

FARMER'S ADVOCATE

AND HOME JOURNAL

THE ONLY WEEKLY AGRICULTURAL PAPER IN WESTERN CANADA

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MAY 1, 1907

WINNIPEG MANITOBA

VOL. XLII, NO. 762

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GENERAL OFFICES.

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Branches at London, Ont. and Calgary, Alta.
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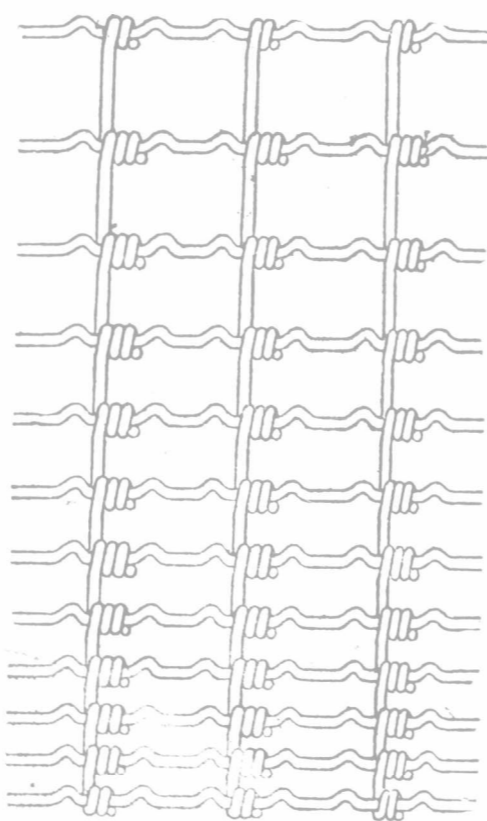
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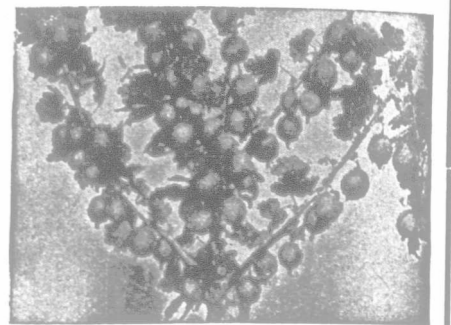
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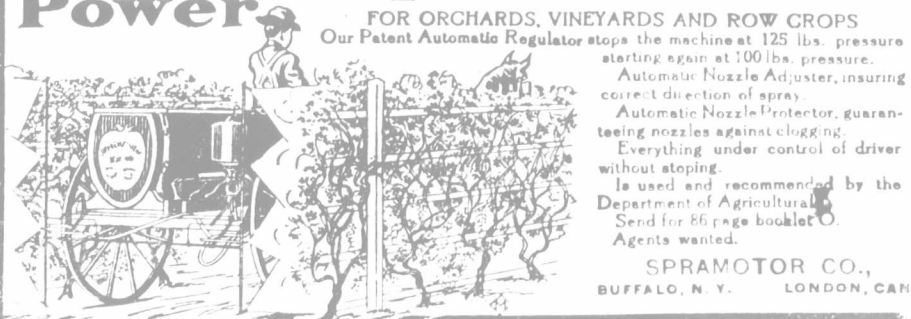
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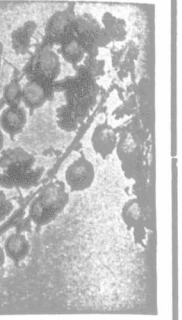
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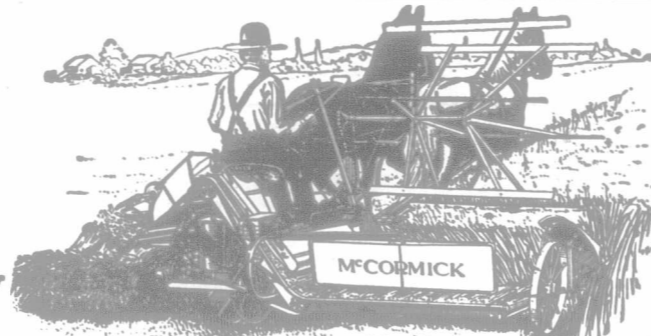
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Farmer's Advocate

and Home Journal

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May 1, 1907.

WINNIPEG, MANITOBA.

Vol. XLII. No. 762

EDITORIAL

Motors Wanted.

