving a series of lantern slides, illustrating many of the famous animals of the beef breeds of cattle.

Throughout the week lectures and demonstrations were given on the judging of horses, cattle and swine. These classes were largely attended, and lively interest was maintained. The work of demonstration was conducted by such well-known experts as Robt. Ness, Howick, P. Q.; Prof. J. H. Grisdale, Ottawa; W. J. Black, Winnipeg; Dr. McGilvray, Binscarth; Jas. Yule, Selkirk; Dr. A. G. Hopkins, Winnipeg; F. W. Hodson, Ottawa; A. P. Ketchen, Winnipeg; Dr. J. S. Thompson, Winnipeg; Prof. Boss, St. Anthony Park, Minn.; J. A. Chapman, Beresford; and others.

Best Age for Economical Gains.

Prof. J. H. Grisdale, of the Central Experimental Farm, who, at the Maritime Winter Fair, had on the platform with him two animals, one a six-year-old ox, the other a yearling steer, said: First, look at the steer's face. We want a broad face, not too long, with a mild, large eye; a large muzzle. All good feeding steers have short, thick necks. We want a steer with a good constitution, for he must digest large quantities of food to make a rapid growth. To secure constitution an abundance of heart room is essential, shown by his thickness and depth. This also gives room for the organs of digestion behind the heart and lungs. He compared the conformation of the two animals beside him; the large ox, with a sharp shoulder and high back; the yearling, with great width of shoulder, top and back, and fullness of loin. The development of the hind quarters should also show length and depth and width, a straight and not a rounding ham. The thick, low-set steer will flesh much more cheaply than the rangy steer. From one year to two and a half years is the ideal age for feeding for beef. The relative cost of a pound of gain is as follows:

From birth to six months.....	2 cents per lb.
Six months to one year.....	5 " "
One year to two years.....	8 " "
Two years to three years ..	17 " "

There is something in the young animal that enables it to make better use of its food than when it gets older. We find it pays to put feeding animals in a loose box (of course, they must be of fairly uniform size); eight or nine in a box is enough; bed them well, and keep them comfortable; keep the stall well ventilated. Under poor ventilation, a bunch of steers gained only one pound per day, while another lot gained 2½

pounds, with exactly the same feed and care, but good ventilation.

When putting up steers in the fall, feed lots of succulent food, and all the roughage you can economically get, them to eat. Give every steer as many turnips as he wants, with four or five pounds straw, and as much hay. Well-cured clover is the best hay. After four to six weeks, begin the meal. Start with one pound per day; increase this quantity gradually. Oats, barley and peas mixed are a good ration. If you have to buy, get some food that is cheapest, according to its analysis.

Bran can often be got at a low price in summer. Gluten is one of our best feeds. The Edwardsburg Starch Co., of Montreal, has given us an honest gluten meal, almost equal to oil meal. It is quoted at \$25 per ton on track at Ottawa. A wide ration can be fed at the start of the feeding period with profit, but it must get narrower as the feeding period advances.

Smithfield Block Test.

Continuing its reports on the carcasses of cattle exhibited at Smithfield, the London, England, Live-Stock Journal has the following:

Shorthorn heifer, Fragrance, first prize in class (first at Birmingham); bred and exhibited by His Majesty the King; age, 2 years 9 months 21 days; live weight, 14 cwt. 2 qrs. 1 lb.; average daily gain of live weight, 1.59 lbs.; weight of dressed carcass, 1,160 lbs.; percentage of carcass to gross live weight, 70.77.

Shorthorn heifer, Jewel, winner of the champion plate as best beast in the show; exhibited by Earl Rosebery, and bred by John Ross; age, 2 years 8 months 27 days; live weight, 15 cwt. 2 qrs. 18 lbs.; average daily gain of live weight, 1.76 lbs.; weight of dressed carcass, 1,194 lbs.; percentage of carcass to gross live weight, 68.07.

Shorthorn steer, reserve and highly commended in class; bred and exhibited by John Ross; age, 23 months 8 days; live weight, 11 cwt. 3 qrs. 5 lbs.; average daily gain of live weight, 1.88 lbs.; weight of dressed carcass, 912 lbs.; percentage of carcass to gross live weight, 69.03.

Hereford heifer, Rosalie, first prize in class (first at Birmingham); bred and exhibited by His Majesty the King; age, 2 years 10 months 3 weeks; live weight, 15 cwt. 1 qr. 25 lbs.; average daily gain of live weight, 1.65 lbs.; weight of dressed carcass, 1,206 lbs.; percentage of carcass to gross live weight, 69.65.

Aberdeen-Angus steer, Danesfield Gay Knight, reserve and highly commended in class; age, 2 years 11 months 23 days; live weight, 15 cwt. 3 qrs.; average daily gain of live weight, 1.63 lbs.; weight of dressed carcass, 1,200 lbs.; percentage of carcass to gross live weight, 68.02.

Aberdeen-Angus heifer, Vintage of Glamis, first prize in class, winner of the breed cup, reserve for champion plate, and also reserve number for the best heifer in the show; age, 2 years 10 months 15 days; live weight, 15 cwt. 3 qrs. 26 lbs.; average daily gain of live weight, 1.71 lbs.; weight of dressed carcass, 1,196 lbs.; percentage of carcass to gross live weight, 66.81.

Cross-bred (Shorthorn-Aberdeen-Angus) steer, Sandy; age, 13 months 21 days; live weight, 12 cwt. 23 lbs.; daily gain of live weight, 1.92 lbs.; weight of dressed carcass, 854 lbs.; percentage of carcass to gross live weight, 62.47.

Cross-bred (Aberdeen-Angus-Shorthorn) steer, Danesfield Max IV., reserve and highly commended in class; age, 2 years 10 months 28 days; live weight, 16 cwt. 2 qrs. 18 lbs.; average daily gain of live weight, 1.76 lbs.; weight of dressed carcass, 1,194 lbs.; percentage of carcass to gross live weight, 63.99.

Cross-bred (Shorthorn-Aberdeen-Angus-Shorthorn) heifer, Ladas; age, 2 years 11 months 28 days; live weight, 14 cwt. 2 lbs.; average daily gain of live weight, 1.44 lbs.; weight of dressed carcass, 1,016 lbs.; percentage of carcass to gross live weight, 64.72.

Cross-bred (Aberdeen-Angus-Shorthorn mixed) heifer, Constance of Arndilly, second prize in class; age, 2 years 11 months; live weight, 16 cwt. 2 qrs. 15 lbs.; average daily gain of live weight, 1.75 lbs.; weight of dressed carcass, 1,268 lbs.; percentage of carcass to gross live weight, 68.06.

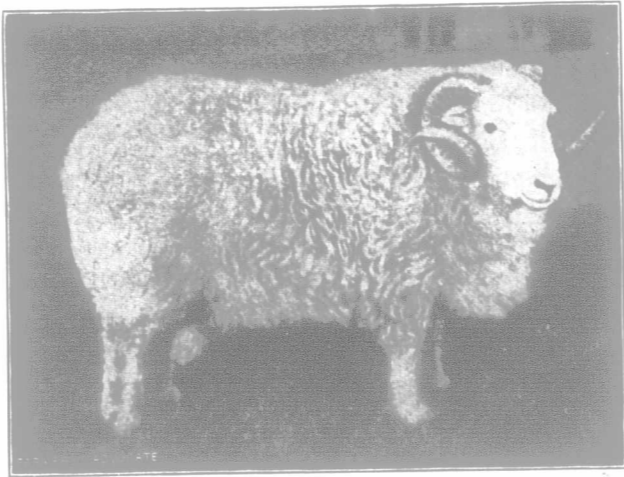
Cross-bred (Shorthorn - Shorthorn - Aberdeen-Angus) heifer, Princess, commended in class; age, 2 years 11 months 6 days; live weight, 15 cwt. 1 qr. 27 lbs.; average daily gain of live weight, 1.63 lbs.; weight of dressed carcass, 1,174 lbs.; percentage of carcass to gross live weight, 67.66.

To Mark the Meat.

The Central Associated Chamber of Commerce have passed a resolution that all retailers of imported meat should be licensed, and that foreign and colonial meat should be marked.

Herdwick Sheep.

The principal habitat of the Herdwick breed of sheep is the counties of Cumberland and Westmoreland. The Herdwicks possess properties which adapt them for a mountain life, and their management partakes of the general simplicity of sheep farming in mountainous districts. They are very independent and able, in a great measure, to take care of themselves. Their essential points are a heavy fleece of fairly strong wool, disposed to be hairy on top of the shoulder, growing well down to the knees and hocks. In the color or markings of the face and legs there should be no spots or speckles, nor any token of brown. When the lambs are born their legs and heads should



Herdwick Ram.

be perfectly black, with the exception of a little white on the tips of the ears, and, perhaps, a few white hairs around the feet. These white hairs gradually increase so that at six months old one-half the ear will be hoar-frosted, and there will be distinct bands of the same round the feet and muzzle. This change of color goes on until some at the age of three years are perfectly white, while others remain a steel gray. Horns in the rams are desirable, and white hoofs are much preferred. There is still a class for this breed in the prize list of the Royal Agricultural Society, and at their show in London last year there were half a dozen pens exhibited by two exhibitors.

Farm.

Growing Alfalfa.

I noticed in the "Farmer's Advocate" of January 25th, an article concerning the growing of alfalfa in the Territories, and am very much taken up with the idea. I am in the stock-raising business, and believe alfalfa to make good feed. I would be pleased to learn where I could purchase some seed, and how much it costs. Does the C. P. R. give any special rates in shipping such seeds? M. C. M. Lethbridge, Alta.

After having grown alfalfa on our farm near Lethbridge for four seasons, and having observed various other attempts in this district, we have come to the conclusion that there is absolutely no question about its success in the Lethbridge district, providing it can be irrigated and reasonable care is exercised in getting it started.

At the present time we have nearly seventy acres of our farm seeded down with alfalfa. It all went into the winter in a vigorous condition. About half of this area was sown last June, and a rather indifferent stand was secured. This is the first time in four seasons that we have failed to get a good stand, and this would not have occurred had we used a press drill, instead of sowing broadcast, or, had we sown earlier and caught some of the May rains we would have secured a good stand, as many of our immediate neighbors did.

The fact that alfalfa requires irrigation in this district was quite clearly demonstrated on our farm this past summer. In our fields of old al-

falfa, the plants on any of the spots which had not been irrigated the season previous were very scattering, and in some cases they were all dead.

In the light of these facts, I would suggest to any in this district who are contemplating trying some alfalfa, where it cannot be irrigated, that they make their tests on a small scale, so that in case of failure they will not feel their outlay.

Lethbridge. W. H. FAIRFIELD.
[NOTE.—Clover seeds are advertised in our columns by good, reliable firms, but if clean, plump seed could be had in the neighborhood of Lethbridge, or could be got from districts where conditions are similar, it would probably be just as satisfactory. We are not aware of any special freight rates on small lots of seed.—Ed. "F. A."]

Make Sure the Seed Will Grow.

In many districts last year no small loss was occasioned by the use of seed that proved to be of poor quality, and while those who suffered in 1904 are likely to take greater care this spring, others may be situated now as were those who encountered the trouble last year. A year ago, in some districts, a great deal of frosted seed was sown, partly because it was with difficulty other seed could be obtained, but mainly on account of the opinion held by many that the frosting would not injure the grain for seeding purposes. Many who held this opinion, and who sowed badly frosted seed, will look out this year for a better sample, as their crops were in many cases almost an entire failure. While a crop failure at any time is greatly to be regretted, at times it is a profitable experience, in so far as it makes the way clearer for greater success in the future.

This year, again, there is likely to be disappointment in some districts, unless advantage is taken of the experience of former years, and more care exercised in the selection of seed grain to secure that which is capable of making strong, healthy growth. Of course, objection is made to purchasing seed at a high price where there is a possibility of that at present available turning out equally as well as that costing twice as much. But does it not also seem bad policy to take the risks involved for the sake of an additional expenditure of twenty cents or fifty cents an acre at seeding time. An expenditure of \$20.00 at seeding time may mean the difference between a good crop and a failure at harvest, and even if the difference be not so great as this, there is almost certain to be some difference in yield, and there is always the satisfaction of knowing that the poor crop, if such it happens to be, is not due to one of the factors that are controllable.

It must be admitted that seed as good as that which is wanted is not at times easily obtainable, and, in fact, it is nearly impossible to get a perfect sample of some of our seeds. Where a genuine effort is made, there is not usually, however, any trouble in getting a fairly satisfactory quality. At any time before sowing, and more particularly where a second-rate article has to be used, it is advisable to test the seed, or have it tested, to find out whether or not it is capable of growing satisfactorily. If only seventy-five per cent. will grow, but that produces a good growth, the apparent and real remedy is to sow enough more seed to make up for that lacking in power to grow. Where the percentage of growth is much less than this, it is usually safe to regard the seed with suspicion, and, if possible, obtain something better. Anyone can test his own seed with very little trouble. No special apparatus is required, nor is any expert knowledge necessary. The best way is to plant fifty or one hundred average seeds, not less, in a small box of soil, and cover them from one-quarter to one-half inch in depth. Keep the box in an ordinary living-room, and count the number of grains that have shown above ground at the end of ten or twelve days. All that will grow will have put in an appearance by that time. It is important to note the vigor of growth. See whether the plants are strong and healthy, and able to stand through adverse conditions. In a soil test, this is much easier noted than where it is made by the other method here given. Sometimes soil is not available just when it is wanted, and in such cases a good plan to follow is to place the



At the Round-up Time—Roping and Branding at Two Per Minute.

counted seeds on a piece of thick flannel placed in a dinner plate, and cover this over with another plate, inverted. Keep the flannel moist, but not wet, and leave it in a living room as before. The germinated seeds may be counted somewhat earlier by using this method, as they have not to penetrate the soil, but not so good a chance is afforded to note the vigor of growth—a very important point.

By either method very satisfactory results can be obtained, and the trouble is so very little that it would not be the part of wisdom to neglect such an important point. The expense is nil, and the information obtained is frequently invaluable.
J. M.

Pointers on Seeding Grass in Alberta.

To the Editor "Farmer's Advocate":

The chances for success in seeding light land in Central Alberta are somewhat against your inquirer's preference, timothy. The land having been plowed in end of July, and not harrowed, the disk followed by the harrow would do good work in making a seed-bed for any of our grasses. Brome grass would be more suitable for the land spoken of, about twelve pounds of seed per acre, to be sown by hand, about the first of June, without a nurse crop. When the weeds are high enough to be clipped by the mower, it is decidedly advantageous to run this machine over the land.

Timothy is rather a hard feeder, and, I might say, intemperate drinker, so that our light soils are not adapted for it. If allowed to stand a little late before cutting, it becomes woody, and has a poor feeding value, being deficient in protein. About fifteen pounds of seed to the acre, providing it is fresh, is nearly right. The seed deteriorates greatly with age, so that this is an important point to be looked after. It can be sown by hand or broadcast seeder after the oats are drilled in, running the harrows over to cover the seed. I would prefer beardless barley to oats as a nurse crop. Central Alberta is well suited for the growing of timothy, provided we cater to its tastes, and give it a chance on our deep black soil. I have little use on the farm for this too popular grass, except for horses that are hard at work. Brome grass is preferred by stock, and is a much better balanced ration.

Lacombe, Alta. OSWALD PALMER.

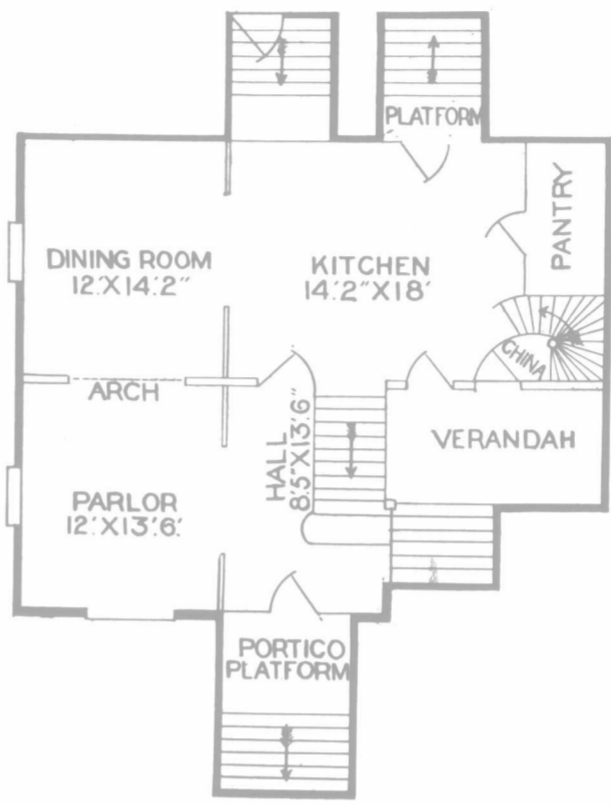
Plan of a Compact Farmhouse.

To the Editor "Farmer's Advocate":

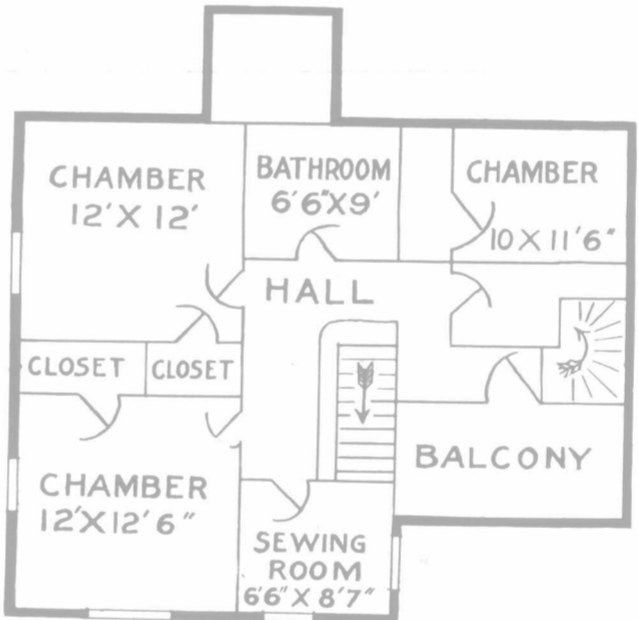
Sir,—I enclose the plan of my house, which was built the summer of 1902. We furnished all stone, and did hauling, also hauled all brick and lumber, and supplied and hauled all sand and lime. The stonework is a two-foot wall throughout, seven and a half feet high, and three and a half feet above ground. All face stone above ground is cut sandstone, laid in cement mortar, and pointed neatly with raised pointing. All brickwork, except belts, is pointed with marble-dust mortar, and half-round head belts are finished with red mortar, which has a handsome appearance. The chimneys are panelled and pointed with marble dust. The window sills are all dressed limestone, rock face. The roof is covered with British Columbia shingles, and all gables of house with cut shingle. The cellar is lighted by three windows, hung with hinges, locked with snap locks. The windows in front elevation are plate-glass bottoms and leaded transoms above; all other windows are double-thickness glass below, and colored muffled-glass transoms. The balcony on second floor is covered with galvanized iron, nailed and soldered at joints, which makes a durable job. In the interior, on first flat, the kitchen, pantry and hall floors are hard maple; oil finish. All other woodwork is pure white pine, with oil finish also, which we consider makes a good finish. The first flat can be converted into one room by opening sliding doors between hall and parlor, also sliding doors between dining-room and kitchen, the opening between parlor and dining-room being an arch in plaster of Paris. The sliding doors are hung with ball-bearing hangers, which give perfect satisfaction. The stairs are solid oak throughout, with the exception of the treads, which are pine. The posts are panelled oak, finished in oil. The sink in kitchen is a white-enamelled pan, adjusted on two iron brackets fastened to wall. The force pump is supported by a two-inch plank, ten inches wide, at end of pan, also on brackets, and resting on pan, which does away with all that woodwork which is in connection with closed sinks. With our sink force-pump we supply bathroom, by way of tank in attic. All waste water from bathroom, sink, overflow of cistern, is carried into the cellar to one main five-inch tile under cement floor, which is continued out underground about twenty rods, emptying into a creek, where it is readily carried away. This way of handling waste water we

have proved satisfactory, as there is no bad odor whatever. We heat our house with a coal furnace; four hot-air pipes lead to registers in floor at equal distances from furnace, one large register in hall heating rooms upstairs. I might just say that bedrooms are all ventilated by means of fanlights over doors. I think there is no need of further explanation, as plan represents all.

JOEL S. WEBB.



Ground-Floor Plan.



Upstairs Plan of Mr. J. S. Webb's Farmhouse.

The Agricultural Meeting.

What was termed the agricultural end of the live-stock convention brought out addresses and discussions on cereals and fodder plants at the hands of Messrs. Bedford, Grisdale and Murray. Supt. Bedford related experiences on the Brandon Farm with feed grains, and advised the growing of more peas on Manitoba farms, recommending the smaller varieties of peas, to be sown thickly, three bushels per acre, or else with one peck of oats per acre, and two to two and one-half bushels of peas, in order to harvest with the binder. He reported yields at the Farm of the popular soup standby cereal as high as 85 bushels, and the speaker preferred pea straw to all other kinds for pig bedding. In oats, the Banner or American Beauty was preferred to Tartarian varieties. The great source of trouble in the country was to get pure oat seed, free of wild oats. Oats, both wild and cultivated, were found in doubles or triples, and while the large wild one had a fuzzy end at the butt, and an open sucker mouth, its smaller companion was not so marked, and, therefore, escaped detection.

Oats, peas and barley deteriorated in Manitoba, and yielded poorly, because planted so late in the season, people continuing to sow wheat as long as they dared.

Mensury was the heaviest yielder of the barleys, but was four days later than the common six-rowed, and was four days ahead of the two-rowed varieties. Two-rowed barley had not been a success at the Farm after the first trial, which

gave them grain which won at the Colonial Exhibition. Wm. Wallace, Niverville, Man., grew two-rowed barley very successfully for years for the Old Country market, but the freight rendered it unprofitable. He sold barley at the same price, on the same day and market, in Great Britain, as obtained for No. 1 hard wheat. Mr. Bedford recommended Rennie's Improved six-rowed barley, and spoke of the tile drain at the farm, but said never lay tile after 5 p. m. in Manitoba, as the sun's reflection prevented accurate sighting and levelling.

This experience of Mr. Bedford's may explain the surveyor's lines in some parts of Manitoba, where arcs of circles are described by the road allowance, in place of straight lines.

Jas. Murray, of the Seed Division, gave an interesting address on "Seed Selection," and referred to the deteriorating effect of the snow in the '03 harvest, and rust in '04, and recited the result of Prof. Zavitz's experiments in seed selection. He advocated careful fanning-mill selection to get rid of the small, shrunken grain, and stated that selection rewards by increase in yield and uniformity. As to the use of rusted seed, he described an experiment he had conducted in a greenhouse with one hundred grains of each of the following wheats: No. 1 hard, Nos. 1, 2 and 3 northern, No. 4 frosted, No. 4 rusted, and No. 5, and stated as follows, the percentage of grain up at the end of eight and twelve days, and described the characteristics, showing specimens of the No. 1 hard and frosted plants mounted on cards:

	Eight days.	Twelve days.
1 hard	71	94
1 northern	64	88
2 northern	58	92
3 northern	78	93
4 frosted	33	85
4 rusted	34	89
5	31	89

Slower growth was noticed in the rusted samples, and the plants were deficient in color, and the amount of plant-food remaining in the seed was evident, little being there to supply the weak child from the rusted seed grain. Another effect on these plants was studied by exposing them to frost, thus freezing down at the end of ten days. The plants from rusted grain, although they came on again, were slim and lacked vigor, shown by the color, whereas in both experiments that from No. 1 hard had strong color, a thick stem, and the seed had still a lot of food in it for the young plant. In favorable seasons, the weaker plant might do, but it was not wise to take chances. Unfavorable conditions, such as freezing down, forced increased root development, therefore seed for plenty of plant-food to support that development. He recommended sowing a bushel and a peck to a bushel and two pecks per acre of real good wheat seed, preferably Red Fife. The chairman, Dr. S. J. Thompson (winner of the wheat prizes at Winnipeg in 1904, and twice previously, with wheat grown at Carberry and Winnipeg), said he had grown wheat for fifteen years, and always sold No. 1 hard wheat, and believed thin seeding favored rust. He advocated two bushels of wheat to the acre, instead of the smaller quantity.

Prof. Grisdale spoke on fodders, referring especially to alfalfa. He said it is the most productive of any fodder, barring corn, but was afraid it could not be got with a nurse crop here. It was a plant that required a lot of coaxing to grow. The young plants would not stand soil blowing (drifting). It must be sown on a well-drained field, where the soil water level is not within two feet of the surface. It will not kill out, if not cut the first year and given a chance. He advocated cutting with the mower, set high, at two and a half months, and again a month later, to keep down the weeds and prevent it blossoming, the latter point being very important. He was a believer in soil inoculation with the clover bacteria. The discussion following elicited Mr. Bedford's opinions as follows: Alfalfa will not stand a fight with weeds during its first year so well as red clover. He recommended growing it on a summer-fallow, although last year they had it knee high at Brandon, sown with barley. Prof. Grisdale further said: Cut for hay as soon as it starts to blossom, or the feeding value is greatly lessened. It is the best of all fodders for hay, and the favorite fodder plant for cattle. He had noticed in a field sown in strips to alfalfa, red clover, brome, timothy and red clover, orchard grass and timothy, and other grasses, that the cattle chose, first alfalfa, second brome, and third the timothy and red clover mixture.

The following resolution was moved and spoken to by Wm. Lothian, Pipestone, and was carried unanimously:

Whereas, the live-stock associations have by resolution declared in favor of more experiments with live stock at Brandon; and,

Whereas, the buildings there are inadequate for such purposes, therefore, be it resolved that the Director is hereby respectfully urged to provide additional buildings suitable and adequate for such experiments.

Apiary.

Winter and Spring Management of Bees

Address by James Duncan, Emerson, before Manitoba Beekeepers' Association.

Mr. President, ladies and gentlemen, I have been asked to read a paper on the winter problem and spring management of bees. In my feeble attempt to comply with that request, I would distinctly have it understood that what I advise is simply what we have learned in the school of experience.

In my estimation, the wintering problem may be summarized thus: In placing the hives in winter quarters, see that they are in proper condition; that is, that they contain a large percentage of young bees—the more the better—a sufficient amount of sealed stores, and a good queen; that the hives rest at least one foot from the floor of repository, the entrances fully open, covers removed and secured, folds of porous material placed on top to conserve heat and allow the moisture to escape, good ventilation, and the temperature ranging from 38 to 43 degrees. With such conditions existing in his bee repository, the beekeeper, if he has any respect for the comfort of the little fellows, will let them severely alone until the proper time comes around to again place them on their summer stands. With this exception, however, should the entrances of any get clogged with dead bees, they should be removed by means of a strong wire, bent at the end. But care has to be exercised lest live bees be pulled out, as they often cluster right down to the bottom board.

To bring about proper wintering conditions, the summer management must be of such nature as will, under existing circumstances, tend to assist and, to a certain extent at least, direct the efforts of the bees to attain that condition. With this purpose in view, we cannot too strongly emphasize the necessity of keeping hives strong. We believe strong hives to be the solution of financial success as well as of successful wintering. A strong colony will at all times contain more young bees in proportion to the old ones than a weak colony; hence it is in better condition to withstand any adverse circumstances that may arise. A few cold nights in spring, or even in summer, will severely affect the brood in a weak colony, though doing but little if any harm to a strong one. This becomes more apparent as the cold nights in the fall appear; a weak colony will almost entirely cease to raise brood, while a strong colony will continue, even if the weather be unfavorable, especially if feeding is resorted to and care taken to help maintain the heat of the hive. We have now the old bees nearly worn out by incessant labor, playing the last act in the drama of their lives by way of aiding in the maintenance of the heat in the hive. They will soon litter the floor of their winter repository, but will leave behind them an army of workers, young and full of vitality; then when "Spring unlocks the flowers to paint the laughing soil," they will come forth to do their part in the economy of the hive, and add wealth, health and pleasure to their owners.

"When gentle spring hangs her infant blossoms on the trees," weak colonies, from the fact of their containing more old bees in proportion to their numbers than strong colonies, will come out greatly reduced numerically as well as often in vitality. Under favorable conditions and care they may often be gotten into shape for winter, but will very seldom give a paying surplus. The summer management, to attain to the wintering condition of the bees, as indicated, may vary more or less as the different seasons and localities demand, and results will be governed greatly by the experience and intelligence of the apiarist.

We will mention a few things which we think generally applicable in running an apiary for profit. As summer is the time to prepare the bees for winter, so is winter the time to prepare for the bees in summer. By having in readiness sufficient hives, foundations and all necessary appliances when needed, much annoyance and loss will be avoided. Set the bees out on the first appearance of pollen or honey, leave plenty of cloth on top, and adjust the entrance blocks to the requirements of the colonies. On the first opportunity, when the temperature reaches 65 degrees or over, assist the bees in housecleaning, at the same time keeping a sharp lookout for the queens or any indications of them; contract the weak colonies to the number of frames the bees will nicely cover; with a comb of honey extra. Feed those short of stores, and tuck all snug and warm.

Should there be doubts of any of the hives being queenless, they should again be examined in about a week, and if neither queen nor brood be present, they may be treated as queenless, and a queen introduced at once. Should no queens be on hand, they may be doubled up with hives containing queens, but we do not consider it good practice. Every apiary should have a few queens on hand to use in emergency. They may be kept over winter in nucellus. Success depends much on the quality of the queens, and if by chance

they have to perform their functions alone in the spring, be assured that a queen will never do her best, even in a strong colony, should the stores be short. Abundance of stores produces best results, and care should be taken that they be always present. As the season advances, close watch must be kept that the storing of honey does not encroach on the queen's domains, but that sufficient room be given for the same. We would recommend only one swarm from each colony. I have omitted details, believing they could be better brought out in discussion than embodied in a paper.

Manitoba Beekeepers' Convention.

The Manitoba Beekeepers' Association held its annual meeting in the City Hall, Winnipeg, on the 22nd ultimo, when a good representation of apiarists was present. Mr. S. A. Bedford, Brandon, president, occupied the chair, and in his address noted the growing interest in beekeeping on the prairies. Manitoba honey, because of its peculiar flavor, due to the variety of bloom, is in immense favor, and the market is decidedly good. Supplies are rather hard to get, but as the industry grows, no doubt some dealer will undertake to handle them. At present one has to get queens from somewhere within the Province or neighboring States, and import or make his own hives. The secretary-treasurer's report was satisfactory, and the Association was assured of a Government grant of \$100.00.

The election of officers resulted as follows: President, S. A. Bedford; Vice-president, J. F. Mitchell, Winnipeg. Board of Directors—J. J. Gunn, Honor; C. G. Caron, Winnipeg; James Duncan, Winnipeg. Auditor, Rev. A. E. Cowley; Representative to Exhibition Board, J. F.



The Bee Colony at the Brandon Experimental Farm.

Mitchell; Secretary-Treasurer, Thos. Gelley, Winnipeg.

J. F. Mitchell and Thos. Gelley were appointed to make arrangements for an exhibit by the Association at the 1905 Winnipeg Industrial.

After the election of officers, two very interesting papers were read and freely discussed. In the discussion the following points were brought out: Prevent collection of moisture in top of hive by using old flannels or some porous material for covering. Keep entrance open during winter. Give ventilation by either providing a large opening at the bottom, porous covering on top, or by leaving an opening at the top of the hive, where the entrance below is small. The inclination to swarm is very much reduced by giving the bees more than enough room in the spring. When it is necessary to feed, give granulated sugar dissolved in water in a small trough, or in a frame with sides on it to hold the liquid. In introducing a new queen, put the cage in which she comes right into the hive, and by the time the bees have liberated her she will have the same odor as the hive, or, if she is home-grown, sprinkle her and the colony with oil of wintergreen. Reduce size of entrance as soon as the flow of nectar ceases. Do not leave old comb or dishes of honey sitting around, as it leads to robbing. Clipping the queen's wings will often prevent a swarm clustering in high trees. Have the hives weigh over sixty pounds when going into winter quarters.

A resolution was passed deploring the presence in our markets of much adulterated honey, and the Government is memorialized to look into the matter, with a view to protect the home industry and the consumer.

Artificial Swarming.

Read by J. J. Gunn, before Manitoba Beekeepers' Association.

Among the advantages of artificial swarming are the following: One does not have to chase after swarms and climb trees; you do not lose swarms by having them come off in your absence, or by alighting in inaccessible places; you always know which hives have swarmed without having to look through a number, as is often the case when a swarm comes out naturally while one's back is turned. It enables you to take precaution against afterswarms. It enables you, when the honey flow is right, to make such a swarm as is most likely to succeed in sections. It takes less time, and is easier to make an artificial swarm, than to have the average natural swarm.

This is a subject on which a great deal might be said, and as it is impossible to even mention all the plans and modifications of plans in use, I shall confine myself to giving the plan I have been in the habit of using most generally.

Artificial swarming, however performed, is a simple operation, yet if the natural conditions under which swarming takes place are not observed, it is liable to prove a fruitful source of trouble. It is a dangerous operation in the hands of a beginner, and had better be left alone till the natural increase of colonies renders it something of a necessity, by which time the apiarist shall most likely have learned enough about his business to make it a success.

Bees swarm, it may be said, when the hive becomes too small for the increasing colony. By looking into such hives once a week the progress of this increase may be noted. When queen cells are found on the combs, it is safe to make the division. It is true that bees sometimes swarm when these cells are so rudimentary as to be noticeable only to the practised eye, and even before any cells are started at all. But such cases are exceptional, just as are the cases when swarming is delayed till the young queens are about hatching out. Of course, such a division may be made, with proper precaution, without regard to queen cells. But this paper is for the assistance of beginners, and for such it is best to be guided, as far as possible, as to when to act by the bees themselves.

Working for extracted honey, and keeping in view the prevention of after swarms, I usually proceed as follows: Remove from its stand the colony to be divided, and put in its place a hive containing five or six empty combs, or, if these are not available, then

sheets of foundation. Then find the queen, and place her, with the comb on which she happens to be, in the middle of the new hive. If the colony being divided is very strong another comb of brood may be transferred. Place these two combs together, arrange the empty combs on either side of them, and put the cover on. Then take each comb remaining in the old hive, and give it a sharp shake in front of the new one. If the weather is hot, as it should be when such work is undertaken, it does not require a very great number of bees to tend the young brood, and bees are hatching out every minute.

Replace the combs in the old hive in the same order as at first, an empty at either side, and move it to a new stand, some distance from the old one, and the work is done.

If one's object is mainly comb honey, what is called a "shook swarm" may be made, with but little difference in the procedure: In this case, four or five frames with narrow starters is all that the swarm gets as a brood nest, and all the bees are shaken in front of the new hive. The field bees, coming in with loads of nectar, find no place to store it, and if a super of sections, with full sheets of foundation, is placed on at once, especially one or two partially-filled sections, a fine lot of section honey may be secured in a short time. This is only done, however, when the heavy flow warrants it.

This plan is used as often as not to prevent an increase of colonies. In such cases, the comb in the old hive may be disposed of in several ways, but as this is a matter that beginners are not likely to attempt, I need not go into the details. However, one way that will suggest itself is the distribution of the brood among weak colonies.

Horticulture and Forestry.

How a Tree Grows.

By H. L. Hutt, Horticulturist, Ontario Agricultural College.

One of the first requisites to the intelligent management of trees of any kind is a knowledge of the manner in which they get their food, and how this nourishment is made use of in building up the structure of the tree. If growers generally had a better understanding of this subject, we would see fewer starved and sickly trees, less butchery in the pruning and trimming of trees, and such a thing as tree-plugging fakery going about the country humbugging farmers into having their trees made "proof against insects and diseases," by pouring drugs into a hole in the trunk, would be something unheard of.

To explain thoroughly the process of tree-growth would require more space than is at my disposal, but I shall try in this short article to give a little insight into the matter.

First, let us notice the structure of the tree, and the parts essential to growth. If we dig up a young tree, we find a root system spreading in the ground something like the top and branches spreading above ground. Near the base of the trunk the roots are largest and most able to hold the tree in place in the soil. The farther we follow them from the trunk, the smaller and finer they become, and at the very extremities they are so fine and delicate that it requires a microscope to see them. These are the fibres and roots-hairs which are most active in absorbing soil moisture and feeding the trees with plant food from the soil.

Trees also take part of their food from the air. This is taken in through minute openings in the leaves during the growing season. The leaves are the most active feeding organs of the plant above ground. They might also be called the breathing and digestive organs, for through them the plant carries on its respiration, and in them it digests the plant food taken from the air and from the soil, and prepares it to enter into the growth of the tree. Here, then, are the most active organs of growth—the root hairs and leaves—at the extreme ends of the tree, and between them the whole length and breadth of the tree, built up by their united action. Water is the vehicle or carrying agent by means of which the plant food taken from the soil is carried to the leaves, and by which the plant food digested and elaborated in the leaves is transmitted to all the growing parts of the trees.

Let us now examine a cross section of the trunk, or of any of the larger branches or roots, and notice the channels through which the plant food and elaborated material is carried. If the section examined is not too young to show the difference, two kinds of wood will be noticed—a dark central heart-wood, and a much lighter-colored sap-wood surrounding it. The heart-wood is the oldest wood, and is increased from year to year by the dying, drying and hardening of the rings of sap-wood next to it. It is not essential to the growth of the tree, except to give stiffening and strength. The sap-wood, so called because it contains the moving sap of the tree, is the latest formed wood, and is usually much softer, sappier, and lighter colored than the heart-wood. Through the minute microscopic channels in the sap-wood the sap travels from the roots to the leaves.

In both the heart and sap-wood may be seen numerous concentric rings, and by counting the rings we can tell the age of the tree, or any branch of it, for a new ring is added each year. And by a comparison of the size of the rings we may also learn much of the history of the tree. A thick ring, naturally, represents a season of good growth, while a narrow one near it would indicate that growth in some way that year had been checked.

On the outside of the wood is the bark, which, if the tree is old enough to show it, is of two kinds. The outer part, in this case, being dry and corky, while the inner bark is green and sappy. The outer is the older or dead bark, while the inner is the newer or live bark. If these be examined closely it may be seen that they, too, are made up of thin concentric rings similar to those seen in the wood. The outer bark is formed by the gradual drying and dying of the outer layers of the inner bark, and after a time it cracks and falls away in scales peculiar to the kind of tree.

From what has been said, it is evident that the increase in thickness of the tree must take place between the sap-wood and the inner bark, which is indeed the case. This part of the tree is called the cambium layer. When the tree is dormant, there is little or nothing of the cambium to be seen, but if the bark is pulled off the tree during the active growing season, the cambium

may be noticed as a sticky, half-liquid substance, which, in drying, forms a new layer of wood on its inside, and a new layer of bark on its outside.

Now, let us find out what this cambium is, and where it comes from. When growth begins in the spring, the root-hairs and rootlets absorb soil water, containing plant food in solution. This solution, which, in the tree, is known as sap, passes from cell to cell through the sap-wood of the roots, trunk and branches to the leaves. In the leaves, it is exposed to the action of sunlight and combined with the plant-food taken in by the leaves. Much of the water which was necessary to carry the plant food from the roots to the leaves is given off into the air through minute openings in the leaves. It is when this transpiration of moisture from the leaves is more rapid than the absorption of moisture by the roots that a plant wilts.

After the plant food undergoes a number of changes in the leaves, and is properly elaborated, it passes downward from the leaves, just between the sap-wood and inner bark, forming the cambium layer, as was noted before, which adds a

in height or lengthening of branches takes place only at the extremities of the branches. In most kinds of trees in our latitude this increase in growth has been completed by the middle of summer, and after that the new wood is matured and hardened so as to withstand the cold winter. At the point reached by each season's growth a ring may be clearly seen in the fresh bark, so that the age of a growing tree or branch may also be determined by counting the rings in the bark from the point as far backward as they can be traced.

[NOTE.—An illustration of tree growth was seen by the writer on a lawn. A galvanized-iron wire clothes line was wrapped around a young pine tree, about six feet from the ground. As the tree grew the wire became imbedded in the bark, and finally stopped the downflow of nourishment. Each year the foliage, or needles, became paler in color, the tree dying by slow degrees. Last season the trunk was nearly three inches thicker above the wire than below, and, apparently, 1905 will see its death.—Editor.]

Dairying.

Convention of Dairymen.

The nineteenth annual meeting of the Manitoba Dairy Association met in the City Hall, Winnipeg, on the 24th of February, with the President, Mr. W. B. Gilroy, of Austin, presiding. The meeting was large and enthusiastic, and the interest and optimism of the dairymen augur well for the dairy industry of Manitoba.

SECRETARY'S REPORT.

In his annual report the Secretary, Mr. G. H. Greig, said that the industry which this association represented seemed to be undergoing a period of depression, owing to the popularity of wheat farming, the severity of last winter, and the transition of the methods of butter manufacturing. Satisfaction was expressed with the dairy exhibit at the Provincial Exhibition, under the direction of Mr. W. B. Gilroy. The advisability of taking steps to institute travelling dairies was raised, in order that more interest might be aroused in the dairy industry.

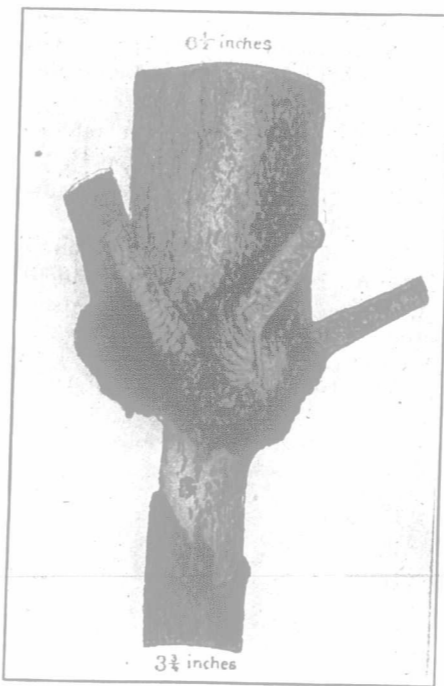
A satisfactory financial statement was submitted. In discussion upon the report, D. Munroe, Winnipeg, said he believed that if people could be shown that dairying was a more profitable industry than grain farming it would tend to make it more popular. He believed that the association should make an effort to induce the Government to expend some money upon travelling dairies, and to carefully foster dairying in connection with the new Agricultural College.

Mr. S. Larcombe asked that the buttermaking competitions at Winnipeg Fair be arranged so that the competitors would not have to remain in town during the whole time of the exhibition. He did not think the industry was on the wane in his district, for nearly all the farmers where he lived were getting into cattle-raising.

Mr. W. Champion, as a member of the old guard of dairymen, expressed himself as never so happy as now, for he considered that the dairy industry is, and always will be, the mainstay of the country, although now he admitted it did not receive the attention that it deserved. Mr. J. J. Ring, of Manitou, said that the rust scare would have the effect of driving more people into dairying, but that the practice of letting the cows nurse their calves during the years of good wheat crops had largely reduced their usefulness as dairy cows. He would like to see something done to stimulate the industry, as it meant a great deal to the Province. Mr. C. A. Murray said that although the make of creamery butter had fallen off by about 50%, the prospects for the coming season were very bright. Mr. F. W. Hodson was happy to inform the Manitoba dairymen that the milking machine was an assured fact, and would soon be found on all the large farms. He also endorsed the travelling dairy, but the keepers of cows must awaken to the fact that a very large proportion of the cows of the country were a dead loss. In Manitoba the average production per cow is 96 pounds of butter per year, and the average cost for keeping per year is \$17. Judging by the expression of opinion by a large number of the members present, the Manitoba Government would make no mistake in providing travelling dairies to give instruction in the care of milk, disposal of cream, making of butter, feeding of cows, etc.

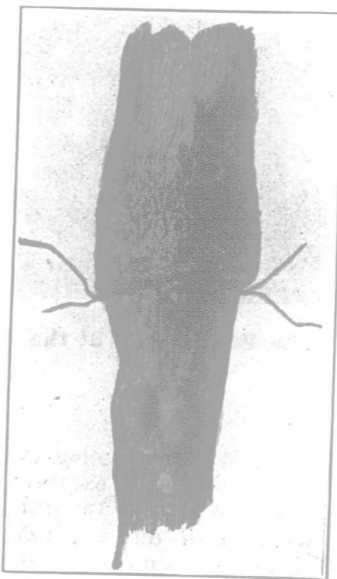
The officers elected for 1905 are: President, Mr. W. B. Gilroy, Austin; First Vice-President, J. J. Ring, Crystal City; Second Vice-President, W. M. Champion, Reaburn; Secretary-Treasurer, Geo. H. Greig, Winnipeg. Directors: Messrs. Steel, Glenboro; Munroe, Winnipeg; Murray, Winnipeg; Beavis, Cartwright; Black, Winnipeg. Representative on the Winnipeg Board, W. B. Gilroy. Auditors, Messrs. Geo. Batho and F. S. Jacobs, Winnipeg.

The dairymen continued their convention in the Cockshutt building, by engaging in a study of the form of a dairy cow. Prof. Grisdale, of Ottawa, and Mr. Robt. Ness, of Howick, P.Q., demonstrated with a good type of Holstein. At the close of the demonstration class a resolution was passed, asking the Government to fit out travelling dairies, and to stimulate the industry in other ways at Farmers' Institute meetings.



A Pine Tree Girdled by Mice.

3 1/4 inches below, 6 1/2 inches above.



Young Tree in Which Growth is Checked by Wire Band.

new layer of wood and bark on the branches and trunk and roots in every live and growing part of the tree.

It will be noticed, then, that it is the downward flow of the cambium, rather than the upward flow of the sap, that is directly concerned in the increase in thickness of the trunk, or, in fact, any part of the tree. This may be proven by tying a band tightly about the trunk or any growing branch, so as to obstruct the downward course of the cambium, and noting the rapid increase in thickness of the part immediately above the obstruction, just as a dam thrown across a stream increases the volume of the stream above it.

The accompanying illustrations show clearly how this has taken place in the specimens photographed.

This explains the growth in thickness. Now, let us see how the growth in length or height takes place. The flow of sap to the extremities of the branches, and the elaboration of plant food in the leaves and green growing parts at the ends of the branches, causes the rapid formation of new cells of wood at these points. All the increase

Poultry.

Second Annual Exhibition of Alberta Poultry Association at Edmonton.

The Poultry and Pet Stock Association of Alberta are entitled to credit and congratulations on the success of their second annual exhibition, held in the city of Edmonton, on February 15th, 16th and 17th. It was marked by well-contested classes in most cases, well-fitted birds, and a large attendance of visitors. It has a set of energetic and enthusiastic officers, and the Association is doing a much needed and valuable work in promoting poultry interests in the Territories. The Territorial Department of Agriculture are co-operating with local associations in both the north and south, and have furnished an expert judge free to the poultrymen. Good standards will be set in this way, and the quality will be improved, and demand consequently stimulated. The Commissioner of Agriculture was in attendance during the whole of the show, and expressed the highest pleasure with the display of pure-bred birds, as well as with the interest and enthusiasm displayed by poultrymen and public alike.

The judge gave great commendation to the Light Brahma exhibit, which was, without doubt, the strongest class at the show, though the Rock classes were perhaps the most numerous. R. J. Manson carried off the chief honors in the Brahma, with C. De W. McDonald following close. Manson won the silver trophy for highest-scoring bird with a cockerel of this class, the score being 96½. Manson, Stovel, Wilson and Bisset divided the money in the Barred Rock classes. G. W. Scott, McDonald and Stovel were all in the White Rock classes. Scott won special for best hen at a score of 96. McDonald and L. D. Parney showed Buffs.

W. F. Cameron and J. B. Stovel were out with good Wyandottes, and McDonald and Cameron with Leghorns. McDonald has Langshans that could have stood against good competition. He was alone also with Minorcas equally good. Buff Orpingtons were not a well-filled class, but among them were some good individuals, shown by V. T. Richards and D. S. Long. C. Bissett had gray and McDonald colored Dorkings. F. H. Hill showed Spangled Hamburgs, and H. Tall and A. W. Fead some Games, all of good character. The Bantams were not well filled, but the birds were creditable.

J. K. Kennedy made the awards satisfactorily in the dog classes, collies being the strongest.

The Poultrymen's Convention at Edmonton.

The best results promise to follow the institution of the Poultry and Pet Stock Exhibition, if we may judge from the large and representative assemblage of citizens, fanciers and farmers who gathered at the night meeting following the second day of the exhibition. Mr. Cottrell, who has a continental reputation as a poultryman, and Dr. Wm. Elliott, Commissioner of Agriculture for the Territories, spoke at the convention, besides local poultrymen who were heading the movement for an exhibition of pure-bred poultry and pet stock.

Mr. Cottrell contributed an exhaustive and interesting address on the properties of the breeds, and on the general management of poultry stock. It is evident that in poultry he is entirely at home. In opening, he presented a strong plea for the placing of awards by comparison rather than by the score-card, as the most rational and satisfactory procedure to exhibitors. His awards gave good satisfaction, and his evening address was listened to with the utmost interest and satisfaction. He paid a high tribute to the character of the exhibits, commending especially the display of Light Brahmas as being equal, if not superior to the exhibit at the recent Guelph Fat-stock show.

Mr. Cottrell's address was of a most comprehensive kind, embracing a discussion of both breeds and management. He traced the growth of a taste for the utility family, as against both the special pot fowl and layers, and he gave many telling incidental references to the distinctive properties of the different breeds of the three families—Asiatic, Mediterranean and American.

His judgment was favorable to the pure-bred fowl, as against the fowl of mixed breeding, though he did not emphasize the need of buying pure-bred foundation stuff. The use of the best class of sires for five years following a consistent line of breeding would put the farmer in possession of a flock of poultry to all intents and purposes pure-bred.

On the management side of poultry work, Mr. Cottrell dealt with the construction and care of poultry-houses, the production of winter eggs, and the fattening and marketing of poultry. The first principle of construction in poultry-houses was simplicity to avoid the harboring of vermin. Houses should have as few places as possible to develop vermin. They should be lighted by vertical pen rather than horizontal windows, to sweep the pen with sunshine from top to bottom, and

keep them dry at all times. The roosts, if more than one, should be all of the same height, as fowl crowd on to the highest perch, and become too warm. The pens should be washed with a solution of half a pint of crude carbolic acid to three gallons of hot water, to destroy vermin, and the roosts painted with an equal mixture of coal oil and carbolic acid.

For winter layers, early pullets are necessary, and these must be well fed and nourished to promote early maturing. It was not considered advisable to select eggs for spring hatching from these, as a fowl that has laid heavily during the winter season would not produce vigorous spring eggs. For this reason, a part of the flock should be reserved for spring work, and not pushed for early laying.

The process of crate-fattening was minutely described, and the gains under Mr. Cottrell's system were a revelation to many. The experience of Mr. Cottrell went to show that a gain of from two to two and a half pounds could be obtained in about three weeks. A discussion of rations was conducted along with this part of the speaker's address.

The evils of a low market were ascribed by Mr. Cottrell to the way in which fowls are commonly marketed. Fowls should be marketed with head and legs on. They should be dry plucked, instead of being scalded, and should be neatly and uniformly packed in crates of a dozen, and sold at a per-pound rate.

The Commissioner of Agriculture of the Territories, Hon. Wm. Elliott, gave an address full of encouragement for the poultrymen. The growth and status of the United States poultry industry was referred to as an indication of its possibilities in this country, and the condition of the local demand was used with good effect. Much poultry and eggs had been imported into the Territories. This should be unnecessary, as we were in every way suited to the production of a large volume of fowl products. The Territorial market was only partially satisfied, and British Columbia still remained.

Mr. C. De McDonald, who is one of the most enthusiastic and competent poultrymen of the city, gave a short practical talk on the chances attending the sensible management of poultry. He advocated pure-bred poultry (as they were selected and bred for special purposes), the keeping of one breed only, and the rational treatment of poultry stock. He showed the inadequacy of supply to present demand, and the good profits accruing to the farmer who gave any degree of care to the business.

At the close of the meeting, a hearty vote of thanks was tendered to the speakers of the evening.

Manitoba Poultry Show.

The Manitoba Poultry Association held its annual show during the week of the live-stock conventions in Winnipeg, and from the standpoint of a display of birds was a great success, but the attendance was not large, and the educational value of the show practically nil. The general-purpose utility breeds were out strong, especially the Barred Rocks. Speaking to the "Farmer's Advocate" of the show, Prof. W. R. Graham, of the Ontario Agricultural College, said:

"The show of poultry was certainly good, and must be a source of great satisfaction to the Manitoba breeders. There were a number of high-class specimens that would do credit to any show on the continent.

"The cooping of the birds was not all that could be desired. The show is badly in need of good coops. The coops, as now used, are not attractive, and many a good bird when shown in such coops looks much inferior to what it really is. The building answers fairly well, but, of course, would be much better if lighted from both sides.

"The show management worked hard, and did as well as could be expected under the conditions. By this I do not mean to say that the management was perfect, but, all things considered, it was as good as is usually seen under such circumstances.

"There can be little doubt that, from a farmer's standpoint, the show lacked educational features. The color of the feathers is interesting to the fancier, but it is the class of birds displayed for shape, etc., as table or as general-utility birds that pleases the farmer. If possible, the show would do well to join with the live-stock associations, and have lectures and demonstrations, like those of the other lines of live stock. This would be interesting to the farmer, and would help in a great measure to popularize poultry-keeping in Manitoba.

"The display of Plymouth Rocks and Wyandottes was certainly very fine, and there were some specimens well up in the prize money that would be equally as good as general-purpose chickens. This is a very desirable condition to have.

"The Orpingtons were out in fair numbers, and appear to be as popular here as in the east. They certainly are one of the coming general-purpose breeds.

"The display of ducks and geese, while not large, contained some very good specimens. Turkeys were only fair. The smaller breeds of chickens, such as Leghorns and Minorcas, were well represented, and the quality of the exhibit was good."

Some of the winners in the larger classes are: Barred Plymouth Rocks.—Cock—1, G. Wood, Holland; 3, Grundy Bros., Virden. Hen—1, T. H. Chambers, Brandon; 2, Geo. Grundy; 3, Wm. Rutherford; H. C., T. H. Chambers, Brandon. Pullets—1 and 2, Grundy Bros., Virden; 3, Geo. Wood, Holland; H. C., Hodgkinson, Neepawa. Cockerel—1, Hodgkinson, Neepawa; 2, J. T. Ward, Treesbank; 3, Rutherford; H. C., Hodgkinson, Neepawa. For Best Pen—1, Hodgkinson, Neepawa; 2, Grundy, Virden; 3, Wood, Holland.

Buff Plymouth Rocks.—Hen—1, 2 and 3, James Black, Winnipeg. Pullets—1, 2 and 3, James Black, Winnipeg. Specials, J. Black. Cockerels—1, 2 and 3, James Black; 4, W. O. Graham. Best Breeding Pen—1, James Black, Winnipeg.

White Wyandottes.—Cock—1, J. Welding, Winnipeg; 2, Longmore, Holland. Hen—1, 2 and 3, Longmore, Holland. Cockerel—1 and 2, Longmore, Holland; 3, Bryan Bros., Neepawa. Pullets—1 and 4, Bryan Bros., Neepawa; 2 and 3, Longmore, Holland. For Pens—1, Longmore; 2, Bryan Bros.

Golden Wyandottes.—Cock and Cockerel—3, S. Ling, Winnipeg. Hen—2, S. Ling. Pullets—1 and 2, T. Reid, Winnipeg; 3, S. Ling.

Silver Laced Wyandottes.—Cock—No first or second prizes; 3, J. A. Carter, Brandon; H. C., W. J. Lumsden, Hanlan. Hen—1, Ed. Brown, Boissevain; 2, Minto Adamson, Virden; 3, Ed. Brown, Boissevain; H. C., Minto Adamson. Cockerel—1, M. Adamson, Virden; 2, Ed. Brown; 3, Ed. Brown; H. C., Dr. S. J. Thomson, St.



A Handsome Manitoba Farmhouse—J. P. Smith, Manitou, Man.

James. Pullets—1, M. Adamson; 2, Ed. Brown; 3, M. Adamson; H. C., M. Adamson.
Barred Rocks.—Pens—1, H. N. Hodgkinson, Neepawa; 2, Grundy, Virden; 3, Wm. Rutherford, Winnipeg; H. C., Geo. Woods, Holland.
Light Brahmas.—Cock—1 and 2, J. W. Higginbottom, Virden. Hen—1, 2, 3, and H. C., J. W. Higginbottom. Cockerel—1, 2 and 3, J. W. Higginbottom. Pullet—1 and 2, J. W. Higginbottom, Virden.

At the annual meeting the advisability of amalgamating with the live-stock associations was discussed. Prof. Graham, of Guelph, laying before the association the advantages that the poultry associations in the east had derived from such affiliations. The incoming executive was then memorialized to do their best to bring about amalgamation.

The election returned the following officers for 1905: President, J. W. Higginbottom, Virden; First Vice-president, G. H. Grundy, Virden; Second Vice-president, George Woods, Holland; Treasurer, B. F. C. Menlove, Virden; Secretary, James Rothnie, Directors—M. Adamson, C. J. Bell, W. F. Scarth, William Anderson, J. Mullins, George Woods. Auditors, Messrs. Williams and Wise; Representative on Winnipeg Fair Board, William Rutherford; Brandon Fair Board, A. E. Sheather.

The Winnipeg Industrial Exhibition Association.

At the board meeting, held previous to the annual meeting, several noteworthy incidents occurred, in addition to the presentation of the annual report; two especially being the resignation of President J. T. Gordon, M.P.P., and Manager F. W. Heubach, on account of pressure of private business, the latter retiring after ten years' active service. That his services were appreciated by the board, is shown by the bonus of \$1,000 granted him at his resignation. The financial report summary is as follows:

Receipts—	
Shares	\$ 30 00
Grants	69,664 37
Subscription to prize-list	4,504 69
Entry fees	8,316 70
Space rentals	188 00
Privileges	22,410 03
Advertising	1,868 75
Miscellaneous	1,845 32
Admissions—	
Gates	\$36,128 55
Season tickets	1,411 00
Grand stand	25,120 75
Miscellaneous	
	62,660 30
	3,121 14
	\$174,697 81

Expenditure —	
Bank overdraft, 1903	\$ 2,413 84
Bills payable, 1903	10,000 09
	\$12,413 84

Prizes paid as follows:	
Entries.	
863 Horses	\$24,752 24
698 Cattle	7,526 88
299 Sheep	1,034 00
229 Swine	1,352 00
57 Stock-judging competition	107 00
354 Poultry	476 50
53 Turkeys, geese and ducks	164 50
73 Pigeons and rabbits	41 50
134 Dairy products	827 00
347 Agricultural products	1,008 00
43 Plants, flowers (professional)	62 00
103 Plants, flowers (amateur)	115 00
20 Birds and honey	58 00
6 Natural history	20 00
41 Fine arts (professional)	20 00
89 Fine arts (amateur)	236 50
22 Ladies' work (professional)	61 00
454 Ladies' work (amateur)	299 00
153 Schools	142 00
Diplomas	88 56
Engrossing same	13 20
Prize ribbons	361 91
Prizes, shooting tournament	125 00
Prizes, athletic association	15 00
Cups and medals	1,185 00
Display of plants	100 00
Market-gardeners' association grant	500 00
	\$40,720 73

The prize money for horses looks large when compared with that for other live-stock. A study of the prize-list shows, however, that omitting grants from the various Horse-breeders' Associations, such as the Clydesdale and others, the prize money offered for horses, exclusive of the races, amounted in round figures to \$4,490, so that practically \$20,000 went for the races alone; the remaining twenty thousand odd dollars paying the total agricultural prize-list. From this \$20,700 should be deducted the grants from the breed associations, amounting to about \$2,400.

Grounds, buildings and maintenance	\$26,107 57
Printing and advertising	12,785 94
Miscellaneous	31,903 14
Transportation	18,033 67
Paid to Canadian manufacturers	1,561 97
Official luncheons	2,121 87
Fireworks	6,094 38
Assistants, siege of Lucknow	455 40
Vaudeville	7,430 30
Military tournament	2,776 71
Ammunition	255 00
Bands	5,795 60
Miscellaneous	2,643 30
Balance on hand	\$171,099 42
	3,508 39
	\$174,607 81

ASSETS AND LIABILITIES.	
	Dr. Cr.
3 Winnipeg Industrial Exhibition Association	\$ 6,477 08
10 City of Winnipeg	57,868 92
29 Shares	1,619 00
24 Accounts receivable	\$ 250 15
30 Grounds, buildings and maintenance	104,476 16
290 City of Winnipeg debenture account No. 1	27,300 00
292 City of Winnipeg debenture account No. 2	16,000 00
41 Cash	3,508 39
	\$108,235 00
	\$108,235 00

The city accounts rendered have not been taken into the association's ledger, as there are several matters requiring adjustment.

It will thus be seen that 1904 was a successful year for the association. After paying a previous year's debt (bank overdraft, 1903, \$2,413.84, and bills payable, 1903, of \$10,000) of \$12,413.84, and some \$3,000 of accounts from 1903, have a balance of \$3,508.39. The City of Winnipeg's outlay on the buildings for the Dominion amount to about \$55,000. The attendance during the ten days was estimated at 209,000. It is now proposed to utilize the exhibition grounds as a public park, to be kept up by the city, a most commendable idea. The following is the new directorate: J. T. Gordon, I. M. Ross, A. A. Andrews, William Whyte, John Arbuthnot, G. F. Gait, F. W. Drewry, D. E. Sprague, F. W. Heubach, J. J. Maulson, J. A. Mitchell, G. H. Greig, Joseph Maw, William Brydon, A. L. Johnson, Hugh Sutherland, and William Martin. The city's representatives are Mayor Sharpe, and Aldermen Latimer, Fry, Cox, Wynne, Campbell, and Sandison. Dr. S. J. Thompson will represent the Horse-breeders' Association on the board, Jas. Bray the Cattle-breeders' Association, and W. B. Gilroy the Dairy Association.

Roup: Cause, and Cure.

There is no time of year when roup is more likely to give trouble than in the damp, chilly weather which comes between winter and spring. It is a contagious disease, the worst with which poultry is afflicted, but it usually starts with a cold. The first indication is a discharge at the nose. If this continues till the mucus thickens and stops up the nostrils, the poisonous discharge fails to find a vent and causes the head to swell. At this point the disease passes from a cold to roup. To prevent this, put a little kerosene on the nostrils when the discharge first appears, or, better, inject a few drops of sweet oil with a few drops of camphor in it, with a small machine-oil can. See that no fowl roosts where a draft can strike it or in a damp place.

If colds appear, put soda in the drinking water, three heaping teaspoonsful to a quart. If a fowl gets to the point where its head begins to swell before you notice it, kill it at once, taking care that its blood does not fall where the others will eat it. Burn it, for you cannot bury it deep enough to be sure that the disease will not spread. If the bird is a valuable one, remove it from the flock, bathe its head with hot water to reduce the swelling, open its nostrils, and inject sweet oil. Do not use a commercial grade, as such sweet oil is always diluted with material

not fit for medical purposes. Use sweet oil purchased at a drug store. Any good liniment which is not strong enough to blister may be put upon the swollen parts. Give the bird soda in its drinking water, and keep it in a warm place.

[NOTE.—Prof. Harrison, of the Ontario Agricultural College, recommends plunging the head in a two-per-cent. solution of permanganate of potash for twenty or thirty seconds, or as long as the bird can stand it. Give this treatment twice a day, until all symptoms have disappeared.—Ed.]

Canker often appears in a flock without being noticed by the owner. When a fowl stands about, opening its mouth and swallowing, as though there was a kernel of grain in its throat which it could not swallow, catch it, and you will probably find that there is a canker blister on the roof of its mouth or tongue. Dry sulphur will take it off. A good way of using it is to puff it on with an insect-powder blower. If the canker has got down into the throat you had better kill the bird, as there is very little probability that you can cure it, and the rest of the flock may get the disease. If canker shows itself on the inside or about the outside of a number of birds in the flock, put powdered alum in the water, a heaping teaspoonful to a quart. Minn. W. J. THOMAS.

An Incubator, and How to Run It.

By A. G. Gilbert, Manager Poultry Dept., Central Experimental Farm, Ottawa.

DIFFERENT KINDS OF INCUBATORS AND THEIR CAPACITY.

The majority of incubators on the market to-day are heated by means of hot air. In some cases hot water, distributed through pipes, is used. Both hot air and the hot water pipe systems have been found to give good results. If I were asked which I had a preference for, I would say hot air. Why? Because I think it is more controllable.

The incubator should embrace all the latest improvements, for in this rapidly developing age every year has its point of superiority over a previous one in all kinds of machinery. The principle may be the same, but the means of applying it will be found more simple and effective.