There is plenty of evidence that the country is ready for traction gas engines. People are continually asking for such machines and for storage batteries to be used in lighting farm buildings. These are two devices that will be perfected and manufactured in such quantities that they will be familiar to every country person in the next ten years. At present these are a few gas engines on the market, but their manufacture and sale is not being pushed so as to meet all the demand. This spring we understand there will be at least one gasoline motor at work in Manitoba, and the way in which it handles the plow, seeder, binder, etc., will be carefully watched by those who are finding the annual expenditure, for what the Boston people call "animal traction," rather a severe drain on the revenues of the farm.

Aids to the Making of Contented Farmers.

The retention of the fertility of Western farms is a problem just beginning to be appreciated by many farmers to whom the law of diminishing returns is yearly being demonstrated by declining crop yields and increasing weed and fungous pests. The testimony of many good farmers in recent issues of this journal shows conclusively that this fact is appreciated by some, and, we are able to assure our readers, leading farmers in their respective neighborhoods. When such men feel it incumbent upon them to put their ideas and opinions upon the printed page in the way they have done for the benefit of their fellows, we may be sure that they are under conviction as to the necessity for seeding to grass and manuring. Others it will be noticed, are strong advocates of some system of crop rotation. A careful perusal of these letters will have shown that timothy and rye grass are most in favor for seeding down; some few advocate brome, but their advocacy is half hearted, while many others have no scruples in condemning this luxuriant grower, on account of the difficulties experienced in getting rid of it. If these experiences are to be taken as a fair index of Western farm practice, and we assume they can be, the absence of the mention of clover and alfalfa cannot help but be remarked and deplored. Grass is stated to be of value as a preventive of soil drifting and is also of some value in the direction of weed suppression, but those most closely observant state that grass alone will not fill the bill as a soil renovator, that manure must be used in addition. This opinion is held most strongly by the occupants of Manitoba farms which have been under cultivation for twenty to twenty-five years. In the newer sections, such as in Saskatchewan and Alberta, a considerable number pin their faith to summer-fallow, and in dry seasons it seems to work out all right, but not so favorably in wet years. The point raised by one correspondent, that of the beginner on new land anxious to get on his feet, is well taken; such a person can get along without, unless on very light land, grass or manure for the first eight or ten years, although at the expiration of that time he will find that having skimmed the cream he must needs content himself with smaller yields of grain and greater dockage when he markets that grain, and then must adopt the more reasonable system of rotation of crops, manuring, and seeding to grass. Attention has also been drawn to the quality of manure, the statement being made that manure of value can only be obtained from well fed (grained) cattle. A summing up of the various opinions shows that, sooner or later, it will pay every farmer

to seed down to grass (either rye grass or timothy) or better, clover; to apply manure (obtained from well fed live stock) on the land and by these methods retain soil fertility, and further to practice a rotation of crops, thus increasing the yield of marketable grain as well as decreasing the loss from weeds. All will not agree as to the best method of applying manure, but we opine that the testimonies given and the comments made will be helpful in no small degree in helping Western farmers to solve the important problem of retaining soil fertility!

Weed Suppression in Alberta.

The endeavors of the Alberta Government and its officials to eradicate and suppress weeds are to be commended. The province has a Noxious Weeds Act and an earnest capable chief weed inspector, Mr. Arch. Mitchell. The chief inspector has engaged the services of quite a large staff of inspectors and has instructed them how to proceed to enforce the provincial act and also the Dominion Noxious Weeds Act. In framing the provincial act the Government has made it compulsory for threshermen to separate the weed seeds from the grain to such an extent that to fulfil the demands of the act threshers will have to equip their machines with extra cleaning apparatus and even where this is provided there will be considerable difficulty in conforming with the law. The making compulsory the equipping of threshing machines with grain cleaners may possibly be the shortest way to a desired end, but the weed inspectors and all farmers should endeavor to see that the efforts of the thresher to deliver clean grain are not unduly taxed. Under the circumstances the person who is most directly responsible for the production of weeds emancipates himself from the responsibility of having them as a nuisance, when he gets the thresher to set to his crop. Cases will no doubt arise when the grower of weeds will escape the detection of the weed inspector while his crop is growing, and succeed in turning the crop over to the thresher to clean. For this reason, if for no other, every farmer who wishes to maintain a clean farm should lend his assistance to the weed inspectors while the crops are growing and not wait until threshing is being done and then see the responsibility of handling weed seeds shifted upon the thresher.

The M. A. C. Preparing to Branch Out.