OF WHAT CAPACITY SHOULD THE INCUBATOR BE?

Experience of many years has shown that where 150 chickens are required at one and the same time, a machine of 200 or 220 egg capacity is the most suitable. Where a lesser number of chickens is desired a smaller size will answer. In certain cases two small machines have been found convenient, because one or both may be operated as occasion necessitates. For instance, early in the season (say beginning of March), when germs are not likely to be strong, both small incubators may be filled, and after testing the eggs only enough strongly-fertilized eggs may be left to fill one incubator. The other is reset or not, at pleasure. Much will depend upon number of fowls kept, strength of germs, etc. It is to be remembered that we have previously recommended farmers to fill their incubators in second week of April, so as to have the chickens hatched out about the first week in May. At the time of filling the incubator (early April) the germs of eggs from farm fowls are likely to be strong, and give a satisfactory percentage of chickens; hence a machine of 220-egg capacity is likely to be most convenient.

PLACING THE INCUBATOR.

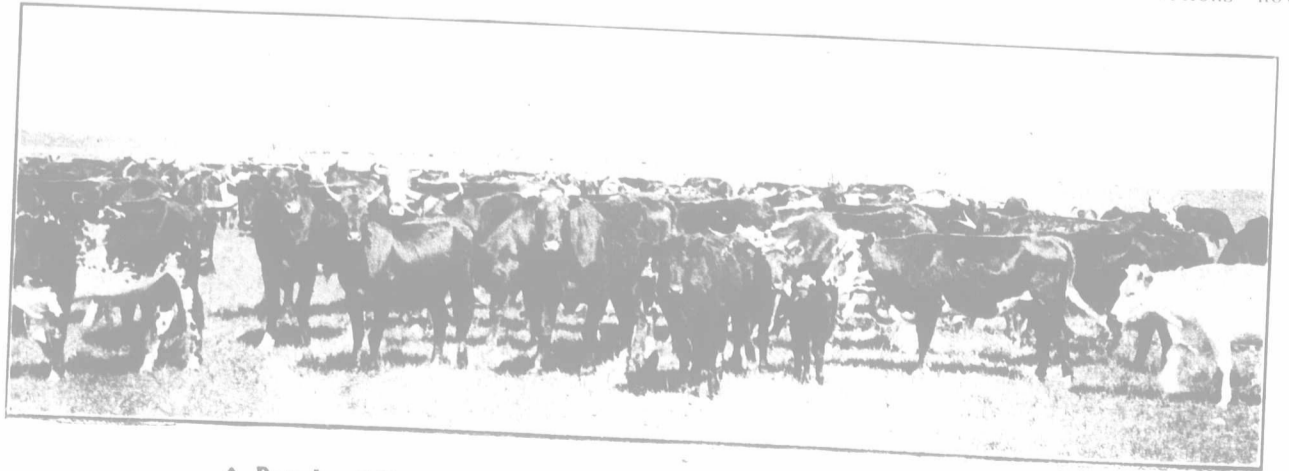
Having secured one or two first-class machines, our first duty will be to carefully unpack and set it or them up. With every incubator will come, if such have not been previously sent by letter, the following:

1. Instructions how to unpack and put together the different parts.
2. A list of articles sent with the machine.
3. Full instructions how to successfully operate the incubator.

The incubator should be placed perfectly level in a room or well-ventilated and well-lighted cellar, with a fairly uniform temperature, and as free from vibration as possible.

LEARN THE INSTRUCTIONS THOROUGHLY.

Having placed the incubator, the instructions how



A Bunch of Range Cattle near Lethbridge—A Lot of 5,000 Head.

to operate it should be completely mastered. Become thoroughly versed in the why or wherefore of all the different working parts. If you are in earnest you will find how interesting is artificial incubation. If you are not dead in earnest, let some one who is operate the incubator.

Before putting in the eggs for hatching, the incubator should be operated for two or three days, so as to permit of a thorough acquaintance with it. Every machine with finely adjusted parts seems to have certain "eccentricities" peculiar to it. Engineers of locomotives will tell you that, although built on the same pattern, no two are exactly alike in operation. One steams easily, works smoothly, and is of amiable disposition. Another, a twin engine from the same shops, is one apparently of moods, working well to-day and seemingly in an ugly temper to-morrow. While not nearly so pronounced in its phases, still it is best to become on the very best and kindest terms with your incubator. Find out its strong and weak points, and, above all things, be patient and good natured. A fussy, impatient, crabbed individual will hardly make a successful operator. Oh! this entails a lot of hard work. Not at all. On the contrary, to the right party, the managing of the incubator will be most interesting and attractive. It opens up a new world of possibilities.

THE REASON WHY FOR SEVERAL POINTERS.

Usually one lamp is sent with the incubator. It is well to procure a second, in case of accident to the one in use. Keep the spare one always ready. The morning is the best time to change lamps. The instructions will likely say to turn and cool the eggs morning and afternoon. Many persons prefer to do so in the evening, but the earlier period is preferable, for the incubator is better to be left undisturbed in the evening, with the temperature at 102½ or 103 degrees, which will be shown by the thermometer in the egg chamber. When turning the eggs or handling the trays the operator should be careful to have his or her hands free from coal oil.

None but the very best coal oil should be put in the lamps. For one reason the lamp will burn better. A well-constructed machine should require no looking after from evening till next morning, if it has been placed in a suitable location. If it requires any watching or pampering during the night, or, indeed, at any other time, you have not got a good one. The mission of the incubator is to be useful, not to make life a burden.

Will there be any great variations in temperature? Certainly not, if thermostat and regulator are working correctly. When the eggs are being cooled, or the egg chamber aired—if the latter is according to instructions—there will be a drop, but the regulation temperature will gradually be resumed on the closing of the glass door or doors. The writer has had a 220-egg capacity incubator in charge, which showed only one degree and a half of variation either way in three weeks. Another was almost as regular.

Correctly placed and running smoothly, the incubator requires a good deal of "letting alone." Stand by the instructions. If any defects show themselves, at once make them known to the agent or manufacturer. There should be no defects in a carefully-finished, up-to-date machine, and no other kind should be purchased.

THE MAN BEHIND THE GUN.

We have rather briefly sketched the incubator and its responsibilities. Now for the man who manages: The greatest drawback to successful early artificial hatching and rearing is weak germs. Neither incubator nor hen will hatch out a strong chicken from a weak germ. A successful hatch is dependent upon "the man behind the gun"; the man who knows how to house and handle his laying stock so that the germs in the eggs laid by his hens are strong, the result of healthy and robust breeding stock. Many an incubator has been consigned to ignominy, when the fault was really in the eggs laid by fowls very much out of condition. Much information as to weak germs and their cause will be found in Experimental Farm reports for 1902 and 1903. These reports will be sent free of cost to those who may wish to have them.

As a means of having eggs in winter and the strong germs in spring, the poultry-house with scratching-shed attachment is becoming popular. Fortunately, the fowls on many farms have opportunity during winter to run in barn, stable or shed. In such cases there should be no difficulty in having eggs early in the season with the requisite strong germ. It is astonishing what variations of temperature eggs with strong germs will stand and yet hatch well.

THE MOST SUITABLE EGGS FOR HATCHING.

Eggs cannot be put into the incubator too fresh. Where eggs are in good supply, ten days should be the age limit. Where not so plentiful, 14 days. It is a grievous mistake to suppose that any kind of old thing in the shape of an egg is good enough for the incubator.

Abnormally large eggs, which generally contain double yolks, or those wrinkled or out of shape, which are usually laid by hens in an over-fat condition, should be discarded in choosing eggs for hatching.

If success does not crown a first attempt at hatching by incubator, find out where mistakes may possibly have been made, and try again.

Points of Barred Rocks.

A correspondent asks for the points of a pure Barred Rock, and if the cockerel has a large or small comb?

The points given by the American Standard of Perfection are given below, but a new standard is promised in March next that may differ slightly in detail from that given here.

THE MALE.

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

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

Wattles and Ear-lobes.—Wattles—Of medium size, equal length, moderately rounded, bright red. Ear-lobes—Of medium size, bright red.

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

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

Breast.—Broad, deep, full. Body and Fluff.—Body—Broad, deep, full, compact. Fluff—Moderately full.

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

Tail.—Of medium length, spread at the base, carried moderately upright. Sickles—Fairly developed, spreading laterally beyond the tail proper. Lesser Sickles and Tail Coverts—Well developed and well curved.

Legs and Toes.—Thighs—Large, strong, well covered with soft feathers. Shanks—Of medium length, stout in bone, well apart, yellow. Toes—Straight, strong, well spread, of medium length, yellow.

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

THE FEMALE.

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

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

Wattles and Ear-lobes.—Wattles—Of medium size, equal length, well rounded, bright red. Ear-lobes—Of medium size, bright red.

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

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

Breast.—Broad, full, round. Body and Fluff.—Body—Broad, deep, full, compact. Fluff—Moderately full.

Wings.—Of medium size, well folded. Tail.—Of medium length, spread at the base, carried moderately upright. Tail Coverts—Fairly developed.

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

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

An Experience with Plymouth Rocks.

Having had a short experience in profitable poultry-keeping, I thought it might be of benefit to some "Farmer's Advocate" readers. I bought nine Plymouth Rocks two years ago; now I have twenty-four yearling hens, as many as my henhouse will accommodate. The house is made of inch boards and scantling, twelve feet square, with a ground floor. The boards are put on double, with tar paper between.

The hens are fed in the morning, with about one quart of goose wheat, spread on the floor and covered with about a foot of straw. They exercise themselves in this until noon, when they are given one pound boiled meat, one quart barley, some turnips and potatoes fed hot. At night they get all the grain they will eat—generally a mixture. They have plenty of grit and bones, that I break up fine with a hammer, and lots of water. The pen is cleaned out twice a week at least, and fresh, dry litter put in place of the old. I believe the main thing in caring for hens is to keep them dry. I have had better success feeding the hot feed at noon than when fed in the morning.

Last year I sold 162 dozen eggs, that were sold

to a private house in Toronto at an average price of 20c. per dozen. I raised 100 chickens that averaged 65c. per pair, making in all an income of \$64.90, besides what my own family used at home. I did not keep account of feeding, as all was raised on farm except the meat, which was principally livers from a neighboring slaughtering house that cost nothing. R. E. S.

Events of the World.

Canadian.

A terrific blizzard visited Southern Newfoundland February 23rd and 24th.

The best oil well yet discovered at Leamington, Ont., was struck recently.

Hon. J. Israel Tarte was married on February 23rd to Mrs. Emma Turcot, of Ottawa.

Four hundred Russian Jews are en route to Canada, by C.P.R. Liner Mount Temple.

A new ore vein, yielding ore worth \$25 per ton, has been found in the White Bear, near Rossland, B. C.

The Speaker of the Senate, and many members of Parliament, sent congratulations to Senator Wark, on the occasion of his one hundred and first birthday.

The steamer China has been purchased by the Lake Ontario Steamship Co., and will be placed on the route between Montreal and Fort William. The boat will be remodelled, and will be one of the finest on fresh water.

On July 1st the Canadian Government will assume control of the fortifications at Halifax and Esquimalt. It has been announced by Sir Frederick Borden, Minister of Militia, that after that date Canada will assume the responsibility of her own defences.

British and Foreign.

As a result of an explosion in a mine at Wilco, Va., twenty-three miners have lost their lives.

France will spend \$24,000,000 on her navy this year, chiefly on submarines, torpedo boats, and destroyers.

General Stoessel, the defender of Port Arthur, has arrived in European Russia, and is receiving ovations at every point.

The German steamers Severus and Romulus, bound for Vladivostok with cargoes of Cardiff coal, have been seized by the Japanese.

Dr. W. Harper, President of Chicago University, and one of the foremost educationists in America, has been operated on for cancer.

Unofficial negotiations are being carried on by the French Cabinet, to see upon what terms a peace understanding between Japan and Russia could be arrived at.

The remains of Grand Duke Sergius have been placed in a vault in the Church of St. Andrew, Moscow, where they will remain until transferred later to St. Petersburg.

A statue of Frances E. Willard, the noted temperance worker, has been placed in the Statuary Hall of the Capitol at Washington. It is the first statue of a woman which has been given place in the hall.

The degree of LL.D. has been conferred by the University of Pennsylvania upon Emperor William of Germany, President Roosevelt, and Sir Henry Mortimer Durand, British Ambassador to the United States.

The local committee of the Socialists, at St. Petersburg, has had printed by the secret press of the party, 5,000 copies of a manifesto, announcing that other assassinations will follow that of the Grand Duke Sergius.

It is estimated that the losses of British underwriters on war risks upon steamers bound for Vladivostok, and subsequently seized by the Japanese, have amounted, since the beginning of the war, to about \$3,000,000.

In a recent fight between Bulgarians and Turks, the Bulgarians lost 20 men killed or wounded, their village being afterwards burned by the Turks. Afterwards the charred bodies of 14 women and several children were found in the ruins.

New Orleans has been visited by a great fire, involving millions of dollars loss in property. Nearly a dozen squares of wharves and freight sheds, with vast quantities of freight, were consumed, along with two elevators and many residences.

Mr. Rider Haggard, the novelist, is on his way to

America. He has been appointed a commissioner to inquire into the conditions and character of the agricultural and industrial land settlements organized in America by the Salvation Army. The trustees of the estate of Cecil Rhodes are paying the expenses of the inquiry to be made by Mr. Haggard, under the auspices of the British Colonial Office, with the view of applying the scheme to South Africa.

The Agra diamond, to which a romantic history is attached, was sold recently in London for five thousand one hundred pounds. It got its name from the battle of Agra, at which it was captured by the Emperor Baber, founder of the Mogul Empire in India. Afterwards it came into possession of the King of Delhi, from whom it was taken in 1857 by some British officers, who smuggled it aboard ship by putting it into a horse-bell and forcing a horse to swallow it. The horse was then shot, and the diamond was taken from its stomach. It subsequently came into possession of the Duke of Brunswick.

Mr. Jas. T. Ford, who arrived in Seattle recently from the Far East, where he has been studying labor conditions for some time past, is of the impression that the development of the cotton and iron industries in Japan and China will in future prove a serious menace to the trade of Great Britain and the United States. Cotton mills, he says, are springing up all over Japan, and are even now largely supplying China's 440,000,000 with cotton goods. As a result partly of this new rivalry, cotton mills have been shutting down all over the United States. In China, he asserts, there is all the coal and iron necessary to carry on extensive manufactures for an unlimited period, and he believes the Chinese are fully alive to the possibilities of the situation.

The situation in Russia becomes every day more complicated, the strike having now affected almost every part of the European portion of the Empire. In the south the entire district of the Caucasus is in revolt, and the Tartars have been let loose on the people with such terrible results that at Baku alone, it is asserted, 300 corpses were counted in the streets. At Batoum and Poti collisions have also occurred, and it is reported that the latter town has been bombarded by a detachment of vessels from the Russian Black Sea Squadron. . . . At St. Petersburg the strike has assumed the form of a lockout, several of the largest manufacturing firms having given notice to the employees that they are discharged, and that the works will be shut down indefinitely. As a consequence, between 30,000 and 40,000 men are idle, and a renewal of the riots is anticipated. . . . In Russian Poland the situation has not improved. Nearly all the railway employees in the Province, including the telegraph operators, have joined the strike and traffic is almost entirely suspended. At Warsaw the strikers have destroyed the switchboard station and cut some of the telegraph wires. Serious riots have also been reported from Kharkoff and from Riga, where mobs of workmen have destroyed some of the factories.

Once more the news of a possible peace, which gained currency recently, has proved to be but a myth. On the contrary, fighting has been renewed along the whole front in Northern Manchuria, operations thus covering a distance of about a hundred miles, with the fiercest bombardment raging at Ponteloff (Lone Tree) Hill, which the Japanese seem determined to regain. Judging from appearances, the Japanese are making every effort to accomplish the grand coup before the spring opens and the rivers become flooded. Already at several points they have crossed the Sha and Shakhe, and are making efforts to pass the Hun. At the same time, they are attempting to cut off the railway communication between the Russian army and Vladivostok. During the past week, also, they have gained an important position at Tsinkhetchen, and have driven the Russians from Da and Vanze Passes, thus gaining an open road to Fushan; while Kuroki's repulse of Lieut.-Gen. Rennenkampf has thrown open to them the mountainous country east of Yentai. The Russians, on the other hand, have gained some unimportant advantages, and have stubbornly contested the Japanese advance at every foot of the way. Their position, however, becomes daily more serious, as the partial collapse of the Great Siberian Railway renders it impossible to forward food and ammunition as speedily as required. The Czar is said to be on the verge of desperation, and the recall of General Kuropatkin is being considered. Should such a step be decided upon, there will be, indeed, but small prospect of immediate cessation of the war.

Field Notes.

Hon. Clifford Sifton has resigned from the Cabinet, on account of his disagreement with the educational clauses of the Northwest Autonomy Bill.

Seeding commenced at Medicine Hat on the 23rd, ultimo, and considerable plowing was done near Lethbridge during the same week.

"Because sheep do better than other stock on poor pasture it is not advisable to habitually keep them on poor pasture. In fact, it is not a good plan to keep sheep on the same pasture more than two or three weeks at a time, no matter how good it is. They require a complete change, and the oftener the change is made the better."—[Farm-stock Journal.]

Canada's Wheat Production.

(Ottawa Correspondence.)

The Agricultural Committee of the House of Commons held its first session on Tuesday, February 21st, when Dr. Saunders, Director of Experimental Farms, furnished some interesting information regarding wheat-growing in Canada. In 1904 he said that 80,000,000 bushels of wheat were produced in the Dominion. In 1902 the United States sent to Britain 81,000,000 bushels of wheat, or 54 per cent. of the latter's total needs; in 1903 only 45,000,000 bushels, and in 1904, 12,000,000 bushels. U. S. flour exports had fallen off similarly. He pointed out that Canada was destined to become the great wheat-producing country of the world, having many advantages in respect to soil, climate, etc. Experiments were being conducted at the Experimental Farms, he said, in order to obtain varieties of wheat that would ripen earlier, and thus would be immune from early frosts, which sometimes injure the wheat crop in some portions of the Canadian West. The experimenters, he said, were meeting with considerable success in producing earlier varieties, and he looked forward to some very important results along this line in the near future. Canada's strongest competitors as wheat producers, according to Dr. Saunders, will be Russia, Argentine and India.

Re Selling Wheat.

In your issue of Feb. 15th appears an article called "Ed. Note," in answer to a letter from Edward Williamson, re grading grain, in which you give some good advice, though rather hard to follow in many cases, for different reasons. First, you advise us to deal with the firm which remits promptly. How are we to know which of the firms that is? They all advertise alike; all solicit consignments, asking shipper to bill the car to their order, or at least to their advice, and "send bill of lading through the mail, when an advance will be sent if desired." The law requires (as you rightly state) all commission merchants and track buyers to be licensed and bonded, but is the law in this respect carried out? It seems not. Then whose fault is it? Who is supposed to prevent irresponsible parties buying wheat without either license or bonds? Up to the present there is only one man has a chance to know who are bonded and who are not, and as there is no list published showing the names of the bonded firms, the shipper is entirely at the mercy of the buyers. Some of us have learned indirectly, and some, I believe, too directly and too expensively, that at least one firm has been allowed to do business, right in the Grain Exchange building, the greater part of this season, without either license or bonds; have advertised in all the leading papers, including the "Farmer's Advocate," soliciting consignments same as the rest, yet not checked up till some one, who had been robbed of wheat, appealed to the commissioner to get settlements, only to find the man had neither money, credit, nor conscience. Another advice in your Ed. Note is to send bill of lading through bank, and the bank will get the money. That is all right so far as the advance is concerned, but when you come to get the balance how are you going to secure it? If you don't sell till you get your out-town certificate you very often lose by the fall of the market, and if you do sell and surrender your bill of lading, what security have you that you will ever get the balance, even if the car is billed to your own order and advice? I am advised by the Commissioner that it is quite easy for the firm who holds the B. L. to get the balance of the purchase money, or duplicates of weight and grade, and ignore the original shipper's claim, although he holds the original certificates. How do you explain that?

Another paragraph which needs explanation in your note is the one referring to the commission merchant holding back the balance of purchase money. You state as soon as the commission man has the grade he can sell it and get the whole sum for it. Surely he cannot remit balance until he gets the certificate showing the number of bushels the car contained. Then your last clause, in which you say the only firms worth doing business with are those who do it promptly, is the solution of the whole difficulty. If you will kindly publish the names of the said BEST FIRMS, who always do business promptly, you will greatly oblige a multitude of farmers like myself, who are

INDIVIDUAL SHIPPERS.

[Note.—The several points brought out by our correspondent were well discussed at the G.-G.'s convention at Brandon. Mr. Hamilton, of Portage la Prairie, explained the way to do business through the bank. As to the commission men who remit promptly, the idea of the suggestion was that business should not be done the second or third time with a firm at all dilatory in remitting. We have suggested editorially that the G.-G.'s organization should give instruction at their meetings as to the best method of marketing, taking up the business end particularly.—Ed.]

Winter Wheat Condition.

The February crop bulletin of the U. S. Department of Agriculture says that winter wheat is generally well protected westward of the Mississippi River, and also in portions of the Ohio Valley and middle Atlantic States, but over much of the last named district there was insufficient snow protection during the severest weather, and in portions of Indiana and Illinois it is feared that the crop has suffered injury, large areas being covered with ice. On the north Pacific coast the outlook is favorable, except for late sown in Wash-

ington. In California the prospect is excellent, except along the Sacramento River, where some damage has been caused by heavy rains.

Hamiota Grain-growers Meet.

A largely attended and very interesting meeting of the Hamiota Grain-growers was held on Saturday, Feb. 18th, to hear the report of the delegates to Brandon Provincial convention, which was given at some length by four of the delegates, and discussed by the members present. All the delegates expressed themselves as being highly pleased with the convention, and thought the time and money spent there was well repaid by the information gained, besides the pleasure of being present at the largest purely farmers' convention ever held in the Province. The benefits of the association are being seen and felt in our local market at present, when for the first time on record the elevator companies are paying right up to the track price for wheat on the street. This is certainly an achievement worth striving for, and meriting credit for the association which has brought it about, and any farmer who has held aloof from the association, claiming it has done no good, should immediately admit that he has made from \$25 to \$100 a car on all the wheat he has sold the last two years, and can take his load on the market to-day and get full value for it—something he could never do before.

A strong resolution was passed at the meeting on Saturday, asking our member at Ottawa to oppose the imposition of duty on rough lumber, which is being asked for by the lumber dealers at present. A petition is also being largely signed, to be forwarded to Ottawa, praying for same. If this action was followed by all the local associations, after being so strongly dealt with by the provincial organization, there should be little fear of the Government imposing the duty.

SEC. HAMIOTA G.-G. A.

Problems of Agricultural Societies.

With the object of becoming familiar with the conditions and needs of the agricultural societies in Manitoba, in order to render them intelligent assistance, the Deputy Minister of Agriculture, W. J. Black, recently issued a letter to all societies, asking them to send delegates to a meeting to be held in Winnipeg, on the 24th, ultimo, at which would be discussed the following questions: Whether it was considered desirable to have the various local fairs grouped for purposes of judging, the judges to be selected by the Department; whether it was desirable to have a general revision of the prize-lists in conformity with an ideal list prepared by a general committee, and whether it was desirable to have expert outside judges employed.

Forty-four out of the forty-nine societies reported to the meeting, setting forth their conditions, needs or otherwise, and their positions with regard to the employment of competent judges.

After hearing reports from all the delegates, suggestions for improvements were made by A. P. Ketchen, Dr. A. G. Hopkins, and Jas. Murray. The former recommended as educative and attractive features judging competitions for the younger generation, and competitions for fitting live stock, particularly horses, for the exhibition ring. There should be some sports, but they should be clean. Good horse-racing, athletic sports of various kinds, and special competitions, were all good attractions. He instanced the "gymkhana" of India, a species of wrestling on horseback, and competitions for women handlers of horses, as being particularly successful. He also advocated annual revision of the prize-list, and arrangement of the live-stock exhibits in the ring according to classes. Mr. Ketchen said in conclusion that it was a big mistake to measure the success of the fair by the gate receipts, for the results of real value were educational.

Dr. A. G. Hopkins, Editor of the "Farmer's Advocate," gave a brief address upon improvements that might be made in the work of agricultural societies. He said that the local fair should in every case be devised with special reference to the peculiarities of the district, and in some districts it might not be advisable for the agricultural societies to undertake a fair. Other suggestions he made were for the holding of athletic contests between schools to bring the young people to the show, pure-seed distribution, plowing matches, butter and bread making competitions, exposition of the beef-ring, poultry-plucking and milking competitions, demonstrations of horse-training, competitions for best-looking farms, giving of prizes for new models for farm machinery, for best plans for farm architecture, for best collections of modern farm machinery, and the holding of debates. He further advocated co-operation in getting pure-bred sires, the giving of larger grants to smaller societies, and the basing of these grants upon the amount of money expended by the society in prizes in purely agricultural classes.

Mr. Murray said that it was remarkable that in a country where grain-growing was of such significance so little attention was paid to exhibitions of grain. He then went on to outline a system of seed fairs in connection with institute work. These fairs he recommended being held in late winter, or very early spring, the exhibits to consist of at least two-bushel lots, and of grains in the sheaf. At such fairs arrangements could be made for the purchase and sale of seed, and the discussion of grain subjects, after the judging had been completed.

The convention then took up the matter of grouping the fairs in circuits, and decided that each delegate should report to his respective society on the proposition, and then communicate to the Department their

desires in the matter, not later than March 15th, naming within a range of ten days the date upon which they preferred to hold their show.

A motion was passed, asking the Deputy Minister, with the assistance of Dr. Hopkins and Mr. Ketchen, to prepare a model skeleton prize-list, with suggestions of a general nature.

A brief but animated discussion upon features that should be eliminated from the fairs culminated in a most emphatic resolution, condemning the permitting of games of chance or immoral exhibitions within the grounds, the individual members pledging themselves to use their endeavors to have these features absolutely prohibited in the shows of which they were directors.

The Deputy Minister then thanked the delegates for the earnest manner in which they had applied themselves to the discussion of the questions brought before them, and asked for their co-operation in carrying out the resolutions passed at the convention.

Veterinarians Meet.

On the evening of the 22nd of February, the Manitoba Veterinary Association held its annual meeting in the City Hall, Winnipeg. Dr. Stevenson, Carman, President of the Association, presided, and read his annual address. Dr. Torrence, Winnipeg, gave the report of the Secretary-Treasurer, which showed the association to be in a flourishing condition, having added four new names to the members' list during the year, making a total of eighty-two. Dr. Snider, of Emerson, won the prize for the best paper by a member who had not previously competed. Several other papers were read, and the association decided to hold its semi-annual meeting in Winnipeg, on a date to be fixed by the council. The officers for next year are: President, Hon. D. H. McFadden, Winnipeg; Vice-President, W. E. Martin, and Secretary-Treasurer, Dr. Torrence, both of Winnipeg.

Another Nail in the Coffin of the Mexican.

To the Editor "Farmer's Advocate":

For years I have taken the "Farmer's Advocate," and there is no paper coming to our home that has a more welcome place or is read with more interest. It is truly a farmer's paper, published in their interests, and from its pages we get each week instruction, advice and knowledge which is valuable and interesting to us and our homes.

I may say, coming here poor and penniless from the Old Land, but with health and courage, I selected Alberta as my home in 1883. Spending a few years in the service of the C. P. R. company, I took to ranching and the raising of cattle, for which I had a fondness, and I am thankful to say, have made my life-work thus far somewhat of a success. I do not wish to boast, but to-day I am the owner of five thousand acres of land and five hundred head of cattle.

I noted in the last number of the "Farmer's Advocate," you are discussing the question and propriety of bringing Mexican and Texas cattle into the Territories, and turning them loose upon our rich prairie grasses. This is certainly commendable and praiseworthy, and should be read by every farmer and rancher, not only in the Territories, but in Canada. While I am not interested to the same extent as those who have their thousands of cattle, it is a matter that affects every man, great or small, engaged in this industry, and I have no hesitation in saying, detrimental to the present and future prospects of this young country of ours. The sooner steps are taken to prevent their importation the better it will be for all concerned.

To-day we have men of enterprise looking forward to the future, spending their wealth in breeding and importing valuable and costly cattle from the best herds of Great Britain, in order to raise the standard and quality of our best beefing and milking strains, and give Canada a reputation for quality, and enable her to compete in the best markets of the world, securing for the growers and producers the highest prices for their labor and toil. The result of bringing those cattle into the Territories is to discourage those engaged in improving our cattle and raising the standard of weight and quality, and it has been largely the means of producing what exists to-day—a glutted market, overstocked with a class of cattle unfit for export, small in

size, poor in quality, lacking in beef-producing conformation, and the only outlet or market is a local one, and ranchers are obliged to accept such prices as they can offer, or carry the cattle over from year to year, hoping that something may turn up to improve price conditions, which is a great financial loss.

Have not our neighbors across the border learned this lesson of their folly, and shut the Mexican cattle out of the northern grazing States, and why should not we take a leaf out of their book and take such precautions as are necessary to shut them out of Canada, especially out of this Western country, noted for cattle-raising as a profitable industry in connection with farming, on account of our rich natural grasses and climatic conditions?

F. H. TOWERS.

Sheep and Swine Breeders Convene.

The Manitoba Sheep and Swine Breeders' Association held its eleventh annual meeting in Winnipeg, on February 23rd. President Jas. Bray opened the meeting by delivering a thoughtful and very optimistic address. He regretted very much that the expense of fencing and the ravages of wolves had so hampered the sheep-breeding industry in the past, but with cheaper fencing the raising of sheep would no doubt become more popular. As for swine, the President said that more should be grown, especially in dairy districts, but that already Manitoba had attained a most creditable position as a hog-raising Province.

The Secretary read a satisfactory financial statement, and noted that the packing-houses were receiving double the number of hogs they were last year, and the quality was very near that of ideal bacon. He also pointed out that the packers were most delinquent in their business methods, when it was possible for the Chicago packers to receive five cents per pound more for bacon in Winnipeg than the best home cured.

The association then discussed the wolf problem, and expressed the opinion that the bounty should be raised.

WINTERING HOGS

was the subject of an address by Mr. Bedford, who said it had not struck him that they had particularly good success with hogs at Brandon until farmers began to relate some of their failures.

He then gave their method of procedure as briefly as he could. First, they had a pen not very warm; in fact, a little on the cool side, but dry. Dryness was, in his opinion, more important than warmth. Then they had the pigs' beds raised above the level of the pen floor, and a 2x4 scantling nailed round to keep in the bedding. They always used pea straw for bedding, and there was nothing like it. He would recommend them all to grow peas if they were not doing so now. The finest peas grown in the world were grown in Manitoba, and nowhere else could such crops be raised. On the Experimental Farm they had gathered 85 bushels to the acre from summer-fallowed plots. The peas, to be successful, must be sown early; put them in with a wheat-drill, and be sure to use plenty of seed. For some reason, possibly because the gophers eat them, more seed was required here than in the East. Two and a half bushels, or better, three bushels, to the acre should be sown. Sow them on fallow.

Give them a varied diet; this is most important. Always feed two or three kinds of grain—oats, barley and wheat is a good combination—and be sure to give the pigs plenty of coal ashes. It is simply astonishing the amount of coal ashes they will consume in winter, and they are extremely fond of them.

"Do you feed salt?" "Never," said Mr. Bedford, "but don't forget the coal ashes. I like mangels, especially for growing pigs."

We get the best success for bacon with a Berkshire and Yorkshire cross, using Yorkshire sow and Berkshire male. We never use a cross-bred animal for breeding.

For brood sows simply arrange a pen under a straw pile, and let them winter there, feeding on the ground.

Prof. Grisdale gave a practical talk and demonstration on the bacon hog, using for illustration a Tamworth, a Yorkshire, and a Berkshire.

The officers elected for 1905 were: President, Dr. S. J. Thompson, St. James; Vice-President, W. E. Baldwin, Manitou. Directors representing swine breeds: Berkshires, J. A. McGill, Neepawa; Yorkshires, Waldo

Greenway, Crystal City; Tamworths, R. S. Preston, Pilot Mound. Directors representing sheep breeds: Cotswolds and Leicesters, Geo. Allison; Shropshires, J. C. Stuart, La Riviere; Oxford Downs, Alex. Wood, Souris; Southdowns, W. W. Fraser, Emerson. Auditors, Geo. Batho and Dr. A. G. Hopkins. Representative to Winnipeg Exhibition Board, W. G. Styles, of Rosser.

On the resumption of the convention, Prof. Boss, of Minnesota, illustrated the method of cutting up beef, and Prof. Grisdale pursued the same course of discussion with regard to hog carcasses.

The Banquet to the Stock-breeders.

The precedent set last year, when the City of Winnipeg entertained the visiting stockmen, was followed out this year. It can hardly be called the success of the previous year. Although people differ as to whether intoxicants should be used at such banquets, few will condone such gross violation of all courtesy to visitors as was shown by some of the aidmen, who made exhibitions of themselves, usually connected with too heavy filling up on intoxicants. In an editorial of a week or so ago we suggested what wore, in our opinion, improvements in the way of convivial entertainments at the time of similar conventions; and we now suggest that in future intoxicants be omitted entirely, as at the Grain-growers' banquets at Brandon and Regina. We do not suggest this because the farmers cannot control themselves—as the total absence of drunkenness among the delegates was remarked at the three last farmers' conventions held at Winnipeg, Brandon and Regina—but because such exhibitions are not pleasant for visitors, and are a source of shame to the city resident. The tipplers had segregated themselves in a body, and had special brands of wines and liquors supplied, and it would be interesting to the ratepayers to know how big the bill for liquors, ostensibly supplied to the stockmen, but drunk by some of the aidmen present, really is. Mayor Sharp presided, in his usual able manner, and postprandial speeches of the usual order were made by some of the guests.

Markets.

Wheat—Very little of interest to farmers, unless it be to those who have seed to purchase, and in such cases quality is the thing. Prices are: No. 1 northern, 97c.; No. 2 northern, 94c.; No. 3 northern, 88c.; No. 4 extra, 80c.; No. 4 wheat, 78c.; No. 5, 67½c.

Oats—No. 2 white, 37½c.; No. 3 white, 36½c.; feed, 34½c.; and the market is firm at these figures.

Hay—Plenty offering, at \$5 to \$6 per ton.

Mill Feeds and Flour—Same as last quotations.

Potatoes—No change from 70c. a bushel.

Dressed Meats—Prices have advanced slightly, ½c. a pound on beef, ¼c. on mutton.

Dairy Produce—Prices steady and firm, the late advance being held. Creamery, in boxes (14, 28, 56 lbs.), are 27c.; pound bricks, 28c. Dairy butter, 10c. to 16c. in lots; 20c. for bricks.

Eggs—The new-laid movement has not yet affected prices, which are firm at 30c.; storage, at 26c.

Hides—Frozen, 6c. to 6½c.

LIVE STOCK.

Cattle—Market rising; advances of ½c. to ¾c. being noted, top prices being \$3.25 to \$3.75 per cwt.

Sheep—\$3 to \$3.50.

Hogs—\$5, for selected weights.

Chicago Markets.

Cattle—Good to prime steers, \$5.25 to \$6; poor to medium, \$3.50 to \$5; stockers and feeders, \$2.40 to \$4.40.

Hogs—Mixed and butchers', \$4.70 to \$5.05; good to choice, heavy, \$4.85 to \$5.10; rough, heavy, \$4.80 to \$4.90; light, \$4.70 to \$4.90; bulk of sales, \$4.85 to \$5.

Sheep—Good to choice wethers, \$5.60 to \$6.25; fair to choice, mixed, \$5.25 to \$5.75; native lambs, \$5.75 to \$7.85.

British Cattle Market.

London.—Live cattle are quoted at 10½c. to 11½c. per pound; refrigerator beef, 7½c. to 7¾c. per pound. Sheep, 12c. to 13c. per pound.

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Life, Literature and Education.

Though nature is constantly beautiful, she does not exhibit her highest powers of beauty constantly, for then they would satiate us, and pall upon our senses. It is necessary to their appreciation that they should be rarely shown. Her finest touches are things which must be watched for; her most perfect passages of beauty are the most evanescent.—Ruskin.

Literary Lines.

"Canada First," an attractive little magazine, in an unusually handsome cover in maple-leaf design, has appeared as an addition to our Canadian magazine literature. It is the organ of the Canadian Preference League, whose avowed object is the promotion of Canadian interests, and whose battle-cry is the call to Canadians to purchase homemade goods "whenever the quality is as good as and the price not greater than others in the market." The aims of the League are discussed at some length in the first issue. The more strictly literary part of the magazine is devoted to sketches on different subjects by Canadian writers, Dr. Wm. Osler, C. G. D. Roberts, Duncan C. Scott, and others. Upon the whole, the outlook for "Canada First" should be decidedly promising.

"Compulsory" School Attendance.

A great deal of interest is being taken at the present time in the movement for the consolidation of rural schools. An object lesson of a consolidated school is being given in one locality in each of five Provinces, under the Macdonald Rural Schools Fund. The beneficial results of the new system are well illustrated by the following item from the St. John Telegraph of Feb. 13th.

"At the meeting of the education section of the Farmers' Association at Fredericton the other day, Mr. Wetmore, the chairman of the Macdonald consolidated school at Kingston, told this little story: 'While driving through a section where a small, poor school had been closed up, Mr. Wetmore was hailed by a leading farmer of the district, who asked how the new school was getting on. Mr. Wetmore told of the progress being made, the large attendance, etc. 'Well,' said his friend, 'I never saw the like with my children. Before this central school was opened I never had any difficulty in getting the boys to stay home from school to do odd jobs around the place. In fact, it was always a trouble to prevent them finding excuses to stay away from school. But now there is a regular outcry if I want them to stay at home, and on the days when manual training is taken, nothing will induce them to miss school.' 'Well, that's all right, isn't it?' said Mr. Wetmore. 'Right? Of course, it

is,' replied his friend. 'A school that makes children want to go must be on the right lines, and I am with you in helping it on in every way that is possible.'"

The Gardener Bird.

The highest development of the decorative instinct in animals is found in the gardener bird (*amblyornis*). This plain-looking native of New Guinea builds its nest on the ground, spreads moss before it, and over this green carpet scatters bright berries, flowers and insects. As the flowers wither they are replaced by fresh ones. The whole establishment serves only as a sort of pleasure resort.

Assuming Nationhood.

The decision of the Federal Government to assume the responsibility of maintaining the dock-yards at Halifax, N. S., and Esquimalt, B. C., at an annual cost of \$2,000,000, has scarcely met with a dissenting note. Something of the real independence of nationhood thrilled the whole Dominion when it assumed the responsibility of coast defences, and nothing since the South African war has done more to impress both Britain and the colonies with the significance of this young nation than the assumption of her own defences. Canada, more than any nation, regrets the barbarous custom of national armaments, but since they are, as yet, a necessary evil, she cheerfully shares the burden of their maintenance with the much-burdened taxpayer of the Old Land.

Sir William Dawson.

In 1888, in the introductory chapter of an interesting work on the geological history of plants, there occurs the following passage: "The writer of this work, born in a district rich in fossil plants, began to collect and work at these as a boy, in connection with botanical and geological pursuits. He has thus been engaged in the study of fossil plants for nearly half a century, and, while he has published much on the subject, has endeavored carefully to keep within the sphere of ascertained facts, and has made it a specialty to collect, as far as possible, what has been published by others. He has also enjoyed opportunities of correspondence or personal intercourse with most of the more eminent workers in the subject. Now, in the evening of his days, he thinks it right to endeavor to place before the world a summary of facts, and of his own matured conclusions—feeling, however, that nothing can be final in this matter, and that he can only hope to sketch the present aspect of the subject, and to point the way to new developments, which must go on long after he shall have passed away."

In this short paragraph there is contained, perhaps, an epitome of the life of one of the most eminent of the many Canadians who have won their way to eminence in ways good and wise—Sir John William Dawson.

Examine the paragraph, and what have we? First, the little lad, the keen observer of nature, "collecting and working" at plants, stones and fossils at an age which proves again the truth of the old adage, "The boy is father of the man." As a matter of fact, his biographers tell us, these collections were begun when Sir William was but twelve years old. After that, the long life of study, and investigation, and thought; of the writing of many books, and the meeting with kindred souls, who, with him, have assisted in laying bare the secrets of the earth. Within these few lines, also, we may read something of the character of the man; his enthusiasm; his deference to the views of others, joined to an independence never afraid to assert itself when assertion seemed necessary; the spirit of humility, so marked in him, which is ever an attribute of the truly great; the consciousness of the "just beginning" on the sea of knowledge, which indicates the true scientist, who ever says, "Nothing can be final in this matter," rather than, "This I have proven"—an epitome, in very truth, of the life of Sir William Dawson, to whom, it is a pleasure to say, "the evening of life" was long, very long, and the sun of his influence has not set.



Sir Wm. Dawson.

It shines on to enlighten and vivify the moral and intellectual life of our country. Since he penned these words, in 1888, many others have come from his desk in Montreal, where he lived, one of the truly grand old men of Canada, his death occurring on November 19th, 1899.

As to details, John William Dawson was born at Pictou, N. S., on October 13th, 1820. He received his earlier education in that town, leaving the Pictou Academy, only to enter the University of Edinburgh, Scotland. Having completed his course there, he returned to Nova Scotia, and immediately identified himself with its educational affairs, being soon appointed, on the strength of his services, Superintendent of Education. Since that day, he has been acknowledged as one of the foremost educationists, as well as one of the most renowned scientists of the century.

In 1852, in company with the famous geologist, Sir Charles Lyell, whom he has called "the great apostle of rational geology," he made a thorough examination of the coal measures in the different parts of New Brunswick, and, after the trip, published his "Structures in Coal" and "Mode of Accumulation of Coal." A few years later he was appointed Principal and Professor of

Natural History at McGill University, Montreal, which, under his management, speedily rose to its acknowledged position as one of the world's great seats of learning. During his principalship, and owing directly to his efforts, the McGill Normal School and the School of Civil Engineering were established. In 1893, he retired from active work at the University, but was immediately appointed Emeritus Principal, and Governor's Fellow, as well as Hon. Curator of the Peter Redpath Museum.

During all these years, he found time to write. Indeed, the amount of work for the press which he accomplished would seem prodigious, even though his energies had not been otherwise taxed by his work at the University, and could only have been accomplished by the most remarkable perseverance and assiduity. Among his best known publications are: "Acadian Geology," "Origin of the World," "Air Breathers of the Coal Periods," "Handbook of Canadian Zoology," "Story of the Earth and Man," "Science of the Bible," "Dawn of Life," "Salient Points in the Science of the Earth," "Science in Bible Lands," "The Meeting Place of Geology and History," "The Historical Deluge," "Eden Lost and Won," "Ethics of Primeval Life," "Fossil Men and Their Modern Representatives," "Geological History of Plants," and "The Ice Age in Canada."

These works are recognized as very valuable from a scientific standpoint. To an unusual degree, also, the author has made them popularly readable, while his contention that geology rightly understood and the Bible rightly interpreted, do not conflict, recommends them to many who have looked upon the works of some other scientists with suspicion.

Sir William Dawson's fame is world wide, and, more fortunate than most men he was, in living to see the fullest appreciation of what he had done. Honors came thick and fast upon him. In 1881, he was awarded the Lyell medal of the Geol. Soc., London; he has been President of the Royal Soc. of Canada, and of the American and British Associations for the Advance of Science, and the American Geol. Soc. He was created a C. M. G. in 1881, and a Knight Bach. in 1884. He is also an F. R. S.; F. Lon. Geol. Soc.; F. R. S. of Edinburgh; LL. D. of Edinburgh University and of McGill; D. C. L. of Lennoxville Univ., and D. L. of Columbia College, N. Y.

Seldom have so many honors been showered upon one man, and few there have been who better deserved them. In spirit, he was deeply religious and reverential. Natural genius has, doubtless, had much to do with Sir William Dawson's great success in life; yet, enthusiasm, and the power of hard, assiduous work have been no mean handmaidens to this first essential qualification. From his life we may each learn a lesson. Genius may not be ours, but enthusiasm and the determination to work hard may belong to us all. Where this, our countryman, has accomplished so much, may we not each, in our own way, accomplish a little, and so developing our own talent to the utmost, make our lives better worth the living.

Fashion Notes.

It is perhaps without one pang of regret that the feminine world as a whole will bid good-bye to the "1830" styles of last year. For behold, the flopping skirts, the drooped shoulders, the baggy sleeves and such like extravagances have already been given their conge by people of fashion, and a speedy return to an era of greater simplicity has been promised.

Skirts will, of course, be made rather full for awhile—fashions seldom go by leaps and bounds—but the fullness will be placed almost entirely from the knees down, the upper portion being kept trim and tidy by pleats stitched in place, hip-yokes and similar devices. In waists, the greatest innovation is in the sleeves, which must now be full at the top and tight-fitting at the wrist, or rather, from the elbow down. Some of the prettiest models show one simple puff, reaching from shoulder to elbow, the lower portion being made like a closely-fitting coat-sleeve. Tucks and pleats will still be much used on bodices, though surplice effects will be quite popular, especially when little guimpes of a contrasting color, or of white all-over embroidery in the cotton gowns, are used to form the V. Some of the newest designs show embroidered suspenders placed over the surplice. This, however, savors of a fad which is likely to outrun its popularity very quickly.

Beyond question, the shirtwaist suit will be the popular gown for spring wear, supplanting, to a great extent, the jacket and skirt suit which has been in vogue so long. With the shirtwaist suit, when necessary, will be worn a jaunty little separate coat of different material, a veritable comfort, in that it may be put on over any gown without looking out of place.

The shirtwaist costumes may be made of fine tweed, cashmere, lustre, or mohair, as one chooses, or of linen trimmed with embroidered bands, for wear during warm weather. Mohair will be exceedingly fashionable. The new weaves of it are very fine and soft, and are said to be very serviceable, as they are dust resistant and spot-proof to a degree almost unknown to most modern materials. Shirtwaist suits of taffeta and foulard are also to the fore among fashion's favorites, but are somewhat perishable for country wear.

In more dressy gowns, voile, colicome, crepe-de-chine, mull, organdie, etc., may be chosen, and made up not too elaborately, but with the fluffiness that seems to suit such materials. Lace will be little used on such costumes, but the yoke or guimpe of chiffon or some such thin material will be much in evidence. As a finish to the yokes, berthas of various forms will still be used, or simple frillings of accordion-pleated chiffon, net, organdie, etc., depending upon the material of which the gown is made.

Asking a Blessing.

Walter Gay has a very tender touch when he delineates toil-worn old womanhood. He makes each of his pictures preach a silent little sermon of its own. The parish loaf, the few potatoes from the garden patch outside, seem but meagre fare, but the tired old woman sits down to her lonely meagre meal with a grateful heart. She folds together her poor thin hands, closes her eyes, and in an attitude of the deepest devotion whispers, "For these and all Thy blessings, oh Lord, make me truly thankful. Amen." H. A. B.

O'er the ocean of commerce, O merchant! Sail your ship by the stars, not by guess. Have a pilot who knows, and you'll anchor At last in the port of Success. —P. A.



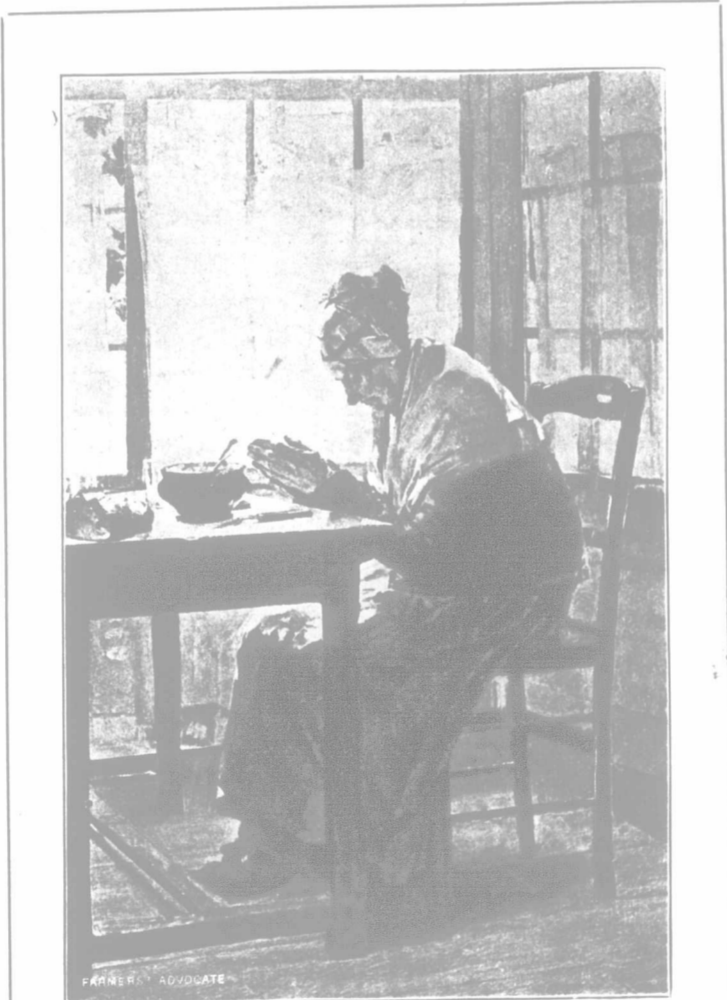
Lord, behold, he whom Thou lovest is sick.—S. John xi: 3.

If it be true that "we cannot but speak the things which we have seen and heard," it is surely equally true that we must be careful how we speak of things we know nothing about. Thankful as I am for God's great gift of perfect health, I dare not presume to give personal counsel to you who have been called to "rejoice, inasmuch as ye are partakers of Christ's sufferings." But God's messages may be passed on from one to another, and my brother—who is a hospital chaplain—has just sent me H. E. H. King's "Sermon in the Hospital," which is a beautiful message to the friends of the Master who are called to drink with Him the cup of suffering. To give you the whole of it would be impossible; even if, as often happens, I were to take up more than my allotted space, but I must pass on to you some selections from it. The story begins with a description of five wards full of sick people, who are listening to a sermon from the text, "I am the true Vine." The preacher shows how the vine is trained, pruned, thinned out, stripped of its fruit, and even cut back to the very stem. The parable is explained:

"Measure thy life by loss instead of gain; Not by the wine drunk, but by the wine poured forth; For love's strength standeth in love's sacrifice; And whose suffers most hath most to give.

And kiss the sacred foot-prints of my Lord Upon the feet of any such a one As lieth patient here beneath His hand; Whom Christ has bound on His own cross, to lie Beside Him, till Himself shall give release; And that shall not be, many a one knows well, Until his place knows him no more on earth.

"God said to Man and Woman, 'By thy sweat, And by thy travail, thou shalt conquer earth'; Not, by thy ease or pleasure—and no good Or glory of this life but comes by pain. How poor were earth if all its martyrdoms, If all its struggling sighs of sacrifice Were swept away, and all were satiate-smooth; If this were such a heaven of soul and sense As some have dreamed of—and we human still. Nay, we were fashioned not for perfect peace In this world, howsoever in the next: And what we win and hold is through some strife. Many are pains of life; I need not stay To count them; there is no one but hath felt Some of them, though unequally they fall.



Asking a Blessing.

From painting by Walter Gay.

I speak to those who suffer: They will know, Better than I, the whole deep truth of it. I who stand here complete in all my flesh, Strong in the morning, sleeping fast at night, Taking the winds of heaven as they blow, Without a special sense save joy in each, Am not so much as worthy to stoop down

But of all good gifts, ever hath been health Counted the first, and loss of it to be The hardest thing to bear: I do not speak Of such imperfect passages of pain As show us we are mortal, and should stir Our hearts to greater diligence in life; But such long weakness, and such wearing pain As has no end in view, that makes of life

One weary avenue of darkened days. The bitter darkness growing darker still, Which none can share or soothe, which sunders us From all desire, or hope, or stir of change, Or service of our Master in the world, Or fellowship with all the faces round Of passing pains and pleasures, while our pain Passeth not, nor will pass; and only this Remains for us to look for, more of pain, And doubt if we can bear it to the end.

"But if this be the hardest ill of all For mortal flesh and heart in peace, It is the one comes straightest from God's hand, And makes us feel Him nearest to ourselves. God gives us light and love, and all good things Richly for joy, and power, to use aright; But then we may forget Him in His gifts: We cannot well forget the hand that holds, And pierces us, and will not let us go, However much we strive from under it.

"When the sharp strokes flesh and heart run through, For thee, and not another; only known, In all the universe, through sense of thine; Not caught by eye or ear, not felt by touch, Nor apprehended by the spirit's sight, But only by the hidden, tortured nerves, In all their incommunicable pain, God speaks Himself to us, as mothers speak To their own babes, upon the tender flesh With fond familiar touches close and dear;

Because He cannot choose a softer way To make us feel that He Himself is near, And each apart His own Beloved and known. Sweet it is when a babe opens its eyes, Blue, smiling, to its mother's morning kiss. But thou, when waking to the morning light, With unrefreshed and aching limbs, mayst feel The heavy pressure of a constant pain Upon thy forehead, and the weary brows Throbbing beneath an unabated load. Is it not God's own very finger-tips Laid on thee in a tender steadfastness? The light and careful touches which to thee Seem heavy, because measured to thy strength, With none to spare; and yet He does not fail For thy impatience, but stands by thee still, Patient, unfaltering, till thou too shalt grow Patient, and wouldst not miss the sharpness grown To custom, which assures Him at thy side, Hand to thy hand, and not far off in Heaven. And when the night comes, and the weariness Grows into fever, and thy anguish grows fiercer, and thou beseechest Him with tears, 'Depart from me, O Lord, and let me rest!' He will not leave thee, nor forget thee; but will clasp Thee closer in the thrilling of His arms, No prayer of ours shall ease before their time. He gives His angels charge of those who sleep; But He, Himself, watches with those who wake.

"Men as men Can reach no higher than the Son of God, The perfect Head and Pattern of mankind. The time is short, and this sufficeth us To live and die by; and in Him again We see the same first, starry attribute, 'Perfect through suffering,' our salvation's seal Set in the front of His Humanity. For God has other words for other worlds,

But for this world, the word of God is Christ.
 And when we come to die we shall not find
 The day has been too long for any of us
 To have fulfilled the perfect law of Christ.
 Who is there that can say, 'My part is done
 In this: now I am ready for a law
 More wide, more perfect for the rest of life?'
 Is any living that has not come short?
 Has any died that was not short at last?
 The ultimate symbol of Divinity
 How can we dream of? We have got no sense
 Whereby to seize it; but in Him we touch
 The ultimate symbol of Humanity,
 Humanity that touches the Divine
 By some fine link, intangible to us,
 Upon that side of mortal consciousness
 That looks towards Death; and we must pass the gates
 Of Death, linked with Him, holding by the hand
 Our Brother gone before, before we come
 To the perception how our life is joined
 To God's; for we are now the sons of God,
 And know we shall be like Him there,
 but what
 We shall be doth not yet appear; but when
 We see Him we shall know Him as He is.

"The Cross of Christ
 Is more to us than all His miracles.
 And that most closely we may follow Him
 By suffering, have all hearts of men allowed.
 Is suffering then more near and dear to God
 For its own sake than joy is? God forbid!
 We know not its beginning nor its end;
 Is it a sacrifice? a test? a school?
 The fruit of Evil; yet what Evil means
 None knoweth, though he spent his life to know.
 We suffer. Why we suffer—that is hid
 With God's fareknowledge in the clouds of Heaven.

"But if, impatient, thou let slip thy cross,
 Thou wilt not find it in this world again,
 Nor in another; here, and here alone
 Is given thee to suffer for God's sake.
 In other worlds we shall more perfectly
 Serve Him and love Him, Praise Him, work for Him,
 Grow near and nearer Him with all delight;
 But then we shall not any more, be called
 To suffer, which is our appointment here.
 Canst thou not suffer then one hour, or two?
 If He should call thee from thy cross to-day,
 Saying, It is finished! that hard cross of thine
 From which thou prayest for deliverance,
 Thinkest thou not some passion of regret
 Would overcome thee? Thou wouldst say, 'So soon?
 Let me go back, and suffer yet awhile
 More patiently; I have not yet praised God.'
 And He might answer to thee,—'Never more.
 All pain is done with.' Whensoe'er it comes,
 That summons that we look for, it will seem
 Soon, yea too soon. Let us take heed in time
 That God may now be glorified in us;
 And while we suffer, let us set our souls
 To suffer perfectly; since this alone,
 The suffering, which is this world's special grace,
 May here be perfected and left behind."

But I find that, in spite of cutting out a great deal, my space is more than filled up. The closing lines must, therefore, be left for next week's issue.

HOPE.

Make thy life all pure and true,
 Filled with deeds of high endeavor,
 Be brave to dare and strong to do
 That which thy God approveth ever.
 —Union.



Our Ingle Nook readers will be pleased to-day to see the following sketches from the pen of Theo, who so kindly wrote before to the art-lovers of our circle. "If my attempts can interest your young readers in a healthy and most fascinating pastime," he says, "I shall be satisfied." We thank Theo most heartily for his interest in our "young readers," and trust that his efforts in their behalf may have the effect he desires.

ANSWER TO AUNT LIBBIE.
 Dear Dame Durden,—In the issue of the "Farmer's Advocate" for February 9th, "Aunt Libbie" asks for the best way to clean wall paper.
 A nurse was telling me once how they prepared a room for an operation at home. The walls, if papered, were cleaned with bread. Our winter kitchen is our summer dining-room. It has the usual three-foot base boarding, and the walls from this were painted; but time

had chipped the plaster, and there were three ugly big cracks in the corners. So we papered it. The paper stuck well on the painted walls. It had a white ground and a pretty floral design, which made the room very bright and cheerful. Last spring, when we housecleaned, we cleaned the paper with stale bread. We did not think it was so dirty until part was cleaned. When it was done it looked as fresh and bright as if freshly papered. It took a small loaf of bakers' bread and a few pieces to do the job; cost, six or eight cents. We are going to clean it again this spring.

HELTONABIT.

SEASONABLE RECIPES FROM WRINKLES.
 As this is the season when oranges are cheap, I send a well-tried recipe for orange marmalade. 1 doz. sweet oranges, 1/2 dozen lemons, 3 grape fruit; cut the fruit in very thin slices, taking out the pips. To every pound of fruit, add 3

pints of cold water; let stand 24 hours, then boil until tender, about 2 hours. Let stand till next day, then weigh, and to each pound of boiled fruit add 1 1/2 lbs. of sugar. Boil till the syrup jellies and the chips are transparent, which will take about one hour.

Lemon Butter.—1/2 lb. of butter, 1 lb. of sugar, 6 eggs, leaving out whites of two, the rind of 2 lemons and juice of 3. Put the whole into a pan, let it simmer over the fire until it is the thickness of honey, then put away for use. Best to cook it over a pot of hot water, as it is apt to burn.

Cheese Pudding.—1 cup of grated cheese, 1 pint of new milk, 1 small tablespoon of butter, 1 rolled biscuit, small teaspoonful of mustard, a little salt and pepper. Put these ingredients in a buttered pudding-dish, bake twenty minutes in a rather hot oven. Should be, when cooked, as light as a baked custard. Serve while hot on hot plates. This is a very appetizing dish for tea.

Egg Toast.—1 egg and 1 cup of milk beaten together; salt and pepper to taste. In this, dip slices of bread and fry a nice brown. Place in a hot vegetable dish with a cover. This is an excellent breakfast dish.

Cake without eggs.—1 cup of sugar, 1 cup of milk, 1 cup of flour (sifted), 2 teaspoons of baking powder, 1 teaspoon of lemon or vanilla; beat thoroughly, and add five tablespoons of melted butter. A cup of raisins may be added if you wish.

Points for the Homely Girl.

It behooves the homely girl to cultivate a disposition which will so irradiate her ugliness that it is transformed into seeming beauty. She must possess lovely traits of character to compete with her beautiful sister.

She must pay attention to details that may not be necessary for the other.

Her dress should be modest, and becoming in fashion and color.

Her hair must be scrupulously neat and arranged to the best advantage.

Her carriage must be erect and graceful.

She, more than all others, must have a care to keep her voice well modulated.

Her manners must be gentle and unobtrusive.

She must be beautiful at heart.

She must read elevating thoughts, look at good pictures, listen to uplifting utterances.

She must repress the angry or fretful word and discover the delight of bestowing an unexpected endearment.

She must not expect attentions, but be eager to render them.

Above all, she must be interested in something, heart and soul, brain and body, as far as possible forgetting herself in some congenial employment, whether it be a duty or a pastime. There is no beautifier which is equal to a genuine interest in something—anything. It lends the sparkle of eagerness to the most lack-luster eye, it puts vivacity into the most listless expression, and makes the ugliest features interesting.

So, let the homely girl have her hobby, and if it be a noble or inspiring one, it will only make her more attractive.

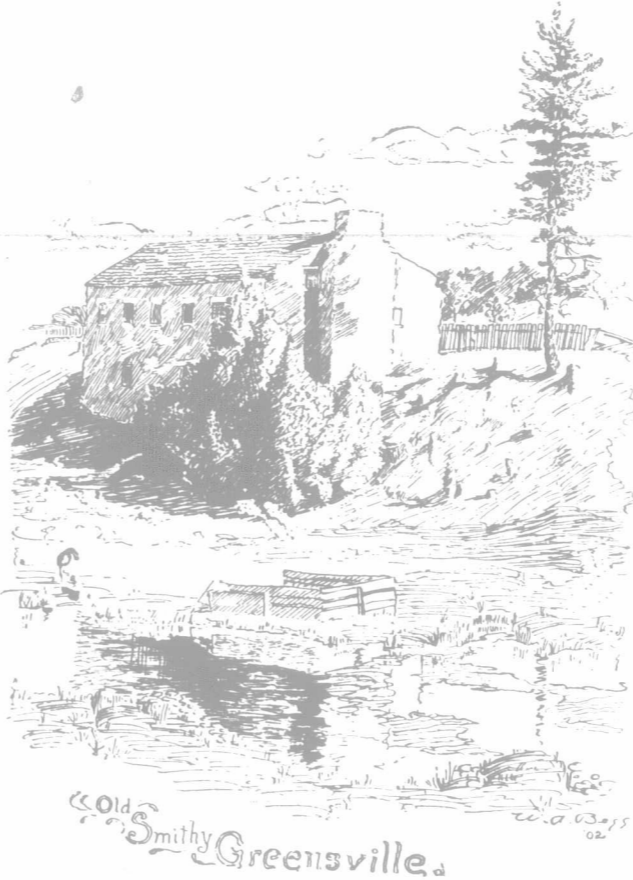
Truly, the efforts the homely girl must put forth are many, but in the long run they will pay a hundred-fold.—Exchange.

Miss Hoamley—Didn't you hear Miss Knox tell me yesterday that I was "the homeliest girl in our set?" Miss Goodley—Yes, the hateful thing! I gave her a piece of my mind about it afterward. Miss Hoamley—Oh, did you? I hope you weren't too hard on her. Miss Goodley—Well, I told her she ought to consider how sensitive you must be about it.

Honesty, absolute truth, in thought, word and deed, always:

Earns what it gets;
 Pays all its debts;
 Knows no regrets.

—Rev. Wm. Bryant.



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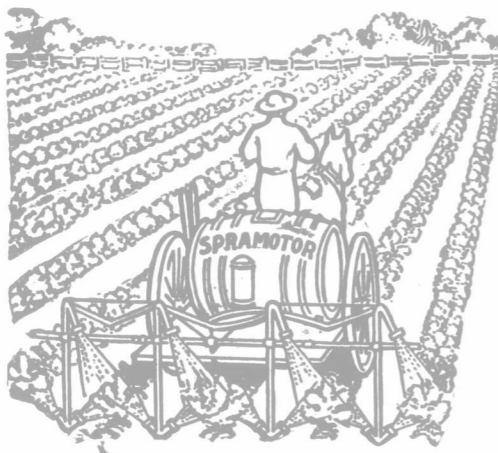
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In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.



The Little Stamp Collector

Three months ago he did not know His lessons in geography; Though he could spell and read quite well, And cipher too, he could not tell The least thing in topography.

But what a change! How passing strange! This stamp-collecting passion Has roused his zeal for woe or weal, And lists of names he now can reel Off in amazing fashion.

I hear him speak of Mozambique, Heligoland, Bavaria, Cashmere, Japan, Thibet, Soudan, Sumatra, Spain, Waldeck, Kokan, Ceylon, Siam, Bulgaria.

Schleswig-Holstein (Oh! boy of mine, Genius without a teacher!), Wales, Panama, Scinde, Bolivar, Jellalabad, and Kandahar, Cabul, Deccan, Helvetia.