The announcement has been made that it is the intention during the coming summer to erect a building for domestic science purposes at the Manitoba Agricultural College and also a dormitory to accommodate two hundred and fifty students. The former idea we are in hearty sympathy with, believing that the daughters from the farms of the country should have equal opportunities of education to those afforded their brothers. The institution of a course in domestic science would undoubtedly be popular with the farmers of this province, and the benefits to the country would be far greater than the expense of such a course would be. With regard to increasing the dormitory accommodation, it is the opinion of this paper that the province would do well to go slowly. The college is undoubtedly popular. It is a new thing, and the halls and dormitories are crowded, but it is doubtful if such a condition would exist were the accommodation increased three or four fold. Alberta and Saskatchewan will soon have agricultural colleges of their own, and the Manitoba institution will be dependent solely on its own farming population, and rightfully so, for support and attendance, but we believe it will be better in view of the difficulties which are bound to arise in securing money for equipment, to be a little short on dormitory accommodation than otherwise. Enthusiasm for the cause is a valuable asset, but it will be well to temper it with some caution in the matter of increasing the dormitory accom-

modation so largely. The FARMER'S ADVOCATE never favored the dormitory idea. We do not believe it to be the best thing for colleges, although it may be all right for boarding schools. The dormitory system is a relic of mediævalism, the outcome of the monastic idea of getting learning, and we believe the advisory board will do well in dropping the idea of providing more accommodation at the Manitoba Agricultural College, and save the province an expenditure that might better be devoted to equipment for experimental work with a view to solving the many problems of Manitoba agriculture.

The Location of the Winter Show.

One of the encouraging signs to the live stock fraternity of Manitoba is the enthusiasm displayed by the Brandon people in regard to the erection of a winter fair building in that burgh. It would appear that better results are likely to accrue from its location at the Wheat City than at any other town or city in the province, it being a great rendezvous for farmers. For the show to be a success it must have the support of the farmers, both in the way of contributing live stock to the show, and in attendance. The Brandon citizens have organized a company, have the site secured, and have had the plans drawn for a suitable building and further have evinced greater interest than has been shown at any other point. Winter shows cost money to run, and even with Government grants some go behind. The Ontario Winter Fair at Guelph lacked \$7,000 of making a profit last year, we understand and that annual affair is well attended. The winter fair is supposed to have an educational value, and it is this idea that warrants the expenditure of Government funds on its behalf. Such fairs should include a show of fat stock, illustrating the feeder's skill, in the animal on foot, and by carcass on the hooks, as well as demonstrating acceptable or unacceptable types for such skill to be exercised upon. The lectures by experimenters and others which go to make up the winter fair, bring fresh to the audience the latest deductions from agricultural research work. Taken all in all, nothing but praise is the meed of a well conducted winter fair, and it merits the support and good wishes of all those who are enthusiastic for Western agriculture, irrespective of their geographical location in the province.

The Coal Supply and Transportation.

Two decidedly acute economic conditions have been prevailing in Western Canada during April, so acute in fact that every day witnesses some change. We refer to the trouble in the coal mines and the protests against the service of the C. N. R. by the boards of trade of different towns, headed by organizations of business men in Winnipeg. The trouble in the coal fields is another of those unfortunate disagreements between capital and organized labor, with the blame for it being prolonged attaching to both parties. In this dispute the Federal Government has taken a more active part as an arbitrator than has been the custom heretofore. Generally the working men have the sympathy of the public in their strikes, but in this case almost everyone is satisfied the miners are receiving ample justice, and that the mines should be kept in operation at full capacity, even if the terms upon which the men are employed are not decided upon for some time. The country needs fuel now and will need it much more in a few months. The thought of entering upon another winter with the stock not ample and the supply in danger of being curtailed through personal pique is intolerable. As in all cases of the kind, the real expense and hardship that attend such unsettled conditions as have prevailed at the coal mines in Alberta for the past year, fall upon the consuming public, and the public has a right to demand that a settlement or compromise be made.

In connection with the transportation difficulties it is interesting to note that the action of the business men of the country is exactly in line with that of the farmers in their annual conventions, and with all classes working to one desired end there is more hope than even before that the service which the public has a right to expect of the railway companies will be forthcoming.

Velocity, a horse owned by Mrs. H. O. Jackson, won the English classic race—City and Suburban, at Epsom on the 24th ultimo. The race is for three-year-olds and upwards, and the first horse received two thousand sovereigns. The course is a mile and a quarter in length.

HORSE

The Prevention and Care of Sore Shoulders.

When the rush of work is on and hot days come in seeding time, the shoulders are often a source of trouble and annoyance. Especially is this the case with horses that have been fed high and not worked during winter; their muscles being soft and flabby it is a very easy matter for galled shoulders to supervene.