And now he longs for more Hong-Kongs, A Fiji, a Mauritius, Greece, Borneo, Fernando-Po, And where he'll stop no one can know, He's grown so avaricious!

Dear Cousin Dorothy,—I am trying your competition, and hope I may succeed in some way, as I have never had an experience before. My essay reads as follows:

In a dark alley in the streets of London, there was a row of almost forsaken buildings, one of which I particularly remember. In a shanty there was in one corner of a room an old frame of a bed, with a few rags to lie on; in another corner a round block of wood for a table, and in the middle of the floor there still remained the old irons of a stove.

But the worst of all, in the almost forsaken room there lived a woman and a dog, and this old woman was deaf and dumb, and kept this large dog for her guide. The dog would not let a living soul touch the old lady if they had no right to, and the only way the old body got anything to live on was with a hand-organ that she had, and she would go out on the streets and play it for hours.

Some would look at her and say, "Come on, let her go!" Others would listen a while, and some would give her some money. Others would not, and the poor dog, fastened to her by a rope, was faithful to her indeed. So one day a little boy had a dollar that his grandma had given him to buy a hobby-horse, and was going past her, but had to stop to see what it was, and so seeing and hearing the case, made signs to her to take his dollar. She accepted it, and after a while went away and bought a dress and some food for her and the dog, and then went home happy. This should be a lesson to us all to help the poor as much as possible. This little boy was kind-hearted and unselfish.

MARIAN McNAB (aged 14).

We have no story-competition on at present, Marian, but I gladly give your little tale a place in our Corner. If you read carefully the conditions of the "Boy Knight" competition, given in a recent issue, you will see that the boy described must be a "real" boy, not an imaginary hero. One of the Cornerites seems to have the strange idea that Canada has thrown off her allegiance to King Edward. I hope it may never be true that loyal Canadians "will not have to sing 'God save the King' any longer." It would be a very poor loyalty to our country that was founded on disloyalty to our King.

I am glad you were pleased with your prize, Beatrice, and think your letter is very interesting. Gordon Caswell's story will be published as soon as we have space for it.

COUSIN DOROTHY.

Dear Cornerites,—I thought I would

write and tell something about Temiskaming, the district I live in. We came from the County of Lambton to this newly-settled country of Temiskaming about two years ago. Our farms are located in the Township of Hilliard, about fifteen miles from the town of New Liskeard. We get our mail once a week from Thornloe P. O., about three and a half miles from here. Harvest-time in this country just now is the winter time, when the men draw their timber either to Thornloe Station or to White River, two and a half miles from here. My father and brothers are drawing their timber to White River this winter. The kind of timber that is generally taken out is pine, spruce, tamarack and cedar. The people around here were very glad when the train came in this fall, and when they decided to have a station at Thornloe P. O. We have about two and a half feet of snow here now, and as there are plenty of nice big hills, coasting is a favorite amusement. There are moose, bears, lynx and wolves in this country, but I have not seen anything bigger than a rabbit. How many of the Cornerites have eaten moose meat? We had a piece of a moose the first year we came here, and we liked it fine. It is something like beef, only coarser. This will be a great country in the near future. The mines are very productive; also the soil, for growing good crops, and there are good prospects for dairying. I am very fond of music, and I took one quarter of music on the organ before we left Lambton. We are pleased that the Home Mission Board of both Methodist and Baptist denominations takes such an interest in this country, by sending out ministers to preach at the settlers' houses. It would be very lonesome without them. We all think the "Farmer's Advocate" is one of the best papers published, and it is a very welcome visitor at our house every Saturday. Wishing you all the compliments of the season, I remain, an interested reader of the "Farmer's Advocate."

BEATRICE EDWARDS (aged 13).

Some Good Conundrums.

- Q.—Why is a clock the most modest piece of furniture?
A.—Because it covers its face with its hands, and runs down its own works.
- Q.—What is the most difficult surgical operation?
A.—To take the cheek out of a man and the jaw out of a woman.
- Q.—How should Russia maintain her Navy?
A.—By suspending the Sinking Fund.
- Q.—What were Eve's religious views before the Fall?
A.—She was Eve-angelical before she took to vestments.
- Q.—Why is a treadmill like a convert?
A.—Because its turning is the result of conviction.
- Q.—What is the difference between was and is?
A.—The difference is intense.
- Q.—When may a man be said to have a fishy origin?
A.—When his father is a little commonplace and his mother a good old soul.
- Q.—A nursemaid goes out to take the air, With three small children under her care, In bright sunshiny weather. Why is she like an arithmetician, Who, in doing a sum in addition, Adds seven and three and two together?
A.— Because, as all but the baby can run, She puts down two and carries one.
- Q.—Why is a watchdog larger in the morning than at night?
A.—Because it is let out in the morning and taken in at night.

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The LEAVENWORTH CASE

By A. K. Green.

CHAPTER XXI.—Continued.
"Mr. Leavenworth may have done so, no one else would have been likely to have noticed," he returned half sadly.
"Mr. Harwell," I now said, "I shall not be at the house to-night; nor do I know when I shall return there. Personal considerations keep me from Miss Leavenworth's presence for a time, and I look to you to carry on the work we have undertaken without my assistance, unless you can bring it here—"
"I can do that."
"I shall expect you, then, to-morrow evening."
"Very well, sir;" and he was going, when a sudden thought seemed to strike him. "Sir," he said, "as we do not wish to return to this subject again, and as I have a natural curiosity in regard to the man whose countenance and figure are so well known to me while yet he retains his title of utter stranger, would you object to telling me what you know of him? Are you acquainted with him, Mr. Raymond?"
"I know his name and where he resides."
"And where is that?"
"In London; he is an Englishman."
"Ah!" he murmured with a strange intonation.
"Why do you say that?"
He bit his lip, looked down, then up, finally fixed his eyes on mine, and returned with a marked emphasis: "I used an exclamation, sir, because I was startled."
"Startled?"
"Yes; you say he is an Englishman. Mr. Leavenworth had the most bitter antagonism to the English. It was one of his marked peculiarities. He would never be introduced to one if he could help it."
It was my turn to look thoughtful.
"You know," the secretary continued, "that Mr. Leavenworth was a man that carried his prejudices to the extreme. He had a hatred for the English race that almost amounted to a mania. If he had known that the letter he received was from an Englishman, I doubt if he would have read it. He used to say that he would sooner see a daughter of his dead before him than married to an Englishman. You think I am exaggerating," he said; ask Mr. Vealey."
"No," I replied, "I have no reason for thinking so."
"He had doubtless some cause for hating the English, with which we are unacquainted," pursued the secretary. "He spent some time in Liverpool when young, and had, of course, many opportunities for studying their manners and character." And the secretary made another movement as if to leave.
But it was my turn to detain him now. "Mr. Harwell, excuse me," I said, "but you have been on familiar terms with Mr. Leavenworth for so long—do you think that in the case of one of his nieces, say, desiring to marry a gentleman of that nationality, that his prejudice was sufficient to cause him to absolutely forbid the match?"
"I do."
I moved back. I had learned what I wished, and saw no further reason for prolonging the interview.

CHAPTER XXII.
Patch-work.
Starting with the assumption that Mr. Clavering, in his conversation of the morning, had been giving me, with more or less accuracy, a detailed account of his own experience and position regarding Eleanore Leavenworth, I asked myself what particular facts it would be necessary for me to establish, in order to prove the truth of this assumption, and found them to be:
1. That Mr. Clavering had not only been in this country at the time designated viz., last July, but that he had been located for some little time at a watering-place in New York State.
2. That this watering-place should correspond to that in which Miss Eleanore Leavenworth was to be found at the same time.

3. That they had been seen while there to hold more or less communication together.
4. That they had both been absent from town at some one time, long enough to have gone through the ceremony of marriage, at a point twenty miles or so away.
5. That a Methodist clergyman, who has since died, lived at that time within a radius of twenty miles of said watering-place.
I next asked myself how I was to establish these facts. Mr. Clavering's life was as yet too little known to me to offer any assistance; so leaving it for the present, I took up the thread of Eleanore's history, when, upon tracing it back to the time given me, I found that she was known to have been in R—, a fashionable watering-place in the State. But if she were there, and my theory was correct, he must have been there also. To ascertain whether this was so, therefore, became my first business. I resolved to go to R— on the morrow.

But before proceeding in an undertaking of such importance, I considered it expedient to make such enquiries and collect such facts as it should be possible for me to do in the few hours that lay before me. I went first to the house of Mr. Gryce.
I found him lying upon a hard sofa in the bare sitting-room I have before mentioned, suffering from a severe attack of rheumatism; with his hands done up in bandages, and his feet encased in multiplied folds of a dingy red shawl that looked as if it had been through the wars. Greeting me with a short nod that was both a welcome and an apology, he devoted a few words to an explanation of his unwonted position, and then, without further preliminaries, rushed into the subject that was uppermost in both our minds, by enquiring, in a slightly sarcastic way, if I was very much surprised to find my bird flown when I returned to the Hoffman House that afternoon.
"I was astonished to find that you allowed him to fly at this time," replied I.
"From the manner in which you requested me to make his acquaintance, I supposed that you had reasons for considering him an important character in the tragedy that has just been enacted."
"And what makes you think I hadn't? Oh, the fact that I let him off so easily? That's no proof. One does not put on the brakes till one is going down hill. But let that pass for the present. Mr. Clavering, then, did not explain himself before going?"
"That is the question," I returned, "which I find it exceedingly difficult to answer. Constrained by circumstances, I cannot at present speak with the directness which is your due, but what I can say, I will. Know, then, that in my opinion Mr. Clavering did explain himself in an interview with me this morning. But it was done in so blind a way, that it will be necessary for me to make a few investigations before I shall feel sufficiently sure of my ground to take you into my confidence. He has given me a possible clue—"
"Wait," said Mr. Gryce; "Does he know this? Was it done intentionally and with sinister motive, or unconsciously and in plain good faith?"
"In good faith, I should say."
Mr. Gryce remained for a moment silent. "It is very unfortunate that you cannot explain yourself a little more definitely," he said at last. "I am almost afraid to trust you to make investigations, as you call them, on your own hook. You are not used to the business and will lose time, to say nothing of running on false scents and using up your strength on unprofitable details."
"You should have thought of that when you admitted me into partnership."
"And you absolutely insist on working this mine alone?"
"Mr. Gryce," said I, "Mr. Clavering, for all I know, is a gentleman of untarnished reputation. I am not even aware for what purpose you set me upon his trail. I only know that in this following, it I have come upon certain facts that seem worthy of inquiry."
"Well, well," said he, "you know best. But the days are slipping by. Something must be done and soon. The public are becoming clamorous."
(To be continued.)



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NATURALLY
One's complexion gets somewhat coarser or loses its freshness as one gets older. Especially is this the case with neglected skins. A short massage nightly, as per directions, with
Princess Skin Food
That peerless unguent introduced by us twelve years ago, will quickly restore the color and freshness and remove blemishes and wrinkles. Get our book and sample White Rose Cream for 10c; it describes everything.
Graham Dermatological Institute,
Dept. F, 502 Church St., Toronto.

Never too Late
To get individual instruction in any of the departments of the
Winnipeg Business College
Write for new catalogue.
G. W. DONALD, Secretary.

KILLS LICE on POULTRY!
Cattle, Hogs, Sheep, Etc. Easy to apply—dust it on.
"Kills calves of Lice"—C. Voss, Armour, S. D.
"Killed every louse in my flock of 250 hens"—D. Perry, Monroe, Wis.
Price, 25 and 50c a Pkg. By Mail, 40 and 70c.
Prussian Stock Food and Remedy Co., St. Paul, Minn.

G. OLAFSON & Co., Winnipeg, Agents for Manitoba Province.
STENOGRAPHY BOOK-KEEPING, etc., thoroughly taught. Complete courses. Catalogue free. NATIONAL BUSINESS COLLEGE, Limited. E. J. O'Sullivan, C. E., M. A., Principal, Winnipeg, Canada.

Portrait of the Late Bishop Baldwin
11 x 15, on heavy plate paper, suitable for framing, together with memoir, the funeral service and sermon on the occasion; price for the two, 25c; 5 sets, one address, \$1.00; cash with order.
The London Printing & Lithographing Co., LONDON, ONTARIO.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

What To Do For Heart Trouble

I back up my advice with this Remarkable Offer:—A Full Dollar's Worth of my Remedy Free to Prove that I am Right.

I ask no reference, no deposit, no security. There is nothing to promise, nothing to pay—either now or later. To any heart sufferer who has not tried my remedy—Dr. Shoop's Restorative—I will gladly give, free, not a mere sample, but a full dollar bottle. I am warranted in making this unusual offer because mine is no ordinary remedy. It does not vainly try to stimulate the heart. Such treatments are worse than useless. It goes straight to the cause of all heart trouble—the heart nerves—and strengthens them and vitalizes them and restores them. Then that is the end of heart diseases.

For the heart itself has no more self control than a common sponge. It is made to beat by a tender nerve so tiny that it is scarcely visible to the naked eye. Yet ten thousand times a day this delicate nerve must cause the heart to expand and contract.

The heart is about the size of your clenched fist. Open and close your fist a dozen times, even, and you will see the monstrous labor this little nerve must do.

The heart nerve is only one of the branches of the great sympathetic nervous system. Each branch of this system is so closely allied with the others that weakness or irregularity at any point is apt to spread. Heart trouble frequently arises from stomach trouble through sympathy, and kidney trouble may also follow. For each of these organs is operated by a branch of these same sympathetic nerves—the inside nerves.

The bond of sympathy between the nerves that operate the vital organs has a useful purpose as well. For what will cure weakness in one branch will surely cure weakness in every branch—what will restore one center, will surely restore them all.

There is nothing new about this—nothing any physician would dispute. But it remained for Dr. Shoop to apply this knowledge—to put it to practical use. Dr. Shoop's Restorative is the result of a quarter century of endeavor along this very line. It does not dose the organ or deaden the pain—but it does go at once to the nerve—the inside nerve—the power nerve—and builds it up, and strengthens it and makes it well.

If you have heart trouble and have never tried my remedy, merely write and ask. I will send you an order on your druggist which he will accept as gladly as he would accept a dollar. He will hand you from his shelves a standard size bottle of my prescription, and he will send the bill to me. This offer is made only to strangers to my remedy. Those who have once used the Restorative do not need this evidence. There are no conditions—no requirements. It is open and frank and fair. It is the supreme test of my limitless belief. All that I ask you to do is to write—write to-day.

For a free order for a full dollar bottle you must address Dr. Shoop, Box 52, Racine, Wis. State which book you want.

Mild cases are often cured by a single bottle. For sale at forty thousand drug stores.

Dr. Shoop's Restorative

Sewing Machines Free, for 20 days trial. We send out all machines on 20 days' free trial before we ask you to accept or pay for them. If not satisfactory, send them back at our expense. We sell a 5-drawer drop-head sewing machine, handsome oak woodwork, for \$17.50; a better machine, same pattern, guaranteed for 20 years, sells for \$21.50; machines with ball bearings and extra fine woodwork, cost a little more, but only about half what others charge. Our sewing machine catalogue, fully explaining our different styles, will be sent on application. We also sell a cheaper drop-head machine for only \$13.00. It is as good as the ordinary sewing machine agents sell. Our price for this as above, \$13.00. Windsor Supply Co., Windsor, Ont.

drop-head sewing machine, handsome oak woodwork, for \$17.50; a better machine, same pattern, guaranteed for 20 years, sells for \$21.50; machines with ball bearings and extra fine woodwork, cost a little more, but only about half what others charge. Our sewing machine catalogue, fully explaining our different styles, will be sent on application. We also sell a cheaper drop-head machine for only \$13.00. It is as good as the ordinary sewing machine agents sell. Our price for this as above, \$13.00. Windsor Supply Co., Windsor, Ont.

Dunlop Book FOR HORSEMEN
Free to any address in Canada. 64 pages with charts and drawings. Valuable information about lame horses.
Dunlop Tire Co., Limited, Toronto

With the Flowers

Starting Plants in the House.

If you have not ordered your seeds, do so at once. Remember that "first come best served" is a variation in the old motto quite common in the seed houses, and if your order is left to the last, when, perhaps, what you want has been sold out, you may be obliged to do without some varieties altogether, or be sent others in their stead. Just here—don't write to the "Farmer's Advocate" for seed catalogues, as several did last year. Examine our advertisements, and find out the addresses of reliable dealers, then write to these for catalogues. We do not keep them in stock at our offices, you know.

Having made your choice from the lists, use the sheets enclosed in the catalogues for ordering. This will save you some trouble, and be a great advantage to the mail clerks in the seed houses.

If you want early flowers and vegetables, and do not happen to be blessed with a little greenhouse, or a hot-bed of the first order, you will certainly have to put up with a "clutter" of boxes in the kitchen during March and April; that is, if you consider boxes filled with sweet, fresh earth from which tiny green leaves are peeping in all sorts of permutations and combinations, a clutter. For my part, I would be quite happy to have them there, provided there were just room to walk around between—there is so much hope and interest just in knowing that spring has come, and that these are the visible signs thereof. Then, too, one keeps thinking of all the glories which will finally be developed from these unassuming brown chrysalides. There is, however, usually no necessity for a great confusion. A few boxes in each window, with, perhaps, a small table covered with them, if the windows be few, will probably be enough for all practical purposes.

Shallow boxes are by all means the best, were it only for the ease with which they may be handled. Cigar boxes are admirable. Bore gimlet holes in the bottom for drainage, and cover over with broken crockery, then fill up with finely-sifted soil. A sprinkling of clean sand over the surface is considered good as a preventive of "damping off," which sometimes attacks young seedlings. Now sow your seed, planting large seeds to about twice their depth, while fine ones should be simply scattered on the surface, and pressed into the soil; a very light sprinkling of fine sand being placed over them, if one has it. Now moisten with a fine spray of tepid water—a whisk broom will do, if you have no spray—cover the boxes with glass or white paper, if you choose, and set away for the seeds to germinate. As light is not necessary at this stage, the boxes may be placed on shelves in a warm place until the plantlets appear. Examine the glass frequently, and if drops of water come on it, remove for awhile and air the boxes. Remember to label each box with the name of the variety contained in it, or you may come to confusion when bedding-out time comes.

As soon as the plants appear, move the boxes to the windows, shading, for a time, whenever the sunshine seems too bright and hot, with paper placed against the window panes. The glass, if used, may now be kept off part of the time, or propped up on the inner side to admit free circulation of air. As soon as the little seedlings are large enough, transplant into larger boxes prepared for this purpose; two transplantings, in fact, are often necessary before it is time to set the plants out in the garden. The last one may be made into a "cold frame" out of doors, covered with glass, or into little cotton bags of soil, propped against one another in a box. In the latter case, when setting the plants out in the garden, all that is necessary is to cut away the cotton, a compact lump of soil being thus left about the roots of each plant, which thus suffers not at all from the moving. Among flowers which may be thus

started in the house in March, may be mentioned Abutilon, Alyssum, Ageratum, Antirrhinum, Asters, Candytuft, Cosmos, Dusty Miller, Nasturtium, Salvia, Verbena, Dahlia seeds, stocks, Balsams and others. It should be remembered that Poppies and Mignonette do not transplant well. Directions usually appear, however, on the seed packets, and should, as a rule, be implicitly followed, especially if the seed be procured from a firm within one's own Province. Directions for United States grown seed are usually not suited to our rigorous, northern climate. . . . Although this is the flower corner, it may not be amiss to mention that cabbage, cauliflower, beets, carrots, lettuce and tomatoes may all be started as above, and so be ready for using weeks earlier than when planted out of doors.

Just one word in closing: never buy so-called "bargains" in seed. You can never rely on two- and three-cent packages, and will be money in pocket if you invest in seed at the regular prices from a reliable firm.

FLORA FERNLEAF.

Modest Susan.

Sweet Susan, modest lass was she as young in the land,
And Timothy was brave and bold, though but a farmer's hand;
Together worked they in the field, for she was stout of limb,
Together weeded, lived and dug, sweet Susan and brave Tim.

When from the ground the Murphys brown they reaped with a will,
Tim's passion grew to utterance, and he knelt there on a hill;
"Dear Susan, won't you—" Susan turned with wonder and surprise:
"Hush, Timothy; how dare you—right before so many eyes!"

Through cornstalks bent with fruitage, cool the crisp breeze did blow;
They reaped the golden harvest now, together, row by row,
From early morn till eve, when bright and full the moon appears,
"Dear Susan—" "Hush!" said she, "Don't speak before these listening ears!"

To meeting Sunday evening oft together they did ride,
Yet she sat very straight indeed, and kept the farther side.
"Dear Susan, please be—" Upward then in fright sweet Susan sprung:
"Hush! Not another word to-night—this buggy has a tongue!"

Then Tim grew weary waiting, and no more "Dear Susan" said;
He wooed another maiden, 'twas "Dear Emeline" instead.
She made no word of protest when he murmured: "Be mine own?"
And now they hoe together—and poor Susan hoes alone.

—New York Tribune.

Humorous.

Teacher—Who was that who laughed aloud? Pupil—I did, sir; but I didn't mean ter do it. Teacher—You didn't mean to do it? Pupil—No, sir; I laughed in my sleeve, and I did not know there was a hole in my elbow.

She—The expression on my new photographs isn't natural. He—No, but it's very pretty.

"Now, how old do you think I am?" coyly asked a literary spinster of a man whose unflinching courtesy was supplemented by his wit on many occasions. "My dear lady, that is a hard question for a man who can scarcely remember his own age," said the man cautiously; "and in your case it is particularly difficult, for you look five years younger than it seems possible you can be, when I consider what a wonderful amount you have accomplished."

Only a Trifling Cold
Has been the Lullaby Song of Many a Victim to their Last Long Sleep.
A cough should be loosened as speedily as possible, and all irritation allayed before it settles in the lungs. Once settled there Bronchitis and Consumption may follow.
DR. WOOD'S NORWAY PINE SYRUP
is just the remedy you require.
The virtues of the Norway Pine and Wild Cherry Bark, with other standard pectoral Herbs and Balsams, are skillfully combined to produce a reliable, safe and effectual remedy for all forms of Coughs and Colds.
Mr. N. D. Macdonald, Whyecomagh, N.S., writes:—"I think it my duty to let people know what great good Dr. Wood's Norway Pine Syrup did for me. I had a bad cold, which settled in my chest, and I could get nothing to cure it till I tried Dr. Wood's Norway Pine Syrup. The first bottle helped me wonderfully, and the third one cured me."
Price 25 cents per bottle.

BOOK-KEEPING STENOGRAPHY
etc., taught by mail. Write for particulars. Catalogue reo. NATIONAL BUSINESS COLLEGE, Limited. E. J. O'Sullivan, C.E.M.A., Prin., Winnipeg, Can.

TESTING TO FIND THE GERMINATING PROPERTIES OF FARM SEED.
To find out whether seeds are capable of producing plants requires neither expert knowledge nor special apparatus. Satisfactory material is to be found in every farm home for making germination tests of practically any kind of seed used on the farm. The simplest and most convenient way to test seed of corn and other cereal grains and most of the root crop and larger vegetable seeds is to place a number of them, say one hundred, between pieces of moistened blotting paper, Canton flannel or cloth; set them in an ordinary dinner plate and invert another plate to cover them. The seed should be kept moist, but not wet. The temperature of the average farmhouse living-room would be quite suitable, but some care should be taken to guard against excessive heat or cold. All good strong seed of corn, cereal grains, clovers or timothy thus treated will have germinated at the end of five days. Very small seeds of the finer grasses, of some of the garden vegetables and of the beets or mangels may be germinated to better advantage by scattering them in a saucer (belonging to a flower pot) that has been soaked in water, and set on a cloth that should be kept damp, or in a pan containing not more than one-eighth of an inch of water, the object being to keep the saucer moist, but not wet. If such a saucer be not available, a brick will answer the purpose as well. In germinating seeds in an earthen saucer, they may be exposed to the light, but not to the direct rays of the sun.

DODD'S KIDNEY PILLS
FOR ALL KIDNEY DISEASES
CURES RHEUMATISM, BRIGHT'S DISEASE, DIABETES, BACKACHE
These pills have discontinued the use of our pills in the past because of imitations. Sold only in bottles.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

LAST MOUNTAIN VALLEY

THE
Choicest Wheat Land
OF
Eastern Assiniboia
\$9.10 per acre \$9.10

Average yearly yield, 25 bushels per acre for 5 years.

The G. T. P. is already surveyed through, and the C. P. R. is now building.

"Easily equal to the Portage Plains," is the signed opinion of over 250 settlers.

Free books, maps and settlers' statements.

WM. PEARSON & CO., WINNIPEG.

LAST MOUNTAIN VALLEY

The Town of

LUMSDEN

N.-W. T.,

Is Headquarters for

Supplying Settlers

for the Last Mountain Valley country. Best of hotel accommodation, numerous boarding-houses, restaurants, large general stores, four implement houses, two large livery stables, harness and furniture supplies, drug and hardware stores, jewelers, lumber yards, baker, butchers, blacksmiths, flour mill 250 barrel capacity, real-estate agents, etc. Communicate with C. HYND, Sec. Board of Trade, or the Mayor.

SPRING PIANO BARGAINS

Although not perfectly new, each is in thorough repair and guaranteed for five years.

UPRIGHT PIANOS.

	WAS	NOW
Berlin Piano Co.	\$400	\$225
Karn	375	215
Evans Bros.	425	210
Layton Bros.	325	175
Jas. B. Berry	350	165
R. S. Williams	340	155

Any of the above shipped on approval for 10 days' free trial.

WRITE AT ONCE FOR FULL PARTICULARS AND ART CATALOGUE.

LAYTON BROS.,

144 Peel Street. MONTREAL.

The Washing Came High.

By Mary Joslyn Smith.

It must have been one of those "onward calls" that led Constance to go with her brother to that "comic opera of a town," for what else could it have been? It was such a sudden flitting from a bright full life in a city, to the new place, cut out of the forest, so new that there were no established precedents. Everybody felt equal to everybody else, and no one wanted to be servant to another.

The salary at the mission-house was not large enough to pay for help, but Constance's mother in the southland said to her daughter, "If you think you can make the home for your brother in that playhouse he describes to us, I will pay for a maid as helper in the scullery."

"We do not have sculleries in the north, and I fear it would be almost impossible to find a maid-of-all-work," replied the brother, "but I will not allow Constance to work too hard. We will do the every-day work together."

The brother and sister established themselves in the mission-house, he as missionary among the people, and she eager to make a comfortable home for the loved brother.

The first troublesome problem was how to get the washing done. Small as was the house, they had frequent guests, and the table linen and bed-clothing made the basket full in a short time.

"At last, I am going to have a washwoman," said Constance to her brother at breakfast. A little later she was trying, in halting French, to make herself understood.

Madame Laundress was speaking glibly, assuring the young mistress that she had come far, and would not lay aside her hat and coat unless she was promised \$1.50 for her day's work. She also had her seven-year-old son with her, whom she said must remain if she did.

"Just this one day, I will pay what you demand, but never again," said Constance. "We must have the clothing washed."

Very soon Madame Laundress began to say "trop beaucoup linge," meaning there was too large a washing. Constance could not escape her, for she had to work in the one small kitchen, preparing lunch and dinner, and hanging out the clothes as fast as ready. About three in the afternoon, Madame tipped over her tub on the kitchen floor, when Constance needed to watch her oven. At five o'clock the laundress confronted Constance, asking if she could stay all

night, since she was not going to wash any more that day. At first the young mistress said, "Of course, not," but when she saw the unfinished state of things, and the woman assuring her that she would not return, she yielded, and prepared cots for the mother and the boy. In the morning, in spite of all Constance's help and hurrying, she hastened not. "You must be away before eleven," Constance finally commanded. The woman left the flannels and socks piled upon the table, once washed out. When she was ready to go she demanded two dollars and twenty-five cents as her pay. Constance had dispensed eight hearty meals to mother and son, furnished lodging for two, hung out all of the washing, finished up really the hardest part, and paid the money demanded.

Her brother came home from a round of work, and sang out the rhyme of a child's play: "This is the way we wash our clothes."

"This is the way for once," replied his sister, "but I must find some other way." There were many men employed in the town, and there was a small laundry. Constance paid a visit to the laundry, and asked if they could not take family washing by the pound. "Never heard of such a thing. If others can do so in other places I can," said the proprietor. "I will send you a washing for trial," said Constance. The laundryman decided, after having the first instalment, that he could do it for four cents a pound. The problem was solved for Constance, and so for many others in the place that were not able to do the washing themselves.

When the clothes came home one day in fine order, Constance said to her brother: "It is odd about housekeeping here; there is always some way out of every seeming emergency. I wonder if it is so everywhere?"

"I am sure if you find it so here, it must be so all over, for this is more than a test place."

"Well," said Constance, "then does not that do away with the idea of emergencies in housekeeping? If housekeepers have eyes to see, I almost think some resources are at hand everywhere."

When winter weather came on, the laundress needed help, and Constance was among the first to help the needy woman.

"For really," said Constance, "it is much better to join with others in giving to the poor creature than to have the annoyance of having her around. I see there are serious problems in social science in a small town as well as in a large one."

THE SPICE OF LIFE.

Modern surgery appears to be making enormous strides. Directions with a new infant's feeding bottle run: "When the baby is done drinking it must be unscrewed and laid in a cool place under the hydrant. If the baby does not thrive on fresh milk, it should be boiled." A photographer advertises: "Your baby can be enlarged, tinted, and framed like the above for 6s. 6d."

The first life insurance policy of which the details are on record resulted in a lawsuit. William Gybbons insured himself on June 15th, 1883, for £383 against dying in twelve months. He did die on May 18th of the next year—and the disgusted underwriters (the company of those days) contested payment on the plea that he had lived twelve months of twenty-eight days each.

A writer tells of the origin of Mrs. Grundy, and says that, "What will Mrs. Grundy say?" occurs in Morton's comedy, "Speed the Plow," written in 1789. One of the characters, Farmer Ashfield, growing weary of constant references to Mrs. Grundy, a character in the play, by his goodwife, suddenly turns upon her with:

"Be quiet, will ye. Always dinging-donging Dame Grundy into my ears. 'What will Mrs. Grundy say?' 'What will Mrs. Grundy think?' The phrase tickled the public ear at the time, and is still in fashion."

A famous physician upon being asked recently, what is the chief cause of ill health, replied: "Thinking and talking about it all the time. This ceaseless introspection in which so many of the rising generation of nervous folk indulge is certainly wearing them out. When they are not worrying as to whether they sleep too much or too little, they are fidgeting over the amount of food that they take or the quantity necessary for health. In short, they never give themselves a moment's peace."

Representative Cooper, of Texas, tells a story about Gen. Sam Houston, of his State, and a practising physician who did not like the old general, being strenuously opposed to him politically. One day, after a heated political discussion, the physician said: "General, I like you well enough socially, but politically I would not believe you on your oath." "I would believe you, doctor," was the quiet reply of the general. "Then, sir," vehemently exclaimed the doctor, "you have a much better opinion of me than I have of you." "Not a better opinion, doctor, but I simply have a little more politeness than you have."

POSTPONED SALE

Our sale of PURE SCOTCH SHORTHORNS advertised to take place on February 16th was postponed owing to the railway blockade, and will take place on

TUESDAY, MARCH 21, 1905.

All trains on the Owen Sound Division of the C. P. R. will stop on the farm on day of sale.

GOODFELLOW BROS., Oak Lane Farm, MACVILLE, ONT.



SAVE 20 CENTS PER SHEEP on every sheep you shear with

STEWART'S IMPROVED 1904 SHEEP SHEARING MACHINE Price in Canada

For sale by all leading jobbers. The day of the old-fashioned hand shears is past. No owner of 10 sheep or more can afford to shear by hand, even though the work be done for nothing. Don't butcher your sheep. Shear with machine and get one pound of wool extra per head. It will more than cover the cost of shearing. Send to-day for valuable book, "Hints on Shearing." It is free, and will save you money.

CHICAGO FLEXIBLE SHAFT COMPANY, 110 LaSalle Ave., Chicago.

In ensuring my advertisement on this page, kindly mention the FARMER'S ADVOCATE.

THE Frost & Wood Company Limited

Are building for 1905 a line of

Seeding and Cultivating Machinery

that will increase the production of your farm and make your work easier.

F. & W. SINGLE DISC DRILL

is a drill that has proven successful wherever it has been used. Built throughout of steel and malleable iron, giving it long life and freedom from repairs. The DISCS are flat, and at a slight angle to the line of motion, saves the work of one horse. The SEEDING APPARATUS is as nearly perfect as mechanical art can make it. We would like you to investigate it and see for yourself. Our Illustrated Catalogue "F" contains a lot of information.

THE Frost & Wood Company LIMITED

Head Office & Works, Smith's Falls, Ont.
Branches: Winnipeg, Brandon, Calgary, Regina.

WE LEAD THEM ALL IN QUALITY, IN CHEAPNESS, AND IN QUANTITY SOLD

Galvanized Steel Woven Wire Fencing

58 INCH.	
49 IN.	9
41 IN.	8
34 IN.	7
28 IN.	6
23 IN.	5

American Field and Hog Fence.

Hinge Joints and Tension Curves.

We call your special attention to our extra Heavy Fence, all Horizontal Wires, No. 9 gauge.

If your dealer does not handle our Fences, write to us.

Made by **The Canadian Steel and Wire Co., Limited**, WINNIPEG, MAN. HAMILTON, ONT.

Senega Root

Ship us your Senega and turn it into money while prices are high. We predict low value in near future.

THE LIGHTCAP HIDE & FUR CO., Limited

Dealers and Exporters of Hides, Pelts, Deerskins, etc. Northern Furs and Senega.

Highest Prices, Prompt Returns. 172 KING ST., WINNIPEG, MAN.

GOSSIP.

Dr. Warre, headmaster of Eton, says: "My impression is that the public school boy of to-day is less rough in manner and language than his predecessors of fifty years ago. I do not see that he is less hardy, or in matters physical less efficient than they. On the whole I can bear witness to improvement. Boys as a rule do more work and learn more than they used to do."

A clergyman once, in introducing his wife to the late Bishop of Llandaff, facetiously quoted the phrase in which Touchstone introduces Audrey in "As You Like It": "Allow me to present my wife—a poor thing, my lord, but mine own." The good lady resented her husband's somewhat infelicitous jest, and, being a woman of spirit, immediately turned and said: "Allow me to present my husband—a poorer thing, my lord, but mine owner!"

In a Pennsylvania town where the Friends abound, a prim old Quaker spinster one day attended the marriage of her grandnephew, a young person who had in the course of his twenty-one years received much needed discipline at her hands.

The old lady was at her best on this festive occasion, and at a pause in the wedding-breakfast her young relative looked over at her with a beguiling smile.

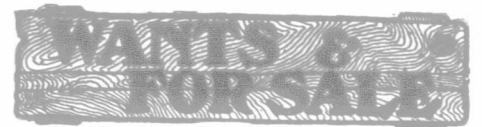
"Tell us why thee never married, Aunt Patience?" he said, teasingly. "That is, soon told, William," said the old Quakeress, calmly. "It was because I was not as easily pleased as thy wife was."

When one of the city ministers of Glasgow was travelling one day by the subway he got into conversation with a fellow-passenger, who had the appearance of being an artisan. The latter was very communicative, and in the course of conversation stated that he was a coupler on the railway. "Oh," said the minister. "I myself have been in that line of business for the last thirty-five years." Looking up, and perceiving from his clerical collar the profession to which his fellow-traveller belonged, the railway coupler joined: "Oh, but I can beat you, sir." "How can you beat me?" "Well, sir, I can couple, and ye canna; ye couple yours for better or for worse!"

GOODFELLOW BROS.' SHORTHORN SALE.

The dispersion sale of the noted herd of Shorthorns belonging to Messrs. Goodfellow Bros., of Macville, Ont., which was advertised to take place on Feb. 16th, was, owing to the storms of that period and the blocking of the railways, postponed to March 21st, and will form one of a series of three important dispersions, the sales of Messrs. Howden, of Columbus, and Johnston, Balsam, coming on the two following days. Those who managed to reach Macville and saw the Oak Lane herd in their stables, speak in the highest terms of the character and quality of the cattle, many of which are imported Scotch-bred animals that have been prizewinners at Toronto, London, and other leading Canadian shows, and all are of Scotch or Scotch-topped breeding. The herd bull, Imp. Famous Pride, by the Duthie-bred Golden Fame, has been a second-prize winner at Toronto, and is one of the very best bulls in Canada—a show bull in any company, and a successful sire as well. There are five other bulls, yearlings and two-year-olds, bred from first-class Scotch families, and all but one of serviceable age. The females represent many of the most popular Scotch families, several imported animals being included. A number of the cows have calves at foot, while all others of breeding age have been bred to the stock bulls, and all are of the approved modern type, low set, thick-fleshed, and kindly feeders.

Note the date, March 21st, and the place, near Bolton Station on Toronto to Owen Sound branch of C. P. R., 25 miles north-west of Toronto. Parties going by G. T. R. from north or south, can make connections at Cardwell Junction morning of sale with C. P. R. from Owen Sound.



Advertisements will be inserted under this heading, such as Farm Properties, Help and Situations Wanted, and miscellaneous advertising.

TERMS.—One cent per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 25 cents.

BEE SWAX WANTED—Will pay 30 cents a pound for good clean beeswax here. James Durcan, Emerson, Man.

FOR information concerning 100 improved and unimproved farms in the Dauphin district, write A. E. Iredale, Dauphin. Terms to suit purchasers. Particulars mailed free. m

ONE HUNDRED AND SIXTY ACRES, five miles from Swan River. Black sandy loam, sixty acres broken, log buildings. Price nineteen hundred. E. J. Darroch, Swan River. m

IMPROVED and UNIMPROVED FARMS for sale in Grand View district, Man. Lists upon application to Benj. C. Nevill, Real Estate Agent. m

FOR information about the rich Dauphin country write the Dauphin Land Co., Dauphin, Man., for list of improved and unimproved farms. H. P. Nicholson, manager.

FOR one month we offer for sale a splendid farm, half-section, in the famous Wawanesa district. Two miles from market. Nearly a dozen elevators in sight of the farm. Plenty of good water, fair buildings. Two hundred cultivated. Abundance of hay and pasture. Value of crop last year, \$1,700. Price \$7,000. Terms cash. King Bros., Wawanesa, Man.

PARTNER WANTED in established nursery business, willing to put in \$3,000. Well located in Vernon, B. C. For particulars apply to Box 371, Vernon.

WANTED at once—Salesman in Manitoba and the N.-W. T. to represent "Canada's Greatest Nurseries." Biggest assortment of hardy fruits, ornamental and shade trees. Recommended by Experimental Stations at Brandon and Indian Head. Big inducements to energetic men. Pay weekly. Special new outfit, designed for Western men, free. Spring canvases now starting. Write now for terms. Stone & Wellington, Toronto.

FARM for sale—Half-section good wheat land; well improved; good state of cultivation; good buildings; beautiful spruce trees. Comfortable home. Box 70, Souris, Man.

WANTED—Married man to manage ranch near Kamloops, B. C. Must previously have held similar position, and have first-class references. Good salary and small percentage on profits will be offered to suitable man. Box 11, Farmer's Advocate, Winnipeg.

BEES FOR SALE—I am now booking orders for Italian bees in Langworth hives, Hoffman frames, for May delivery. W. E. Cooly, Soligirth, Man.

FOR SALE—Having decided to quit farming, I beg to offer for sale my home farm, Springbrook, two miles north of Austin, S. half 4, 12, 11, 320 acres, all fenced, about 175 under cultivation, and most of it ready for crop. Another 100 acres can be broken, balance, about 40 acres, wooded with elm, ash, maple and poplar, along banks of spring creek that runs past buildings—three story cottage-roofed brick house, 32x30, full basement, furnace, cistern, front and back stairs, large frame kitchen, frame barn, 52x50, 18 ft. posts, loft for 30 tons hay and 4,000 bushels oats, stalled for 16 horses and 60 head cattle, frame stable, 24x100, lean-to 16x100, frame stable 16x32, log stable 14x24, good 1-ft. log house, used for granary and crusher room, henhouse, root house, crusher, cutting box, pulper, steam engine, cream separator and 9 portable granaries, 600 bushels each. Buildings are new and up-to-date. School on the section. A dairy herd of over 60 cows, 75 head young cattle, 20 horses, and 9 hogs, consisting in part of imported pure-breds, 100 tons hay, a full line of implements and quantity of seed grain. Can be purchased with farm if required. Also the section to the east, 640 acres, 320 under cultivation and large portion of it ready for crop, fenced around and 2 1/2 miles cross fences, can all be broken, good water, frame house, kitchen, dining room, sitting room, three bedrooms, frame stable 28x16, good loft, log granary, pigpen, etc. Buildings protected by a fine bluff. The purchaser may also lease 480 acres cornering this section, with 220 ready for crop, and a section convenient for hay, pasture and wood. A grand chance for a big farmer. For further particulars apply to John D. Hunt, Carberry, Man.

TRADE NOTES.

SPECIAL NOTICE—H. S. Palmer's licenses are respectfully requested to report such damages as they may have sustained by reason of infringers or derogatory statements regarding the H. S. Palmer patents at this office without delay.

CHICAGO FLEXIBLE SHAFT CO.—It has been the unanimous testimony of all who have used them, that the power clippers for horses and sheep are the best machines that have been invented in recent years. For sheep shearing, they save from one-half to one pound of wool on each animal, and on horses they save hours of time, besides doing the very best class of work. Clipping machines are advertised in our columns by the Chicago Flexible Shaft Co., and the man who buys one makes no mistake.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE

POULTRY AND EGGS

Condensed advertisements will be inserted under this heading at one cent per word each insertion. Each initial counts for one word, and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns.

VERDEN Duck Yards. Mammoth Pekin Ducks and Drakes for sale. Correspondence solicited. Menlove & Thickens, Verden, Man.

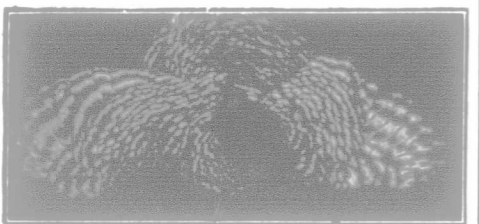
FOR SALE—High-class Golden Wyandottes Indian Games and Plymouth Rocks. S. Ling 28 River Ave. Winnipeg.

INCUBATORS, Poultry and Pet Stock Supplies.—Our incubators are guaranteed. You run no risk. Write at once for a large new catalogue. A. J. Morgan, London, Ont.

COCKERELS for sale, from bred to lay strain of White Wyandottes, at \$1.50 to \$2 each. Thos. Lund, Stonewall, Man.

WHITE Wyandottes and White Leghorns, the stay white kind, Ontario's choicest strain. Eggs \$2.00 per fifteen. Write for circular. Ernest Charlton, Ilderton, Ont.

BUFF ORPINGTONS, Silver-laced Wyandottes, stock. Eggs \$2 per setting. Scotch collie pups. W. J. Luxton, Hanlan, Man.



Barred Plymouth Rocks AND SILVER-SPANGLED HAMBURGS Eggs and stock in season. Write for free Catalogue. **THOMAS BROS.,** Crossfield, Alberta.

\$12.80 For 200 Egg INCUBATOR Perfect in construction and action. Hatches every fertile egg. Write for catalogue to-day. **GEO. H. STAHL, Quincy, Ill.**

NATURAL HEN INCUBATOR The only one that's different. Uses the hen all through the hatch. Nature's own way. Avoid high prices. **200 Egg Hatcher costs but \$9.** Agents wanted. Cat. log with 25c illustration free. **Natural Hen Incub. Co., B-15 Columbus, Neb.**

Scotch Shorthorns Herd headed by Imp. Royal Champion. Young stock for sale from Imp. sires and dams. For particulars write to **ED. ROBINSON, Markham Sta. & P. O.** Farm within town limits.

Advertise in the Advocate AND GET BEST RESULTS.

QUESTIONS AND ANSWERS.

1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.
2nd.—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.
3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.

Veterinary.

WASHY DRIVER.

I have a driver that scours badly when driven; scours a little in the stable; is feeling well, but appetite is poor. What shall I do for him? G. H. L.

Ans.—Purge him with a ball consisting of six drams aloes and two of ginger, then give daily in powder nux vomica, gentian and ginger, one dram each, to tone up the digestive system. Exercise care in feeding and watering. When in the stable feed clean hay and easily-digested grain, such as ground oats. Do not water just before taking on the road or after feeding.

AN INDOLENT SORE.

Horse, six years old, has a sore on ankle of hind leg about the size of a silver dollar. Has had the sore about a year. It does not run, and does not make him lame, but it sometimes bleeds when he has been driven through snow-banks. I have tried many liniments, and other remedies, but have not been able to cure it; also consulted a veterinary surgeon. H. V. Killarney.

Ans.—If the horse was a gray, might suspect a melanotic tumor. Healing may have been prevented by the horse striking himself when worked. If such is the case, provide a boot or something of the kind from your harnessmaker. Zinc oxide ointment to which is added one dram iodoform to one ounce of the ointment will be found useful; or get the following made up: Carbolic acid, one ounce; camphor, five ounces; resin, one ounce; methylated spirits, fifteen ounces, and paint the sore from time to time. Iodoform and tannin, equal parts, makes a useful dry dressing for wounds.

TRADE NOTE

CONCRETE BLOCKS.—The use of hollow concrete stone as a building material, promises to develop even more rapidly than has yet been supposed. This material is acknowledged by the most competent authorities to be one of the best it is possible to secure for the construction of buildings. The many points of advantage it possesses will be gladly explained to enquirers if they will drop a card to the Jas. Stewart Mfg. Co., of Woodstock, Ont., asking for particulars. This widely-known firm is marketing a Hollow Concrete Stone Machine, the value of which will be shown to any who may want information.

Maple Lodge Stock Farm, the home of Mr. A. W. Smith, whose P. O. is also Maple Lodge, is located about equal distance from Lucan and Ailsa Craig Stations on the main line of the G. T. R., between the Sarnia Tunnel and Toronto, and about one mile from Lucan Crossing, L. H. & B. R. The Shorthorn herd numbering about 60 head, is headed by two imported bulls, Knuckle Duster and Prince Golden. The latter, a twenty-months-old bull, is large, deep and evenly fleshed, got by the noted Golden Drop bull, Golden Thistle, and has for his dam the unbeaten show heifer, Forest Princess. Until quite recently, another choice imported bull was in the herd, viz., Sir Wilfrid. Nearly all the young things are either by Sir Wilfrid or Knuckle Duster. Among the young bulls now on hand is the choice quality, fifteen-months Roan Patrician, by Sir Wilfrid, dam Princess Jossie, who was also dam of the champion steer at Guelph Winter Fair, 1903. Count Cecil is a red about fifteen months old, by Knuckle Duster, and from a Campbell Cecelia dam that we are informed has a record of 60 lbs. of milk per day. This young bull has abundance of natural flesh, and should transmit the dairy qualities of his dam to his progeny. We also noticed a thick, red, fifteen-months-old bull of the Lovely tribe, a grandson of Knuckle Duster, and a twelve-months roan from a Campbell Fair Queen, and by Sir Wilfrid, and three others by the same sires and from Lavinia dams. They are grandsons of Roan Blanche, that was such a famous winner in the dairy tests at London and Guelph Winter Fairs, giving 54 lbs. milk, testing 4.2. 14th Princess Thule, the cow that stood high up in the dairy test at the Pan-American, has two good-quality daughters, by Knuckle Duster, as has also Ivy, the cow that won first in the dairy test at Guelph, 1902, giving 53 lbs. of 4.5 milk. They are also by Knuckle Duster, and from Lavinia dams. In addition to the families already referred to, there are Duisys, Constances, Rose of Sharons, Marr Missies, Cruick-shank Mysies, Symes, and others. This herd has long been noted for their combined flesh and milk production. A few good, clean-boned Clyde mares are being kept, and are being bred to the best imported stallions procurable.

The flock of Leicester sheep now numbers 215 head, and a more uniform lot it would be difficult to find. The great stock ram, Stanley, that has sired most of Mr. Smith's winners at St. Louis, Chicago, Toronto, and other large shows, is looking well. This ram has never been shown since as a lamb. He won first at the Border Leicester Breeders' Club Show, Winchester (imp.), bred by Mr. Twentyman, is crossing well upon Stanley ewes. We noticed one ram lamb by him from a full sister of Stanley, that will be ready for a tussel next fall, if no misfortune happens to him; in fact, the lambs throughout are an extra good lot, heavier in the bone than the average Leicester.

BREEDERS' DIRECTORY.

Breeder's name, post-office address, class of stock kept, will be inserted under this heading at \$3.00 per line per year. No card to be less than two lines or exceed three lines.

- A. D. McDONALD,** Napitka, Man.—Breeder of Shorthorns, Yorkshires and Berkshires. Young pigs for sale.
- A. D. GAMLEY,** Brandon, Man.—Breeder of Leicester sheep and Roadster horses. Stock for sale.
- A. DAMSON BROS.,** Gladstone, Man., breeders of Shorthorns and Yorkshires, 1 1/2 miles from Stn.
- A. B. POTTER,** Maple Leaf Farm, Montgomery, Assa., Holsteins, Yorkshires and Berkshires.
- A. & J. MORRISON,** Glen Ross Farm, Homewood, Man. Shorthorns and Clydesdales.
- C. W. TAYLOR,** Dominion City.—Barred Plymouth Rocks, Buff Cockins, Black-headed Red Game, White Cockins.
- C. H. CROCKER & SON,** Pine Lake, Alberta.
- C. O'BRIEN,** Dominion City. Buff Orpingtons, Scotch Deer Hounds, Russian Wolf Hounds.
- DAVID ALLISON,** Stronsa Farm, Roland, Man. Shorthorns and Berkshires.
- D. HYSOP & SON,** Killarney, Man., Landaeer Farm, Shorthorns and Percherons.
- E. LILTON & WATT,** breeders of pure blood Hereford and Shorthorn cattle. Choice young bulls now for sale. Clverdale Farm, 3 miles northeast of Birds' Hill, Springfield Township, Man.
- E. T. GRIFFITHS,** Moose Jaw, Assa.—Breeder of Clydesdales and Shorthorns. Stock for sale.
- F. J. COLLYER,** Welwyn Station, Assa. Aberdeen-Angus and Berkshires.
- GORRELL BROS.,** Pilot Mound, Man.—Shorthorn. Stock of both sexes for sale.
- H. W. HODKINSON,** Neepawa, Man. Barred Rocks. Winners.
- HENRY NICHOL,** Fairview Farm, Brandon, Man. Breeder of Clydesdale horses and Shorthorn, etc.
- J. G. WASHINGTON,** Nings, Man.—Breeder of Clydesdales and Shorthorns. High-class stock of both sexes always for sale.
- JOHN GIBSON,** Underhill, Man.—Breeder of Shorthorns and Tamworths. Stock for sale.
- JAMES DUTHIE,** Melgund Stock Farm, Hartney, Man. Shorthorns and Berkshires.
- JOHN LOGAN,** Marchison, Man. Shorthorns.
- J. MANSFIELD,** Rosebank Farm, Brandon, Man., Breeder of Shorthorns. Young stock for sale, both sexes.
- JOHN WISHART,** Portage la Prairie, Man.—Breeder of Clydesdales and Havkney horses. Young and breeding stock of both sexes for sale.
- J. H. REID,** Moosomin, Assa.—Breeder of Herefords. Young bulls for sale.
- J. M. MACFARLANE,** Moose Jaw, Assa.—Breeder of Clydesdale horses.
- J. CHILDREN & SONS,** Okotoks, Alta.—Duroc Jersey swine, either sex, for sale.
- J. W. MARTEN,** Gotham, Wis., U. S. A., importer and breeder of Red Polled cattle.
- JAS. TOUGH,** Lake View Farm, Edmonton, breeder of Hereford cattle.
- LAKE & BELSON,** Grenfell, Assa.—Breeders of Polled-Angus cattle. Young bulls for sale.
- L. E. THOMPSON,** Deloraine, Man.—Breeder of Clydesdales, Shorthorns, Jucks and Jennets O. I. C. swine and P. B. Rocks.
- L. V. B. MAIS,** Fort Qu'Appelle, Assa. Gallo-ways.
- LUM CREEK STOCK FARM**—J. H. Kinnear & Son, Souris, Man. Breeders of Shorthorns. Stock for sale.
- R. A. COX,** breeder and importer.—Shorthorns, Berkshires and B. P. Rocks. Berrisford, Man. Stock for sale.
- R. A. & J. A. WATT,** Salem P. O., Ont., and telephone office.—Breeders of Shorthorns and Clydesdales. Imported and Canadian-bred females; also a pair of bull calves.
- RIVERIDGE FARM.**—Shorthorn cattle, Deerhounds, B. Rocks, B. B. R. Games. A. A. Titus, Napitka, Man.
- RIGBY & JOHNSTON,** Headingly, Man. Breeders of Improved Yorkshires.
- REGINA STOCK FARM.**—Ayrshires and Yorkshires for sale. J. C. Pope, Regina, Assa.
- ROBT. SINTON,** Regina, Assa.—Breeder and importer of Herefords. Stock, both sexes, for sale.
- R. P. STANLEY,** Moosomin, Assa.—Breeder of Percherons and Hackneys. Stallions of both breeds for sale.
- THOS. WALLACE,** Red Herd Farm, Portage la Prairie, Man. Shorthorns.
- THE "GOULD FARM,"** Buxton, North Dakota, U. S. A., breeders of Red Polled cattle, the dual-purpose breed of America.
- TRAYNOR BROS.,** Regina, Assa.—Clydesdales. Stallions for sale.
- THOS. ELLIOTT,** Regina, Assa.—Breeder of Herefords.
- THOS. DALE,** Portage la Prairie, Man.—Breeder of Shorthorns and Berkshires. Young and breeding stock of both sexes for sale.
- W. M. LAUGHLAND,** Hartney, Man.—Breeder of Shorthorns, Berkshires and B. P. Rocks.
- WALTER CLIFFORD,** Austin, Man., breeder of Polled Angus Cattle: 1/2 mile from station.
- W. M. DAVIDSON,** Lyonsball, breeder of pure-bred Shorthorns. Young stock of good quality for sale.
- W. S. LISTER,** Middle Church (Nr. Winnipeg) Marchionni Herd—Scotch Shorthorns. Bulls all ages, from imported stock. Telephone 1044B.

London Fence

THOR, (Greek God of Thunder and Friend of Man.) To the Farmers of Canada.

These coiled steel strands of famous "London" Wire, Secured to end posts anchored firm as earth herself, And tightened independently, do perfectly to hill or dale conform. These are the girders. In their great strength and resilience doth mostly lie the endurance of the fence. In this no chances take, but purchase only "London" spring steel wire coiled, not kinked, (warranted by the makers.) These strands or girders, each to each, so solidly secured by this machine, With tough steel wire automatically prepared or spooled, Thereby produce a barrier so perfect that well do ye exclaim, "Eureka!" "This London Fence Machine no equal hath on this broad earth, "That doth in speed or perfect product bear comparison."

London Fence Machine Co LIMITED
LONDON AND CLEVELAND.

Western Agents—A. E. Hinds & Co. 602 Main St., Winnipeg
Quebec and East Ont. Phelps & Smith, 60 McGill, Montreal.
Maritime Agent J. W. Boulter, Summerside, P. E. I.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Children Are Underfed

THE RESULT IS WEAKNESS, RICKETS, ST. VITUS' DANCE AND MANY ILLS OF CHILDHOOD—THE CURE IS

Dr. Chase's Nerve Food

"Nine-tenths of children are underfed," writes a great English scientist who made an exhaustive study of the subject.

Children require double nourishment—to enable them to grow as well as to repair the wear and tear consequent on living.

Active exercise of mind and body, together with growth and physiological changes, consume nerve force at a tremendous rate, exhaust the supply of rich blood and leave the body weak and liable to disease.

Pallor and weakness, weak eyes, nervousness, skin diseases, rickets, St. Vitus' dance and constant liability to catch cold and to contract the disease of childhood are the result.

As a means of restoring the vitality of weak, puny children there is no preparation so effective as Dr. Chase's Nerve Food.

Being mild and gentle in action and powerful as a creator of new, rich blood and nerve force, this great food cure is admirably suited to the needs of childhood, soon adds new, firm flesh and tissue to the weak and emaciated body and restores the vigor of robust childhood.

There is no means by which nourishment is so directly supplied to the blood and nerves as by the use of Dr. Chase's Nerve Food, because this preparation is composed entirely of the elements of nature which are required to build up and restore strength to the system.

Dr. Chase's Nerve Food, 50 cents a box, at all dealers, or Edmanson, Bates & Co., Toronto. The portrait and signature of Dr. A. W. Chase, the famous recipe-book author, are on every box.

Advertise in the Advocate

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office.

HACKNEY HORSE STUDBOOK, VOL. XXII.

We have received, by the courtesy of the Secretary of the Hackney Horse Society, Frank F. Euren, 12 Hanover Square, London, W., England, Vol. XXII., of the Hackney Studbook, containing the alphabetical records of the breed for stallions Nos. 8713 to 9076, and mares 16388 to 17074, and re-entries. It is illustrated with cuts of Administrator 8047, champion stallion; Rosadora 11437, champion mare; Sir Horace 5402, champion pony stallion, and Gold Foil 13513, champion pony mare at the London Show, 1904. The volume is neatly printed and should prove very interesting to Hackney breeders.

TRADE NOTE.

CHATHAM WAGON.—The farmers of Manitoba and Western Canada are having their attention brought through these columns to the many splendid features of the celebrated Chatham wagon. The output of this factory is known in the Dominion from one coast to the other. When a Chatham wagon goes into a district, it is the firm's best salesman. It sells other wagons to neighbors simply because it shows distinct superiority in material, workmanship and satisfactory wearing qualities. Only the best of live timber is used in their construction. It is properly air-dried under cover, a process which brings it to the most perfect and lasting condition. If you intend buying a wagon, it would be wise to write to the Chatham Wagon Co., Chatham, Ont., and get what information you want regarding their goods—price, etc. You may have it for the asking, and the company will be glad to answer any questions you ask about their wagon.

As a youth, Daniel Webster was somewhat opposed to physical labor, but he was quick at repartee. While mowing he complained to his father that his scythe was not properly hung. "Hang it to suit yourself, Dan," replied the paternal. The boy immediately hung it on a tree near by. "There, father, it's hung to suit me now."

Announcement

THE famous business so long and so successfully carried on under the name of W. Warner, Brandon, will henceforth be conducted by Warner's Limited, who assumed control on March 1st, 1905. We confidently hope, by a continuance of the same absolutely reliable and up-to-date methods, to merit not only as much, but more of your trade than ever before. Respectfully,

Warner's Limited, Brandon.

THE PEOPLE'S POPULAR STORE

REVILLON BROTHERS, Limited.

MAIL ORDERS CAREFULLY ATTENDED TO

When in the city, it will pay you to call on us and have your wants attended to. We lead the trade in

DRY GOODS, GENTS' FURNISHINGS, BOOTS and SHOES, CARPETS, GROCERIES and HARDWARE.

Our Ladies' and Fur Departments cannot be equalled.

REVILLON BROTHERS, LIMITED, EDMONTON. Cor. Jasper Ave. and 2nd Street.

Joseph Rodgers & Sons Limited, SHEFFIELD, ENGLAND.

Please see that this EXACT MARK is on each blade. James Hutton & Co., Montreal, SOLE AGENTS IN CANADA.



FARM BOOKS

The farmer's home without an Agricultural Library is lacking in one of the chief aids to pleasure and success. We have gone over the available first-class works on agricultural subjects, and have selected the best. See below for prices and how to obtain them.

- LIVE STOCK.**
- Veterinary Elements.—A. G. Hopkins, B. Agr., D. V. M. \$1.50. A practical farm live-stock doctor book.
 - The Study of Breeds (Cattle, Sheep and Swine).—Prof. Shaw. 400 pages, 60 engravings. \$1.50.
 - Horse Breeding.—Sanders 422 pages. \$1.50.
 - Horse Breaking.—Capt. Hayes. \$5.00. Far and away the best on this subject.—The Field.
 - Points of the Horse (3rd edition).—Capt. Hayes. \$10.00.
 - Light Horses—Breeds and Management. (Vinton series.) 226 pages. \$1.00.
 - Heavy Horses—Breeds and Management. (Vinton series.) 219 pages. \$1.00.
 - Cattle—Breeds and Management. (Vinton series.) 270 pages. \$1.00.
 - Sheep—Breeds and Management. (Vinton series.) 232 pages. \$1.00.
 - Pigs—Breeds and Management.—Sanders Spencer. 175 pages. \$1.00.

- Feeds and Feeding.—Henry. 600 pages. \$2.00.
 - Live-Stock Almanac. Handsomely bound. 75 cents. Paper cover, 40 cents.
 - Live-Stock Judging.—Craig. \$2.00. The only work on this subject.
- GENERAL AGRICULTURE.**
- Agriculture.—C. C. James. 200 pages. 30 cents.
 - Chemistry of the Farm.—Warrington. 183 pages. \$1.00.
 - Farmyard Manure.—Aikman. 65 pages. 50 cents.
 - Successful Farming.—Rennie. 300 pages. \$1.50, postpaid.
 - Agricultural Botany.—Percival. \$2.00. A very useful book for student farmers.
 - Soiling Crops and the Silo.—Shaw. 366 pages. \$1.50.
 - Fertility of the Land.—Roberts. 415 pages. \$1.00.
 - Physics of Agriculture.—King. 604 pages. \$1.75.

- DAIRYING.**
- Milk and Its Products. Wing. 230 pages. \$1.00.
 - Testing Milk and Its Products.—Farrington & Woll. 255 pages. \$1.00.
 - Canadian Dairying.—Dean. 260 pages. \$1.00.
 - Cheesemaking.—Decker. 192 pages. \$1.75.
- POULTRY.**
- Poultry Craft.—Robinson. \$2.00.
 - Farm Poultry.—Watson. 311 pages. \$1.25.
- APIARY.**
- The Honeybee.—Langstroth. 521 pages. \$1.50.
- FRUIT, FLOWERS and VEGETABLES.**
- Vegetable Gardening.—Green. 224 pages. \$1.25.
 - Flowers and How to Grow Them.—Rexford. 175 pages. 50 cents.

- Amateur Fruit-growing.—Samuel B. Green.** 5x7 inches; 134 pages, with numerous fly-leaves for notes; bound in cloth, and illustrated. 50 cents.
- PLANT and ANIMAL LIFE.**
- The Story of the Plants.—Grant Allen. 213 pages. 40 cents.
 - The Study of Animal Life.—J. A. Thomson. 375 pages. \$1.75.
 - Insects Injurious to Fruits.—Saunders. 436 pages. \$2.00.
- MISCELLANEOUS.**
- Landscape Gardening.—S. T. Maynard. 338 pages. \$1.50.
 - Birds that Hunt and Are Hunted.—Neltje Blanchan. 360 pages. \$2.25.
 - Carpenters' and Joiners' Handbook. 75 cents.
 - American Tanner.—Briggs. 25 cents.
 - Taxidermy.—Hastuck. 50 cents.

HOW TO OBTAIN THESE BOOKS.—We will furnish present subscribers any of the above books for cash or as a premium to those obtaining new yearly subscribers to the "Farmer's Advocate" according to the following scale:

- Books valued at 50c. and under for 1 new subscriber.
- Books valued over \$1.00 and up to \$1.50 for 3 new subscribers.
- Books valued over \$2.00 and up to \$2.50 for 5 new subscribers.
- Books valued at \$4.00, 8 new subscribers.