The use of collars with damp, dirty linings is fertile in producing sores. Too big, badly-fitting collars are equally disastrous. There is too much friction with them, and horses with hard skins are soon in trouble, while the more tender cannot escape. Dirt on the lining of the collar should never be tolerated; such should be cleaned and brushed frequently, and lumps of hair and other matter should never be allowed to form. At dinner time and in the night, the collars should be taken off and dried thoroughly. Sunshine is one of the best of all means of drying them, as the warmth and wind dry and sweeten them completely. Wet weather is more in favor of sore shoulders, as everything is sticky then, and the draft is harder; this contributes to the ailment. Some horsemen soak the collars thoroughly, especially the leather faced ones, and put on the horse when wet so that it may take the shape and form of the shoulder, and retain it when dry.

As to remedies, there are many, but rest and a discontinuance of work must be associated with them all. Healing is often deceptive; a scab is formed, and the sore dries up. It appears hard and so sound that a venture is made to resume work, but before proceeding far the surface comes off. A new wound is found beneath, and the idleness and mending have all to be gone through again. This is distressing both to horse and owner, and a great loss, too, as an incapable horse or two in the busy season is a serious hindrance in all cases. Sugar of lead is one of the quickest to form a hard surface and make believe all is well again, but it is most deceptive, as its healing quickly is not real or lasting, and should not be counted on. Washing the shoulders with strong salt water is a painful way of treating a wound, but if the skin is not actually broken this often hardens it sufficiently to avoid breakage, but once that occurs, we know of no better treatment than to clean the sore. Keep the horse idle, prevent rubbing, and dress daily with a lotion composed of solution of sulphate of zinc 1 oz., glycerine 3 oz., solution of subacetate of lead 1 oz., water 1½ pints.

A very useful salve is made of tannic acid, iodoform and clean lard, one of each of the former to eight or ten of lard. This may be applied if the skin shows slight signs of chafing and the animal has to be kept at work. A very common form of shoulder trouble is that taking the shape of a large swelling at or near the point of the shoulder, the contents of which, when an opening is made, are found to be a thin, bloody colored fluid of which if the incision is not kept open there will be more secreted, filling up the cavity. In these swellings, the result of muscle bruises, there is no pus formation unless the wound is infected when opened. The lining of the cavity is a secreting membrane and in order to prevent re-filling of the cavity, it should be packed with oakum on which may be smeared some red iodide of mercury ointment (1 to 8). If the swelling is not opened and the fluid is allowed to escape, it may be painful, absorbed and then leave a small, hard, fibrous deposit which will be a constant source of irritation when a

collar is worn. If the trouble is allowed to go on, with the result, a small fibroid tumor, surgical interference will be needed before the shoulder can be made sound and fit for steady work.

Defining Horse Classes at Fairs by the Weight.

A short time ago occasion arose to revise the prize list of one of Manitoba's leading fairs, and amongst other things the horse classes received attention, some revision of which was of a forward character the balance of a retrogressive kind. The heavy draft class was first scanned and a move made; viz, the lowering of the minimum weight from sixteen to fifteen hundred pounds, with which we do not agree. It can be stated with little fear of contradiction that at the average country fair, few real drafters are shown. The average farm horse coming forward in our show-rings is of the agricultural class, yet while that is so it is not a reason for lowering the standard of the heavy draft class. The market requirements must be considered and the call for heavy drafters is for horses weighing over 1,600 lbs. In fact, at the International two classes are made, for horses over 1,750 and under that weight. All horsemen know that the line between the two classes, heavy draft and agricultural, is not a hard and fast one to be delineated by five or ten pounds on a scale beam, yet not one will be prepared to claim that mature horses in normal working condition weighing less than sixteen hundred are entitled to be termed heavy draft horses. Then came the consideration of the agricultural class, and it was hemmed in by the new ruling in a way that does not augur well for that society's next show, for when handling that *bete noir* of all horsemen, the general purpose class, the maximum for which was placed at 1,350 pounds, only one hundred and fifty pounds weight were allowed to come and go on for the greatest of all at our country fairs; viz, the agricultural class. If the weight classification is to be followed, and it seems in default of any better guide that it should be, then the maximum and the minimum for the agricultural class should be 1,600 and 1,250

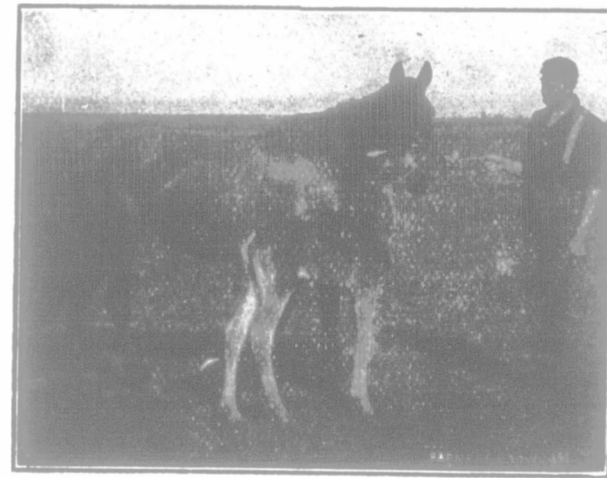


Photo by W. O. Eber, Moffat.
ONE OF THE EARLY FOALS.
John Turnbull's, Moffat, Sask.