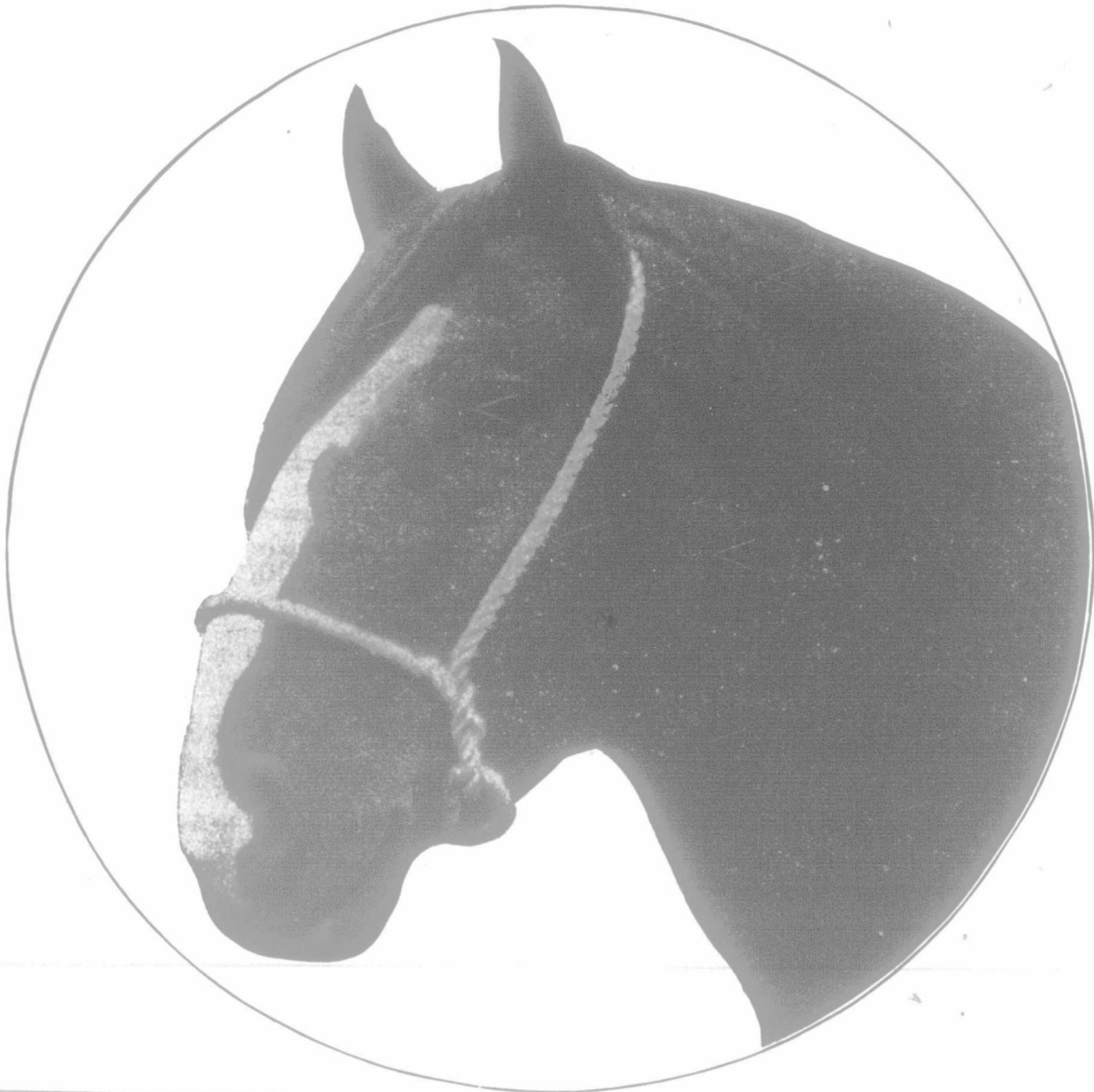
- Books valued over 50c. and up to \$1.00 for 2 new subscribers.
- Books valued over \$1.50 and up to \$2.00 for 4 new subscribers.
- Books valued at \$2.75 for 6 new subscribers.
- Books valued at \$6.00 for 12 new subscribers.

We can furnish any of the above books at the regular retail price, which is given opposite the title of the book. By a careful study of the above list, any farmer can choose a select list of books suited to his needs, and for a small outlay in cash, or effort in obtaining new subscribers for the "Farmer's Advocate," secure the nucleus of a useful library.

THE WM. WELD CO., LIMITED, Winnipeg, Manitoba.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

HIGH-CLASS STALLIONS



Clydesdales, Percherons and Hackneys.

J. A. S. MACMILLAN

IMPORTER AND BREEDER.

Box 413,

Brandon, Man.

OUR MOTTO: "Nothing but the best,"
as the following prizes will show.

Also guarantee every stallion as a sure foal-getter. Our record of Stallions SOLD AS PRODUCERS CANNOT BE BEATEN. Syndicates and individuals wanting a stallion would do well to communicate with me before purchasing elsewhere.

Mares and Fillies always on hand. Prices right. Terms easy.

Noted Prizewinners Sold:

CAIRNHILL

The Champion Stallion of America and Canada for 1903.

PLEASANT PRINCE

1st Prize, Aged Class, Dominion Exhibition, Winnipeg, 1904.

1st Prize, Aged Class, and Diploma all ages, Brandon Fair, 1904.

ST. CHRISTOPHER

1st, Winnipeg Fair, 1901. 1st and Cup, Brandon Fair, 1901.

PILGRIM

1st and Cup, Winnipeg Fair, 1900.

BURNBRAE

1st at Pan-American, Buffalo. 1st and Sweepstakes, Winnipeg and Brandon, 1898.

DEFENDING THE HEREFORD.

In our last issue a portion of an article from John Clay was published, in which some reflections were cast upon the worthy whitefaces. T. F. B. Sotham comes to the rescue in a U. S. contemporary, and the following is from his pen:

Texas, being the cradle of the cattle industry and the only state that has in any measure held its own as a breeding ground, naturally came to use Herefords extensively. If the Hereford predominates in Texas, it is not for lack of opposition or trials with other breeds. Thirty years of practical experience ought to bring about "the survival of the fittest." Cattle-breeding is growing more and more profitable. In time it will take all the available cheap lands in America to produce the calves, lambs and foals for development on tame-grass pastures, where grain or cake finish is most economically made, and for filling corn-belt and cotton-seed feed-lots. As ranges and big pastures are divided it is going to come home to American cattlemen that the only cattle that can profitably stand the economical wintering programme is the mature breeding stock that beget and produce the calves. Obesity is a detriment to a breeding cow, and a thin healthy cow is a sure breeder that has devoted her substance to her offspring. It does not take a prophet to foresee the return of cattle-breeding to the Northwest, and the decline of steer-grazing in that region. Plenty of hay, to keep breeding stock strong, can be raised there that is now practically wasted on steers, because in profitable beef-making the roughing process is insufferable waste. As population and demand increase, true economy will compel the end of the present shortsighted squandering of man's indispensable food (beef) through the cruel starvation process.

Mr. Clay is right in making "the reservation that the Hereford calf of today, taken from his mother, transferred to the corn-belt, and dealt with generously, is a beau-ideal feeding animal." On the one vital point in profitable feeding all experience agrees, namely: "the younger the animal, the less feed it will consume to make a pound of gain." In ripening improved beef-bred animals, where the milk flesh has been preserved

DON'T READ THIS

Unless you are interested in horses. If you are, write me for particulars regarding my horses, prices and terms, or visit my stables.

**Shires, Clydes, Percherons,
Coachers or Hackneys,
Imported Stallions or Mares.**

Single animals or in carloads, as desired, of the highest quality.

My residence and office is "THE WIGWAM," 12th Ave., West.
Stables at "THE GRANGE," near the city.

I desire a few experienced and reliable agents. Address

Geo. E. Brown, Box 620, Calgary, Alta.

MINNEHAHA HORSE RANCH.

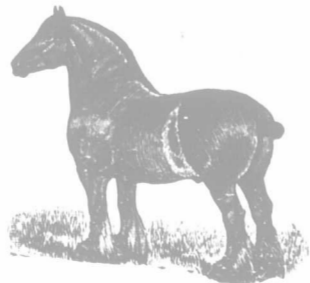
Clydesdales.

CHARMING PRINCE, winner of sweepstakes at Calgary Spring Horse Show, 1903, heads the stud.

REGISTERED MARES, many of them from noted prizewinning sires.

R. W. Meiklejon, Cochrane, Alta.

WHY NOT HAVE THE BEST?



A lifetime's experience in buying and a thorough knowledge of what breeding and individuality is needed to produce the best horses are two of the reasons for our firm's success. We are bringing to America stallions that have proven of value before importation, and cannot help but do so here. See our stock and its record.

Alex. Galbraith & Son, Brandon, Man.

In answering any advertisement in this issue, kindly mention the FARMER'S ADVOCATE.

and increased by judicious feeding, the point where cost of production begins to exceed the value of the meat produced, marks also the time when the gain has become one of clear fat, the storing of which consumes the lean tissue at the expense of tenderness and flavor of the meat. It is true, therefore, of the Hereford, and of other breeds approximating his thrift, that they make the very best beef known to the epicure at the least cost.

It is high time that intelligent cattlemen quit the barbarous squander of priceless flesh through the parsimony of the roughing process as it is generally practiced, where animals are compelled to consume summer's flesh to eke out a miserable winter's existence. It is not only a wicked cruelty, but it is foolishly unprofitable—a veritable flying in the face of Providence. Its counterpart is seen on corn-belt farms, where thoughtless soil-robbers tempt Providence, throwing away or squandering those products which nature has provided to prevent the aforesaid criminal waste of flesh, and while preserving the same, converting for the soil that which will restore and enhance the fertility of its virginity.

Samuel Weaver, on his Illinois farm, makes two-year-old draft fillies and colts weigh a ton, not once but year after year, and horse-buyers after tempting them away from him, have worked on their teeth to make them show an older mouth, and sold them as fours. These weights were made with centuries-old draft blood as a foundation; then the colts were sheltered from heat and insects in summer, and from cold and storms in winter. They had the run of permanent pasture daily in winter, nightly in summer, supplemented with good hay, a moderate but regular grain ration and never-failing pure water. It is certain that these big babies consumed less feed than others similarly bred that were roughed till four and then grain-forced a year, selling as fives at 16 cwt., after all the kinks that starvation had not indelibly impressed had been fed out.

Yea, verily! The blood of our great breeds of improved domestic animals is a bounteous gift of the Almighty, but man is responsible for their environment. It behooves teachers to beware lest grace be rejected, and Deity charged with shortcomings.

Champion Clydesdales BY Clydesdale Champions

FOR THREE SUCCESSIVE YEARS

GRAHAM BROS.

Have won the Clydesdale Stallion Championship at the International, Chicago, and similar honors at Toronto. : : :

1904 Baron Sterling,
Sire Baron's Pride.

1903 Cairnhill,
Sire Ethiopia.

1902 Young McQueen
Sire McQueen.

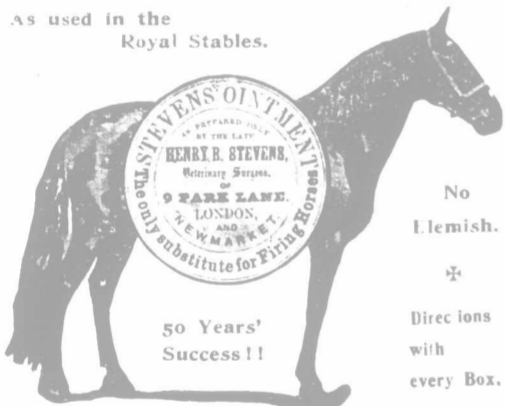
Also a multitude of other important prizes.

We have select stallions and mares to sell, winners here and in Scotland among them. We can offer more Sons and Daughters of Baron's Pride than any other American firm. Stallions to get pure-breds. Stallions to get grades. Mares for all. Prices are low—any single breeder can afford them. Correspondence solicited. Catalogue on request.

GRAHAM BROS., - - - - - Claremont, Ontario, Canada.

IT IS ALIVE!

As used in the Royal Stables.

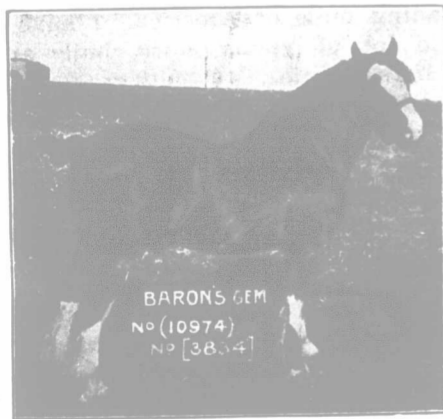


Stevens' Ointment

No Hemorrhage.
* Directions with every Box.

As used in the Royal Stables, is alive with energy in curing Spavin, Ringbone, Curb, etc., and all enlargements in Horses and Cattle. Go by the Book.

THE MARTIN, BOLE & WYNNE CO., Western Agents, Winnipeg, Man.



Craigie Mains Clydesdales and Shorthorns.

FOR SALE:

Clydesdale Stallions from 2 to 7 years old, also some good bargains in fillies and mares. Over forty to select from, all of A1 breeding.

Shorthorns.—A few extra choice heifers and one richly-bred young Cruickshank bull, sired by the noted Clipper Hero.

A. & G. MUTCH, Lumsden, Assa.

WORMS in HORSES, CATTLE and OTHER ANIMALS

It is wonderful the result produced by giving

St. John's Worm Powders

They act very quickly and expel worms, bots, etc. These powders are the ideal thing for worms in horses.

SOLD BY ALL DEALERS.

THE MARTIN, BOLE & WYNNE CO., Sole Proprietors, Winnipeg, Man.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

QUESTIONS AND ANSWERS. Veterinary.

LUMP JAW.

I have a young cow, has a hard lump about the size of a hen's egg on her face, at the corner of mouth.

Ans.—Have lump removed as quickly as possible. Better employ a V. S. V.

ABNORMAL GROWTH.

I have a heifer calf in good condition; eats well; has on under side of neck a growth resembling bunches of grapes. On letting her out to drink the exercise caused the growth to discharge freely.

Ans.—The heifer has an abnormal growth, which should be removed as quickly as possible. A V. S. had better be employed to do it. V.

STIFF LEG.

Five-year-old mare stiff on off hind leg; all right when outside, but when in stable, standing over in stall, she is very stiff. We noticed her about two years ago, but very slightly then. She seems healthy.

Ans.—It is impossible to tell without seeing the case what is the cause of stiffness. A veterinary surgeon should be consulted. V.

INDIGESTION.

I have a cow suckling a calf. She has quit milking, and stands humped up and shivering; refuses to eat anything but roots.

Ans.—Your cow is suffering from indigestion. Give her 2 lbs. sulphate of magnesia; after 24 hours have expired, give 1 pt. raw linseed oil; also the following powders: 2 drams nux vomica, twice a day, night and morning. Will have to give the powder in a drench. V.

QUARTER-CRACK.

I have a colt coming three; I worked him a little last year. He has a crack on his hind foot, up almost to the hair.

Ans.—If not too close to the hair, cut across the top of the crack, to prevent crack from extending further up. Apply a blister round the top of hoof. I would recommend for blister, iodide of mercury, 1/2 dram; cantharides, 1/2 dram; lard, 6 drams. Keep hoof soft with oil. V.

ECZEMA.

I have a mare in foal, time up April 24th. She is very thin. Little lumps come on her shoulders, but do not break out; has an irritation in her hind legs; keeps biting them when standing in stable; seems to be daudruff on skin, but not broken out. W. M.

Ans.—For legs, wash with soap suds; rub dry; apply a corrosive sublimate solution, 1 to 1000, once a day. Internally, give 3 grains of arsenic once a day for one week; also a dram of nitrate of potash night and morning, for a week, in feed. V.

MILK FEVER NOT A GERM DISEASE.

I would like your opinion as to the safety of using a box stall for a cow due to calve in March, where a cow had milk fever last August. I have always kept this stall for cows due to calve, as it is warm and dry. Nothing was done except to clean out the bedding, towards disinfecting the stall. Have heard that milk fever germs will remain. C. B.

Ans.—There would be no danger in using the box stall, as milk fever is not caused by germs. Milk fever, where calves are allowed to run with their mothers for two or three days, and the udder not completely emptied, is almost unknown. Try that plan this time, or if you remove the calf, do not milk out clean for three days, and you need have little fear. Kindly send us account of the case you had, telling how cow was treated before disease developed, and what treatment was given for the disease. Milk fever has been largely robbed of its terror since the air treatment has proven so happily effective. Filling the udder with pure oxygen, or with common air, by means of a bicycle pump and common milk siphon, does the business of a cure within an hour or two without any medicine; but, of course, prevention is better than cure, and the course indicated is the simplest.

HORSE OWNERS! USE

GOMBAULT'S
CAUSTIC BALSAM.
A safe, speedy and positive cure. The safest. **Best BLISTER** ever used. Removes all bunches from Horses. Impossible to produce scar or blemish. Send for descriptive circulars.



THE LAWRENCE-WILLIAMS CO., Toronto, Can.

Lump Jaw
Save the animal—save your herd—cure every case of Lump Jaw. The disease is fatal in time, and it spreads. Only one way to cure it—use
Fleming's Lump Jaw Cure
No trouble—rub it on. No risk—your money back if it ever fails. Used for seven years by nearly all the big stockmen. Free book tells you more.

Spavin and Ringbone
Once hard to cure—easy now. A 45-minute treatment does it. No other method so easy—no other method cures.

Fleming's Spavin and Ringbone Paste cures even the worst cases—none too old or bad. Money back if it ever fails. Free illustrated book about Lump Jaw, Spavin, Ringbone, Splint, Bog Spavin and other stock ailments. Write for it.

FLEMING BROS., Chemists,
46 Front Street, West, Toronto, Can.

\$100 REWARD
for any case of colic, curb, splints, contracted or knotted cords, recent shoe boils, splints or callous that cannot be permanently and positively cured, if directions are followed, by
TUTTLE'S ELIXIR.

It relieves and cures Spavins, Ring Bone, Cuckle Joint, Scratches, Grease Heel, Founder, Sore Shoos and Shoulders, Bruises, Wire Cuts, Collar and Saddle Galls, Pneumonia, Distemper, Choked Places, etc. Used and endorsed by Adams Express Co., Chicago Fire Department and others. Tuttle's American Worm Powders never fail. Tuttle's Family Elixir stops the pains and aches of mankind instantly. Our 100-page book, "Veterinary Experience" free.

Tuttle's Elixir Co., 66 Beverly St., Boston, Mass.
Beware of all other Elixirs. Tuttle's is the only genuine. Avoid all blisters; they are only temporary relief.

LYMAN, KNOX & SON, AGENTS,
Montreal and Toronto, Canada.

FOR SALE: The Clydesdale Stallion FITZPATRICK 3951.
Four years old bay; face one fore and both hind feet white. He is a sure foal-getter, beautifully put up, showy, of good disposition and broken to harness. Communicate with
WM. MARTIN, or J. W. IRWIN,
811 Union Bank, Box 15,
WINNIPEG, MAN. EMERSON, MAN.

WANTED
Five Good Stallion Salesmen
Experienced in selling to farmers; references necessary. Apply, stating salary expected, to
"H. K." care of Farmer's Advocate,
WINNIPEG, MAN.

Clydesdale and Hackney Stallions
On four horses shown at the Dominion Exhibition this year, I won 8 prizes—two championships, two diplomas, three firsts and one second; also at Calgary the gold medal given by the Clydesdale Society of Great Britain for best Clydesdale, besides numerous other first prizes. If you want a young horse that will make you money, and at a right price, write or see me.
WILL. MOODIE, De Winton, Alta.

STALLIONS FOR LAND.
Fifty Percheron, Shire and Hackney Stallions to trade for good land or city lots in W. stern Canada. Won more Premier Championships at World's Fair, St. Louis, than any other exhibitor; ages 3 to 7 years, good colors, choicest breeding.
LEW W. COCHRAN,
CRAWFORDSVILLE, IND.

Calgary Business College
Open all the year round for thorough commercial instruction. TOUCH-TYPING, STENOGRAPHY, BOOK-KEEPING, etc., etc. For terms apply
W. H. COUPLAND,
BOX 285. CALGARY, ALBERTA.

Measure Yourself
for a pair of our \$4.50 made-to-order Pants, equal in quality and fit to any sold at \$8.00—this saves you a third of actual price. Write for our Spring patterns and self-measuring chart at once.
THE WINNIPEG TAILORING CO.,
159 Smith Street. Winnipeg, Man.

COMBINATION SALE

OF

Shorthorn Cattle

BY AUCTION AT
OAK LAKE, MAN.,

Wed., March 15th, '05

17 BULLS, 17 COWS
AND HEIFERS.

The contributors are all old-established breeders of Shorthorns: Messrs. Lang, Gordon, Cameron, Gillespie and others of the district. For catalogue giving particulars regarding the stock to be offered, write A. CAMERON, Oak Lake, or

T. C. Norris, Griswold, Man.
AUCTIONEER.

GREAT SPRING SALE

OF

HORSES

Stock-Yards, CALGARY,

15th, 16th and 17th MARCH

Entries are coming in now for this sale. We anticipate a great three days' sale. We will have the horses—heavy horses and small ponies and unbroken range horses—horses to suit everybody.

Remember the date, and watch this space for list of entries.

THE ALBERTA STOCK - YARDS COMPANY, LIMITED,
P. O. BOX 846, CALGARY.

I will sell by PUBLIC AUCTION, in the town of BELMONT, on
C. N. R., on

THURSDAY, MARCH 16TH, 1905,
the following property:

CLYDESDALES

One registered stallion, rising 3, sire Prince Charming; one grade stallion, rising 6; also a number of grade horses.

SHORTHORNS

Five registered Shorthorn cows, two registered yearling heifers, four registered young bulls; also a number of grade cattle.

TERMS OF SALE—Approved joint lien notes on horses. Approved joint notes on cattle. Half of price on Nov. 1, 1905; balance on Nov. 1, 1906, with interest at 7 per cent. per annum.

WM. MAXWELL.

MAKE MONEY AT HOME

by taking subscriptions for the FARMER'S
ADVOCATE. For terms, etc., apply at once to

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

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

GOSSIP.

EMERSON GRAIN-GROWERS' GIVE
THEIR M. P. SOME WORK.

The Emerson branch of the M. G. G. Asso. met on Saturday, Feb. 15th, to hear report of delegates to Brandon Convention. Most of the members were present. After hearing Messrs. Curran & Knowles' report, they unanimously sustained the resolutions, passed, and by a standing vote pledged themselves to support the Central Association in their suit of Ferris vs. C. N. R. Co., also unanimously support the Central Association in their stand on the lumber questions, and instructed the Secretary-Treasurer to write the member, Mr. St. Cyl, stating the stand taken for free lumber and just measurement, and that we are actively circulating petitions to be sent to him, and that we expect over three hundred names from this point for free lumber and just measurement.—T. W. Knowles, Sec.-Treas.

The following members of the Cattle Breeders' Association were prominent at the recent convention in Winnipeg:

S. Rankin, Hamiota; Wm. Chalmers, Hayfield; J. E. Marples, Deleau; James Duthie, Hartney; J. A. Elton, Winnipeg; James Moore, Beresford; R. A. Cox, Beresford; Wm. Henderson, Morden; B. Parker, Morden; T. C. Wilson, Snowflake; J. C. Stewart, LaRiviere; W. Hardy, Roland; J. A. Finlay, Oak Bluff; J. A. Young, Cypress River; J. G. Campbell, Cypress River; J. G. Washington, Ninga; W. J. McComb, Beresford; R. B. Thompson, Beresford; W. S. Henderson, V. S., Carberry; W. Swenerton, Carberry; Wm. Black, Hayfield; K. C. Bedson, Winnipeg; W. M. Oughton, Arden; M. S. Smith, Boissevain; C. J. Thompson, Virden; M. E. Sutton, Roland; T. E. M. Banting, Banting; Walter James, Rosser; E. R. James, Rosser; A. C. Howkins, Swan Lake; D. Munroe, Winnipeg; R. C. Henderson, Culross; R. J. Caskey, Macdonald; Hugh McClelland, Emerson; L. McArthur, Longburn; Geo. Allison, Burbank; D. H. Perdue, Souris; R. Clowes, Austin; J. E. Smith, Brandon; John Wishart, Portage la Prairie; J. J. Weightman, Weathall; F. H. H. Lowe, Ninette; J. R. Rankin, Hamiota; J. A. Stevenson, Carman; W. H. Galbraith, Hartney; W. G. Livingstone, Stony Mountain; T. W. Robinson, Manitou; Duncan Stewart, Westbourne; D. Smith, Gladstone; Ralph Lemieux, Somerset; N. F. Hinds, Portage la Prairie; W. J. Lumsden, Brandon; J. R. Dasler, Crookston; G. L. Ferguson, Souris; Walter Beachell, Rosser; J. Graham, Carberry; Waldo Greenway, Crystal City; W. H. English, Hartney; H. O. Ayearst, Mount Royal; Percy Hopkins, Stoughton, Assa; H. V. Clendinning, Hartney; Thos. Jasper, Harding; J. G. Barron, Carberry.

ARGENTINE SHEEP.

The loss suffered by the Argentine estancieros by bronchial worms every year is enormous, and certainly not realized in this country. That well-known authority, Mr. Herbert Gibson, has recently been writing upon this important subject. He has pointed out most clearly that it is not the breed of sheep that is to blame, but simply the method of management. "There is nothing wrong with the breeds, etc., but everything wrong with the breeder."

Practically all over the Argentine, the breeder lambs his ewes from boyhood to senility in the same sheep-soiled paddocks. The remedy urged is the extended use of the plow. It is suggested that instead of endeavoring to combat the evil by means of purchase of fresh breeds to stud sheep, a portion of the grazing ground should be plowed up and resown, and thus get fresh soil, etc.

In proof of the heavy loss, the writer points out that New Zealand, with one third of the sheep Argentine has, exports nearly 50 per cent. more carcasses. The Argentine, which exports about 5 per cent. of carcasses of its stock of sheep, and counting those used for home consumption, finds her stock decreased. New Zealand, on the other hand, exports nearly 25 per cent. of her capital stock of sheep, and feeds herself in addition, and yet finds the capital stock of sheep increased at the end of the year. Not a half of Argentine's annual crop of lambs, it is said, supply either the local or the foreign meat trade, or pass into the breeding corral.

WHICH SEPARATOR?

It is to your advantage to get the cream separator that will do the best work for you at the least expense. The

EMPIRE

Easy Running
Separator

is the simplest in construction, the most perfect in operation. It has the fewest parts to clean, the fewest to wear out. It gives less trouble and more satisfaction than any other. All we ask is a chance to show you why. Send for name of nearest agent and free catalogue.

Empire Cream Separator Co.,
Bloomfield, N. J.

Ontario Wind, Engine &
Pump Co., special selling
agts., Winnipeg, Man.



Farmers, why not improve your stock by buying a

RED POLLED BULL?

The best for beef and butter. We have some good ones for sale, and the price is right.

H. V. CLENDENNING, Bradwardine, Man.

Poplar Grove HEREFORDS

Western Canada's
leading herd.

SHEPHERD PONIES
J. E. MARPLES
DELEAU, MAN.

Prices Reasonable. Terms Easy.
Correspondence Solicited.

P. F. HUNTLEY,
Breeder of Registered
HEREFORDS

P. O. box 154,
Lacombe, Alta., N.-W. T.
Inspection of herd invited. Farm two miles
east of town.

SCARCLIFFE FARM HEREFORDS

YOUNG BULLS
FOR SALE.

WRITE AT ONCE
FOR PRICES.

BING & WILSON,
GLENELLA, MAN.

JOHN T. PARKER, Box 11, Lethbridge, Alta.

BREEDER OF

Alberta Herefords

PRICES RIGHT. TERMS EASY.

Aberdeen-Angus
CATTLE.

Herd headed by imported Leader of Dalmeny. My cows are sired by the leading bulls of America. I have a fine lot of young cows, bulls and heifers for sale. My bulls are from 12 to 22 months old. Come and see my cattle, or write for prices.

M. C. Willford, Harmony, Minn.

TERRA NOVA STOCK FARM

HERD OF

ABERDEEN-ANGUS
CATTLE.

All the best families represented. Some fine young bulls for sale from both imported and home-bred cows. Prices reasonable.
S. Martin, Rounthwaite, Man.

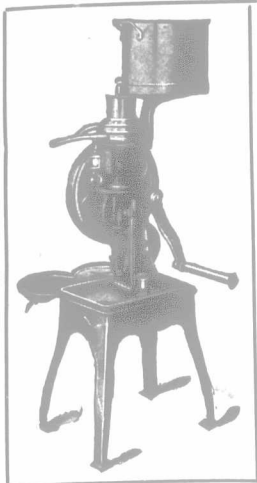
W. CLIFFORD

Breeder of Aberdeen-Angus Cattle,
has a herd of 40 head on his farm, 1/2 mile from
AUSTIN STA., MAN.

FOR SALE—Bulls from 3 to 18 months old; also a few choice heifers. All from imported stock or the best strains in Canada and the United States.

IT ALWAYS PAYS TO
Advertise in the Advocate

De Laval Separators



ARE INDEPENDENT OF MILK TEMPERATURES.

Cold milk puts the other kind "up against it," but the perfection of the "Alpha Disc" and "Split Wing"—the world-famous DE LAVAL skimming device—enables DE LAVAL SEPARATORS to handle milk at low temperatures without loss in the skim milk and clogging of cream in the bowl.

550,000 in use—more than ten times all other makes combined.

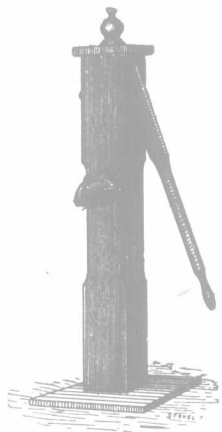
WRITE FOR CATALOGUE.

The De Laval Separator Co.
248 McDermot Ave., WINNIPEG, MAN.

Montreal, Toronto, New York, Chicago, Philadelphia, San Francisco.

DO DOLLARS COUNT WITH YOU?

If so, we can interest you.



Cater's Pumps Star Windmills

Write for new price list. Address

BRANDON PUMP & WINDMILL WORKS,
H. Cater, Proprietor. Box 410, Brandon, Man.

CARNEFAC

GIVES QUICK AND PERMANENT RESULTS

WEST L'ARDOISE, CAPE BRETON, Jan. 27th, 1905.
THE CARNEFAC STOCK FOOD CO., Toronto:

Dear Sirs,—

Enclosed find balance due on "1 pail" of Carnefac—which duly arrived here Dec 24, '04. Must say that Carnefac has proven very satisfactory—as a matter of fact, do not think that I shall ever be without it again. I have recommended it, and you shall certainly hear from me when this pail is empty.

Yours truly,

(Signed) JEFFREY MAUBOURQUETTE.

The above is but a sample of letters we receive every day from farmers to whom we have sent 25 lbs. of CARNEFAC on trial. A few points on this is worthy of special notice, namely, the small quantity, short time used, trifling cost, and the satisfactory results. If any of those are points that concern you in the feeding of your stock, a few weeks' use of CARNEFAC will satisfy you that it does all claimed for it. We would particularly invite you to try it if you have any stock seriously out of condition.

The CARNEFAC STOCK FOOD COMPANY,
Winnipeg, Man. 65 Front St. E., Toronto.

GOSSIP.

IMPROVING GRAIN BY DRYING.

In the business of preserving and marketing grain, especially corn, no method or process of treatment, in late years, has come into such general use and such favorable notice as that of artificially curing and drying grain, commonly called "kiln-drying."

This is due to a combination of several causes. During the past three years unseasonable frosts, cold and rainy periods, have been responsible for large crops of immature, soft grain, and a short supply of merchantable grades. The consumptive demand has been unusually large, depleting stores of old grain before the new crops were merchantable, and forcing the early marketing of new crops.

An enormous foreign demand, though diminished somewhat by the arrival of many cargoes in bad condition, still further absorbed the best grain available, and it became imperative that artificial methods of curing should be used.

Necessity, the mother of invention, compelled the production of machinery for the purpose. Old devices were revised and new ones cunningly invented to meet the emergency, and so successful has been the demonstration of the utility and profit in operation of grain driers, that they are to-day established as a necessity in the handling of grain.

Many of the principal elevator companies are equipped with drying appliances, and others are preparing to install the apparatus. As a result, "kiln-dried corn" is a regular commodity, and the demand for it already exceeds the supply.

The process of "kiln-drying" grain,—of making new grain old,—is simply to blow warm air through it, till dry, then cold air to cool it. It is not expected that all the moisture will be evaporated. That would not only be expensive, but wasteful and unprofitable. Grain, old and "bone-dry," contains about 10 per cent. of moisture. Old No. 2 corn frequently has 12 per cent., and corn with 12 per cent. will carry safely to South Africa and back. It is, therefore, expected that 12 per cent. to 14 per cent. of moisture will be left in the grain after drying, and only the excess above that amount will be evaporated. It is this excess which makes trouble, and it sometimes amounts to 10 or 12 per cent. of the total weight of the grain.

It has been found that a temperature of 140° to 160° of heat will dry efficiently, at the same time leaving the dried grain of good appearance, not shriveled or cracked. A high temperature, up to 200° to 210°, has been used at times; but this renders the grain brittle, causing undue breakage in handling, and imparting an odor of baking. Contact of the grain with hot metal has proved ineffectual and injurious to the grain and must be avoided.—[Grain Dealers' Journal.]

WHEN ALL ELSE HAD FAILED

Dodd's Kidney Pills Cured His Bladder Troubles.

James Atwell Proves that Lumbago and Bladder Troubles are Caused by Diseased Kidneys.

Campbellford, Ont., March 6.—(Special.)—That Lumbago and Bladder Trouble are both caused by diseased Kidneys has been shown in the case of Mr. James Atwell of this place. Mr. Atwell says:

"I had Lumbago and Bladder Trouble. In passing my urine would hurt me so as to almost cause tears to come to my eyes. I used medicines and a bandage prescribed by my doctor, but got no relief. Then I tried Dodd's Kidney Pills and they cured me for good and all. I will never be without Dodd's Kidney Pills in the house."

Cure your Kidneys with Dodd's Kidney Pills and they will strain the causes of Lumbago, Rheumatism, Dropsy or Bladder Troubles out of the blood.

A WARNING NOTE FROM THE BACK.

People often say, "How are we to know when the kidneys are out of order?" The location of the kidneys, close to the small of the back, renders the detection of kidney trouble a simple matter. The note of warning comes from the back, in the shape of backache. Don't neglect to cure it immediately. Serious kidney trouble will follow if you do. A few doses of

DOAN'S KIDNEY PILLS,

taken in time, often save years of suffering. Mr. Horatio Till, Geary, N.B., writes:—"I suffered for about two years with kidney disease. Had pains in my back, hips and legs; could not sleep well, and had no appetite. I took one box of Doan's Kidney Pills, and they cured me. The pains have all left, and I now sleep well."

Price 50 cents per box, or 8 for \$1.25. All dealers, or

THE DOAN KIDNEY PILL CO., Toronto, Ont.

HIGH PARK GALLOWAYS

At present I am offering for sale several bulls from 8 to 20 months old, and a few heifers from 1 to 3 years old, prizewinners and bred from prize-winning stock. Will sell at right prices, and satisfaction guaranteed. Robt. Shaw, Brantford, Ont. Sta. & P. O. Box 294.

Owing to the loss by fire of a great portion of our winter's feed, we find it necessary to reduce our stock. For the next month we will sell registered

Shorthorn Bulls and Females,

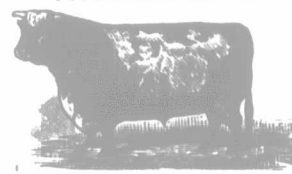
Of all ages, at greatly reduced prices. Write for particulars.

Walter James & Sons, Rosser, Manitoba

Live stock is the sure foundation of Agriculture
Sittyton Stock Farm.

First Prize and Diploma Herd at Regina. SITTITON HERO AT HEAD OF HERD. SITTITON HERO 7-30822 won first and sweepstakes at Winnipeg as a yearling, a two-year-old and as a three-year-old; first for bull and two of his get in 1901; third at Toronto same year and second at the Pan-American, being on beaten by the \$5,000 (imp.) Lord Banff. Young Bulls for Sale; also Cows and Heifers in Calf by Sittyton Hero. GEO. KINNON, COXTONWOOD, ASSA. A well-bred animal can be more easily raised than a scrub.

THORNDALE STOCK FARM.



SHORTHORN herd numbers 160, headed by Challenge—30462—and Royal Sailor—37071. Sixteen yearling bulls for sale, and a lot of

younger ones; also females of all ages. T. W. ROBSON, Maniton, Man.

Scotch Shorthorns

Herd headed by Royal Macgregor, an excellent stock bull and prizewinner of note. Young stock of both sexes for sale.

P. TALBOT & SONS, Lacombe, Alta.

Shorthorn Bulls, Heifers and Heifer Calves for Sale.

The get of Sir Colin Campbell (imp.)—28878—and General—30399—. Cows all ages, in calf or calf at foot. Seventy head to choose from. Three Clydesdale Stallions two and three years old. Also mares and fillies. Leicester Sheep, both sexes. Stock always on hand. m Geo. Rankin & Sons, Hamiota, Man.



Grandview Herd.

Scotch Shorthorns. Herd headed by Crimson Chief—24057—and Trout Creek Favorite. Stock for sale at all times. Correspondence solicited.

JAS. WILSON, Innisfail, Alberta. Farm 3 miles south of town.

Drumrossie Shorthorns—"Drumrossie Chief"—29832—and "Orange Chief"—52766—at head of herd. Young things for sale at all times. J. & W. SHARP Lacombe, Alta.

GOSSIP.

Mrs. Burdett, the wife of the American humorist, says that, while touring in the Scottish Highlands one summer, she was taken to a cave in which Macbeth was said to have been born. She listened to the excellent speech of her guide. At the end she said to the man, "Come, now, tell me truly, is this really the place where Macbeth was born?" The little guide smiled awkwardly. He shifted about a little. "Weel," he said, "it's one of the places."

HOW TO LIVE LONG.

"If we must die, let old age claim each of us as its natural trophy."

It has been said that it is better to be born lucky than rich, but it is, in fact, better to be born tough than either lucky or rich.

After 40, eat less and eliminate more. Drink more pure water and keep the peristaltic wave of prosperity constantly moving down the alimentary canal.

Many people suffer from too much business and not enough health. When such is the case they had better cut out business and society for a time, and come down to mush and milk and first principles.

Don't be foolish. Eat less and play more. Indulge in less fret and fume and more fruit and fun.

There are people too indolent to be healthy; literally, too lazy to live.

Work your brains and keep in touch with people. Do something for others and forget yourselves.

There is nothing so insane and detrimental to mind and health as the conversation of people on their aches, and pains, and troubles. The froth of whipped eggs is a tonic compared to it.

All our appetites are conditional. Enjoyment depends upon the scarcity.

A worker in any field, whose age is near either the shady or sunny side of 50, should consider himself in his prime, good for another half century of temperate, judicious work.

Let grandma wear bright ribbons and gaudy gowns if the colors become her, and let grandpa be as dudsish as he pleases with flashy neckties and cheerful garb. Both will be younger for it, and, besides, it is in harmony with nature.

Gray hair is honorable; that which is dyed is an abomination before the Lord.

Cultivate thankfulness and cheerfulness. An ounce of good cheer is worth a ton of melancholy. DR. G. F. BUTLER.

A-A. CATTLE AND THEIR CROSSES AS BEEF PRODUCERS.

This is the title of a pamphlet recently issued by the English Aberdeen-Angus Cattle Association, the work of Mr. Albert Pulling, the Hon. Secretary, and setting forth in detail a very distinguished record of successes scored by the comely doddies and their crosses at fat-stock shows in the kingdom during recent years. After stating these victories in detail, the writer of the pamphlet goes on to refer to animals of the breed as follows: "The records of their performances afford, it is submitted, ample evidence of the excellence of Aberdeen-Angus cattle and their crosses as prizewinning and commercial beef-producers, and it is also well known by those who breed and feed them, that they are very hardy, thrive on the poorer pastures, are easily fed and brought to maturity, and that their beef, which tops the quotations at the markets, is thus produced at a minimum of cost. These notes deal with the merits of Aberdeen-Angus cattle as beef producers, and it is as absurd to claim for them (now that they are bred so exclusively for that purpose) as it is for cattle of any other beef breed (whether beef-Short-horn, Devon, Hereford, or Sussex) that they are, as a breed, heavy milkers; originally the cows were good milkers—many still are—the quality of their milk is excellent—and their crossing with the milk breeds prove themselves to be first-rate dairy cattle and find a ready market for that purpose, especially in the north, where their merits are fully known. On this point it is only right to mention that in New Zealand and Australia, both pure-bred and cross-bred Aberdeen-Angus cows are giving a very good account of themselves as dairy cattle, and are very popular in that capacity."



Milking Time

Is the farmer's daily harvest. Unlike the raising of crops or of beef cattle the dairy account can be balanced almost daily. This enables the dairy man to know at any time whether he is getting all that he should on his investment. If the cow's food is not assimilated or is not of the right sort to make milk the results show at once in the milk pail. With these facts in view we ask every cow keeper to make this experiment.

If you have just one cow, weigh or measure the milk for ten days, then for ten days continue the same ration and add Dr. Hess Stock Food as directed; if you don't have a notable increase, sufficient to pay for the stock food many times over, your money will be refunded.

Or, if you have a herd, feed Dr. Hess Stock Food to every other cow down the line as you have them stationed; otherwise give to all cows exactly the same feed, continue this system of feeding two weeks, measure or weigh the milk of those getting the stock food, and those that don't.

These tests will show that a greater quantity of milk is produced from the same ration when

Dr. Hess Stock Food

is fed. A. Holmquist, Moorhead, Minn. says: "I fed Dr. Hess Stock Food to my dairy herd of thirty cows, one feed a day for one week, and found that the flow of milk increased five gallons per day. I then gave two feeds per day and the milk increased to ten gallons per day. To further test the Stock Food I gave up feeding it and the milk decreased the ten gallons it had gained. I now feed Dr. Hess Stock Food regularly."

It is not a condimental food, but a scientific stock tonic and laxative, the prescription of Dr. Hess (M.D., D.V.S.), that makes the grain and other foods digest properly, allowing the least possible amount of nutrition to pass off as waste, and relieves the minor stock ailments. Good alike for cattle, horses, hogs and sheep.

Dr. Hess Stock Food is sold on a written guarantee, 100 lbs. for \$7.00; 25 lb. pail \$2.00 (duty paid); smaller quantities at slight advance. Fed in small dose.

Remember, that from the 1st to the 10th of each month Dr. Hess will furnish veterinary advice and prescriptions free if you will mention this paper, state what stock you have, also what stock food you have fed, and enclose two-cents for reply. In every package of Dr. Hess Stock Food there is a little yellow card that entitles you to this free service at any time.

Dr. Hess Stock Book Free! If you will mention this paper, state how much stock you have and what kind of stock food you have used.

DR. HESS & CLARK, Ashland, Ohio, U. S. A.

Also manufacturers of Dr. Hess Poultry Pan-a-co-a and Instant Louse Killer.

Instant Louse Killer Kills Lice

IDEAL WOVEN WIRE FENCE
Saves Time, Trouble and Money.

You can sleep at night and rest assured that your stock is absolutely safe behind IDEAL fences. This fence once built on your farm will end fence troubles for you.

It is made of No. 9 steel wire. It is made with the famous Ideal lock that can't slip. It is made to last and give good service. It is made on a good common-sense basis by men who know what the farmer needs. No animal can go over or under it.

The IDEAL is a strictly first-class fence at a low price. We believe it is by long odds the best fence on the market, and want you to know all about its construction, so we ask you to write for our new catalogue explaining all about the "IDEAL" fence.

A postal card or letter will bring the catalogue to your home. It is FREE.

The MCGREGOR-BANWELL FENCE CO., Ltd., Walkerville, Ont.
MEFRICK, ANDERSON & CO., Winnipeg, Sole Agents Manitoba and N.-W. T.

BARGAINS IN SHORTHORNS

Nobleman (Imp.), a Winnipeg winner, of Nonpareil breeding, and Pilgrim (Imp.), a massive, smooth, red bull; also Nonpareil Prince, a straight Nonpareil two-year-old, winner of first at Winnipeg, 1904, and Fairview Prince, same age, another winner this year, along with

FIFTEEN YOUNGER BULLS

fit for service, is JOHN G. BARRON'S present offering for sale. Mr. Barron is crowded for room, so will dispose of heifers and cows at rock-bottom prices.

JOHN G. BARRON, CARBERRY, MANITOBA.

ADVERTISE IN THE FARMER'S ADVOCATE

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE

MAPLE SHADE SHORTHORNS



Nine young bulls fit for service. Showing the finest Cruickshank breeding.

Good Size, Quality, Flesh and Bone.

Inspection invited. Catalogues on application.

JOHN DRYDEN & SON, Brooklin P.O., Ont.

15 YOUNG BULLS



Mostly imported and from imp. sire and dam. Also a choice lot of cows and heifers.

All Scotch

ARTHUR JOHNSTON

GREENWOOD, ONT.

Pickering, G. T. R. Claremont, C. P. R.

PINE GROVE STOCK FARM

ROOKLAND, ONTARIO, CANADA.

Breeders of choice

SCOTCH SHORTHORNS

and SHROPSHIRE.

W. C. EDWARDS & CO., Ltd., Props.

JOSEPH W. BARNET, Manager.

T. DOUGLAS & SONS,

Strathroy, Ontario.

SHORTHORNS and CLYDESDALES

Present offerings: 12 young bulls of No. 1 quality, ready for immediate service; also cows and heifers of all ages. Also one imp. stallion and two brood mares. Prices reasonable. Visitors welcome. Farm one mile from town.

Spring Grove Stock Farm

SHORTHORN CATTLE & LINCOLN SHEEP.



First herd prize and sweepstake, Toronto Exhibition, 3 years in succession. Herd headed by the imported Duthie-bred bull, Rosy Morning, and White Hill Ramsden. Present crop of calves sired by Imp. Prince Sunbeam, 1st Toronto, 1903. High-class Shorthorns of all ages for sale.

Also prizewinning Lincoln, Apply

T. E. ROBSON, ILBERTON, ONT.

Barren Cow Cure makes any animal under 10 years old breed, or refund money. Given in feed twice a day. Mr. J. B. Ketchen, Dentonia Park Farm, Coleman, Ont., says: "Have used your Barren Cow Cure very successfully on a very hard case. Particulars from

L. F. SELLECK, Morrisburg, Ont.

GOSSIP.

At the annual sale last week of Berkshires from the herd at Biltmore Farms, Biltmore, N. C., 49 head sold for \$5,172, an average of \$106; highest price, \$400; lowest price, \$30.

In the olden days of whitewashed chapels, a minister went into the Little Bethel and found the workmen, with their caps on their heads, working their white-washing brushes up and down the walls to the tune of "Pop Goes the Weasel." He was shocked. He said: "Take your caps off, and, if you must sing, sing hymns." The next day but one he found the brushes moving very slowly on the wall to the tune of "Before Jehovah's Awful Throne," and he saw that very little work had been done; so he said to the workmen: "Put on your caps and get back to the old tune, or we shan't have the place ready for Sunday." No doubt the whole incident passed without any sense of humor between them.

THE SIGNIFICANCE OF SEX CHARACTERISTICS.

By J. McCaig.

Apart from a knowledge of breed characteristics and differences which are valuable and necessary to the breeder of pure-bred stock, there is much to learn from sex characteristics and differences. An animal may be just as badly out of character with respect to sexual properties as with regard to breed properties, and this defect is no less a hindrance to successful breeding.

The practical and important thing to remember is that there is such a thing as male and female type, and that we should study and observe to get a just appreciation of these. In this view the features that go to make up male expression must not only not be undervalued, but should be sought for and insisted upon. Heavy manes in horses, strong horns in the horned breeds of sheep, heavy crests in bulls, and all such features are in order, and their absence is a defect, as they bespeak appropriate male constitution. If the scientist were to translate such inappropriate lack of male properties into a practical breeding principle, he would say that the lack of organic capacity in such male to develop exuberant features would indicate a want of power in him to produce variation in the offspring; in other words, to STAMP HIS OFFSPRING with special character. This scarcely needs scientific interpretation to the experienced breeder, as he never fails to choose a sire of strong male individuality if he wants to transform his herd or flock.

A female may be similarly out of character as respects sex characteristics. In contrast to the male, she should be marked by a characteristic simplicity and unattractiveness, or perhaps we should say plainness. This difference has strong confirmation in the popularity of a string of exhibition males over a string of females.

This difference has its origin in what may be called natural selection rather than in sexual selection. In a state of nature there is obviously an advantage in the plainness or want of prominence in the pregnant or brooding female, if we extend the discussion to birds. There is another difference which may be referred to the same principle. Besides being more attractive, males are usually stronger and more active than females, which is due to the offices of defence and nourishment devolving on the males. This is no longer a consideration with animals under domestication. It is still the case, however, that the property of QUIETNESS AND PASSIVITY that would be no fault in a female would be out of character in a male. A sluggish stallion or an awkward or ambling bull or ram would not be chosen by an experienced breeder for a sire. Thus it appears that the differences that have arisen between the sexes in their evolution have become permanent, and are important principles in breeding practice.

In noting a few of the qualities that belong to males and females characteristically above, it is not the aim of the writer to give an exhaustive list of these, but to establish a belief in their fundamental utility and importance.

Why do "Page Fences Wear Best"?

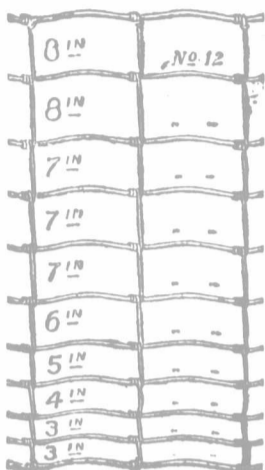
BECAUSE—They are made of wire 50% stronger than Common Spring Steel Wire, so called.

BECAUSE—The horizontal wires are **COILED**. Mind you, **COILED**, not **CRIMPED**. A **COIL** gives several times the elasticity that does a crimp. This **COIL** is what enables Page Fences to do with posts long distances apart.

Our prices are very low, as you can judge for yourself when we tell you that we can furnish an 8-wire, **HIGH CARBON FENCE**, for not to exceed 50 cents per rod. All of our other styles in proportion, some for less money and some more.

We have all kinds, some close mesh (19 bar, 57 inch), some light (5 bar, 36 inch), some heavy (all No. 9 gauge.)

The railroads use Page Fencing in large amounts. Practically every road in Canada is using it. Look at this list, the first four of which each have from 100 to 1,000 miles in use, and the others each have from 10 to 100 miles:



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| Canadian Northern Ry. | Toronto, Hamilton & Buffalo Ry. | Bay of Quinte Ry. |
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| Quebec Southern Ry. | Cape Breton Ry. | |

Now, you know railroad corporations do not buy large amounts of goods, and keep on buying the same kind year after year unless they prove by use to be good value. Railroad men now acknowledge that **PAGE FENCE** is the best and cheapest.

NOTE—All Page Fences are now painted **WHITE**—our special distinguishing mark. Get the **WHITE** brand and you will have our make of fence.

Also Page Gates, from \$2.50 up. Ornamental Lawn Fence, from 25c. per running foot. Also Poultry Netting.

THE PAGE WIRE FENCE CO. LIMITED

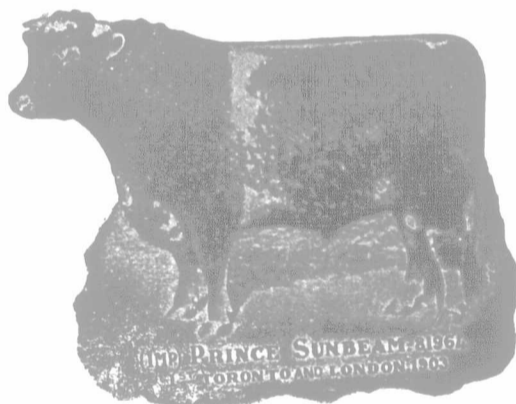
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BRANCHES: MONTREAL TORONTO ST. JOHN WINNIPEG

"Page Fences Wear Best."

TROUT CREEK SHORTHORNS



A few very choice bulls and females, both imp. and home-bred, with superior breeding.

Send for Catalogue.

JAMES SMITH, W. D. FLATT,
om Manager. Hamilton, Ont.

OGILVIE'S AYRSHIRES



Present offering in the Ogilvie herd includes two or three of the very best young bulls and heifers ever offered in this country, including the winning senior bull and heifer calves at Toronto, London and Ottawa last fall; also the winning yearling heifers, served to calve in August and September next. Also a big choice of young cows.

ROBERT HUNTER, MANAGER, LAOHINE RAPIDS, QUE.
Farm near Montreal. om One mile from electric cars



RUPTURE CAN BE CURED

at home WITHOUT Pain, Danger, or Time From Work by the **WONDERFUL DISCOVERY** of an eminent Toronto Specialist. Conductor **W. H. GREAVES, Medicine Hat, N.W.T.**, whose portrait here appears, was ruptured 5 years, and is cured by the great Discovery of the Rupture Specialist, **Dr. W. S. Rice, 24 East Queen St. (Block 21), Toronto, Ont.** To all Ruptured sufferers, who write at once, Dr. Rice will send **FREE**, his **BOOK, "Can Rupture be Cured,"** and a **FREE TRIAL** of his **DISCOVERY**. Do not wait, write to-day.

Blacklegine
BEST AND MOST CONVENIENT VACCINE FOR BLACK LEG.
PASTEUR VACCINE CO CHICAGO SAN FRANCISCO

14 Shorthorn Bulls

Choice Scotch-bred ones, for sale at moderate prices. For particulars, apply to

J. & W. RUSSELL, Richmond Hill, Ont.
George St. trolley car from Union Station, Toronto, passes the farm. om

PLEASE DON'T imagine because we sold some cattle at Hamilton that we have none left to offer.

WE HAVE some good **SHORTHORNS**, both male and female.

IF YOU want any, write us specification, and we will tell you frankly whether we have it.
JOHN CLANON, H. CARGILL & SON,
Manager. om Cargill, Ont.

MAPLE LODGE STOCK FARM

1854.

Eight very choice young bulls, of the best breeding and from first-class milking cows. A few handsome heifers also for sale, and a few Leicesters. om

A. W. SMITH, Maple Lodge P.O., Ont.

TRIEDINNOCK AYRSHIRES

PRIZEWINNING imported bulls from the best milking strains in Scotland head the herd of 75 head. **Winings for 1903 at Toronto and Ottawa; The gold medal and 4 first prize herds; 35 prizes in all—18 firsts, 6 seconds, 5 thirds, 9 fourths.** In the Pan-American milk test, the 3 first Ayrshires were from this herd. **Quality, size, milk and tests is our aim.** Young bulls and heifers for sale. Price and particulars, apply to om
JAS. BODEN, Manager,
St. Anne de Bellevue, P. Q.
G. T. R. and C. P. R. stations on the farm.
2 1/2 miles west of Montreal.

140 JERSEYS - 140

to choose from. 74 First Prizes, 1904. We have what you want, male or female.

B. H. BULL & SON, Brampton, Ont.
Phone 68. om

MOUNT FARM BERKSHIRES

CHOICE-BRED STOCK

now for sale;
PAIRS SUPPLIED NOT AKIN.

Inspection requested, and correspondence invited and promptly answered.

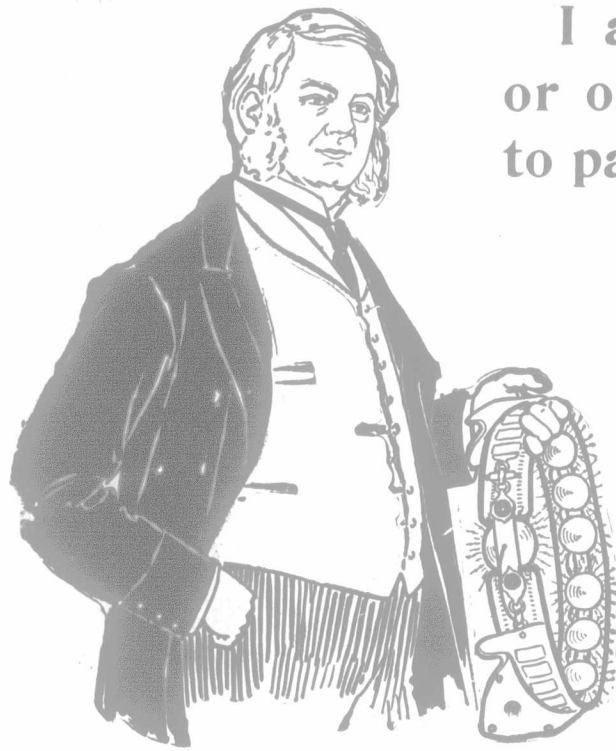
C. G. BULSTRODE,
Mount Farm. QU'APPELLE, ASSA.

T. E. M. BANTING
BANTING, MAN.

Breeder of Prize Tamworths. Some fine young stock for sale.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.

Men Try my Cure Free!



I ask not one penny in advance or on deposit. I accept your word to pay me when cured.

I know the terrible mental torture of the nervous debility sufferer, but I also know his gratefulness when restored, and that is the basis for my free treatment until cured. Can any such sufferer come to me and be made a man among men, and then refuse to pay a few dollars for aiding him to become so? I say, no, and my wonderful success backs up my judgment. I wish that every sufferer knew that the effect of Electricity upon the weak, debilitated man is the same as rain upon the parched field in summer. He may be debilitated from varicocele, losses, impotency; may have confusion of ideas; fear to act and decide; gloomy forebodings; timid and fretful; avoid friends and company; without confidence in himself to face the slightest responsibility, and let him properly apply Electricity for but a few hours and all these symptoms vanish—giving way to glowing, soothing vigor through every weak part. A few weeks' to a couple months' use of this treatment banish them forever, and make strong, confident, manly men out of the puniest weaklings. For nearly 40 years I have treated

and restored weak men through my world-famed invention, and am still doing so with greater success than ever. In fact, I do not expect to fail in any case of this kind, and therefore as men are more or less skeptical I will continue to give my Hercules

Dr. Sanden Electric Belt Free Until Cured

and as said not one cent is to be paid in advance or on deposit. Call or write and get the belt and use, say for 60 days, and if cured pay me price of belt only—many cases low as \$4—if not cured return the belt and the deal is ended. But I know what the belt will do, and will take the risk of my pay when you are cured. I also give my belts on same terms in Rheumatism, Lamé Back, Stomach, Kidney and Liver complaints, etc. Think of a remedy that has stood every possible test for nearly 40 years—the only one ever successfully given to sufferers on its own merits!

As the originator and founder of the electric belt system of treatment my 40 years' success is the envy of many, and my belts of course are imitated. (What good thing is not?) But my great knowledge to advise and direct my patients is mine alone, and free to all who use my belt until cure is complete.

Call or send to-day for my belt. Or if you want to look into the matter further, I have the two best little books ever written upon Electricity and its medical uses, and send them free, sealed, upon request.

Dr. C. F. Sanden, 140 Yonge St., Toronto, Ont.

Office Hours: 9 to 6. Saturdays until 9 p. m.
Largest Electric Belt Establishment in the World.

Nine Nations

Now Use Liquozone. Won't You Try It—Free?

Millions of people, of nine different nations, are constant users of Liquozone. Some are using it to get well; some to keep well. Some to cure germ diseases; some as a tonic. No medicine was ever so widely employed. These users are everywhere; your neighbors and friends are among them. And half the people you meet—wherever you are—know some one whom Liquozone has cured.

If you need help, please ask some of these users what Liquozone does. Don't blindly take medicine for what medicine cannot do. Drugs never kill germs. For your own sake, ask about Liquozone; then let us buy you a full-size bottle to try.

We Paid \$100,000

For the American rights to Liquozone. We did this after testing the product for two years, through physicians and hospitals, after proving, in thousands of different cases, that Liquozone destroys the cause of any germ disease.

Liquozone has, for more than 20 years, been the constant subject of scientific and chemical research. It is not made by compounding drugs, nor with alcohol. Its virtues are derived solely from gas—largely oxygen gas—by a process requiring immense apparatus and 14 days' time. The result is a liquid that does what oxygen does. It is a nerve food and blood food—the most helpful thing in the world to you. Its effects are ex-

hilarating, vitalizing, purifying. Yet it is a germicide so certain that we publish on every bottle an offer of \$1,000 for a disease germ that it cannot kill. The reason is that germs are vegetables; and Liquozone—like an excess of oxygen—is deadly to vegetal matter.

There lies the great value of Liquozone. It is the only way known to kill germs in the body without killing the tissues too. Any drug that kills germs is a poison, and it cannot be taken internally. Every physician knows that medicine is almost helpless in any germ disease.

Germ Diseases.

These are the known germ diseases. All that medicine can do for these troubles is to help nature overcome the germs, and such results are indirect and uncertain. Liquozone attacks the germs, wherever they are. And when the germs which cause a disease are destroyed, the disease must end, and forever. That is inevitable.

- | | |
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| Asthma | Hay Fever—Influenza |
| Abscess—Anemia | Kidney Disease |
| Bronchitis | La Grippe |
| Blood Poison | Leucorrhoea |
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| Bowel Troubles | Malaria—Neuralgia |
| Coughs—Colds | Many Heart Troubles |
| Consumption | Piles—Pneumonia |
| Colic—Cramp | Pleurisy—Quinsy |
| Constipation | Rheumatism |
| Catarth—Cancer | Scrofula—Syphilis |
| Dysentery—Diarrhea | Skin Diseases |
| Dandruff—Dropsy | Stomach Troubles |

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| Dyspepsia | Throat Troubles |
| Eczema—Erysipelas | Tuberculosis |
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| Goitre—Gout | Varicocele |
| Gonorrhoea—Gleet | Women's Diseases |

All diseases that begin with fever—all inflammation—all catarrh—all contagious diseases—all the results of impure or poisoned blood.

In nervous debility Liquozone acts as a vitalizer, accomplishing what no drugs can do.

50c. Bottle Free.

If you need Liquozone, and have never tried it, please send us this coupon. We will then mail you an order on a local druggist for a full-size bottle, and we will pay the druggist ourselves for it. This is our free gift, made to convince you; to show you what Liquozone is, and what it can do. In justice to yourself, please accept it to-day, for it places you under no obligation whatever. Liquozone costs 50c. and \$1.

CUT OUT THIS COUPON.

For this offer may not appear again. Fill out the blanks and mail it to The Liquozone Company, 458-464 Wabash Ave., Chicago.

My disease is.....
I have never tried Liquozone, but if you will supply me a 50c. bottle free I will take it.

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Give full address—write plainly.

Any physician or hospital not yet using Liquozone will be gladly supplied for a test.

BOOK REVIEW.

Any book reviewed in this department may be ordered through this office.

THE AMERICAN GALLOWAY HERD-BOOK.

Through the courtesy of Secretary Gray, of the A. Galloway Association, we have received a copy of Volume 14, which contains the pedigrees of 2,006 animals belonging to this hardy breed, so well thought of on the ranges. The progress of the Galloway within the last few years has been remarkable, due largely to improvement in the breed by the breeders. Attention has been drawn to this breed quite largely by the exhibits made at the leading shows, in which respect Wm. Martin, of Winnipeg, has been noted as a staunch supporter of this shaggy-coated polled beef breed. The index shows, amongst other things, scale of points (not yet adopted), registrations and transfers, list of awards at the big fairs, and several illustrations of winners. The style of setting the pedigree has been changed to the style of Scotch Herdbooks (vide preface). We prefer the style used in the American Hereford and Angus books, and the Dominion Shorthorn book.

GOSSIP

Lew W. Cochran, of Crawfordsville, Indiana, advertises in this issue an assortment of fifty Percheron, Shire and Hackney stallions, which he will trade for farm lands or city lots in Western Canada. Mr. Cochran's horses won many good prizes at the World's Fair and International Exhibition, besides a goodly share of the awards at several State fairs. The offer to exchange horses, which are a comparatively scarce article in this country, for land, which is quite plentiful, is a novel idea, and should prove a business getter.

Bishop Thorold, at a dinner party, told the following story on his return from America. The chaplain of a large private asylum asked a brother clergyman to preach to the inmates on a Sunday during his absence. Before going away he said, "Preach your best, for though insane on some points, they are very intelligent." So he talked to them on India, and of heathen mothers who threw their dear little babies into the sacred river Ganges as offerings to their false gods. Tears streamed down the face of one listener, evidently deeply affected. When asked by the preacher afterward what part of the sermon touched his heart with grief, the lunatic replied: "I was thinking it was a pity your mother didn't throw you in the Ganges."

Charles Dickens used to tell this story about a clergyman: "This preacher had been called to officiate at the funeral of a relative of a Conservative editor, and as the preacher himself aimed to be a Liberal leader in the district, he and the editor had often crossed swords. This time the chance came to deliver a home thrust without a chance for either parry or reply. At the coffin of the deceased, beside which the editor and other mourners knelt together, the preacher made this appeal: 'Lord overrule this affliction to the welfare of all assembled, including the reptile now sprawling in Thy presence, who has frequently abused Thy servant in the columns of his beastly publication.'"
—Birmingham Post.

TRADE NOTE.

A NEW NAME—WARNER'S LTD.—The well-known and highly successful business which has been conducted at Brandon, Man., under the name of W. Warner, will henceforth be carried on by Warner's Ltd., who assume control the 1st of March. The new firm will conduct affairs with the same energy, enterprise and persistence that was characteristic of the old regime. Up-to-date, reliable methods will be employed as heretofore, and this famous book and stationery house can count on an ever-increasing business in Western Canada. The "Farmer's Advocate" bespeaks a continuance of the confidence which has been reposed in it for many years. Attention is directed to the firm's advertisement on another page.

In answering any advertisement on this page, kindly mention the FARMER'S ADVOCATE.