pounds respectively, and as the heavy draft class is not likely to be filled, three prizes might be offered there and five in the agricultural class. When the general purpose class was reached, the chairman explained that a standard of height was to be set to prevent the awarding of prizes to undersized agricultural horses, what the market terms "farm chunks." The height settled upon was 15.2, although 16 hands was first suggested—rather too high—and if considered in connection with the weight, requirements might call for rather a stilted looking animal. Several years ago this paper laid down the premises that the general purpose horse *per se*, might be considered as the result of an attempt to breed a coach, carriage horse or large roadster, that had not been entirely successful. Now it is comparatively rare to find a horse (mature mare or gelding) of the carriage type weighing 1,200 lbs. or over, even 15.2 or 16 hands horses; hence we contend that the minimum weight limit for the agricultural horse was put too high at 1,350 pounds and that a better classification would have been heavy drafters 1,600 pounds and up; agricultural class, over 1,250 pounds and under 1,600 pounds; general purpose horses under 1,250 pounds and 15.2 or 16 hands over. In the past, the fair classification of a st. Cheney or ignorance on the part of the judges has permitted the awarding of prizes to heavy drafters, little under-sized, ill-bred, hairy-backed, scanty horses—diminutive drafters

rather than the big upstanding f. low which for lack of a little quality, action or fitting, or necessity for his use at farm work, had failed to make the carriage class, the latter far the better bred horse, one that would bring more money on the market and yet discriminated against in favor of the farm chunk for which no society should even offer a prize, as it represents one of two things—either lack of knowledge of the horse market requirements or a want of information on the science and art of breeding horses.

Thoroughbred and Coach Might be Used.

EDITOR FARMER'S ADVOCATE:

When I wrote my letter of March 6th, to which Mr. R. M. Dale takes exception in your issue of 3rd ultimo, of breeding to the French Coach, in advising I looked at the matter from a business standpoint, presuming that a man with a "bunch of light mares" of possibly indiscriminate breeding would like a horse which he could depend upon to throw size, a close uniformity in make and color, and at the same time give quality, quick sellers in fact. This he can be reasonably sure of with the French Coach, those missing the fancy mark being still big enough for the land. That he owes his prepotency in transmitting these traits of conformation for which he has been bred to his long lines of Thoroughbred blood goes without saying. At the same time I think most horsemen will agree with me that to breed a bunch of such mares to a Thoroughbred stallion would in all probability result in quality without substance, for which there is only a limited market and that a poor one, and the breeder would be forced to put a cold cross on top eventually to get size. It is this method of breeding which has done more harm to the cause of the Thoroughbred in this country than anything else. Had Mr. Dale suggested that the farmer should breed his neatest and most active farm mares, weighing about 1,300 lbs. to a Thoroughbred, *instead of a Clyde* as is usually done, and have every prospect of getting a much higher price for the produce, I should have heartily endorsed him. Or had the enquirer stated he had big upstanding Coach mares I should have suggested a Thoroughbred but on a bunch of light mares I'm afraid the result from a commercial point of view would be a failure.

G. E. GODDARD.
Bow River Horse Ranch, Alta.

Turning to Grass at Night.

F. H. S., writing from Lanigan, Sask., would like some suggestions as to the wisdom of turning work horses out to grass at nights instead of keeping them stabled and fed on hay.

There are differences of opinion upon this question and a good deal depends upon other things. Certain it is that as far as the spending a hot summer night goes, horses will rest and stretch better out in the field than they will in a hot stable, but if a horse is hungry and the pasture short he may have to spend too much of his time looking for food. And if the pasture is large more time may be lost in getting the horses up than would offset the good the grass does them. A certain amount of grass is one of the best tonics a horse can get. It cools his blood, tones his system and improves his appetite. The ideal system would be to find the horses grain and a little hay at quitting time, then let them out into a good pasture for the night. We know a lot of "good farmers" will not agree with this as there is a growing tendency among successful farmers to keep their horses in, but in this the convenience of the teamsters is consulted before the health of the horses. A team cannot be got ready so easily in the morning if the horses have to be brought in from the field as they can when kept up, and it is also the case that they get soft if they get much grass. They even get so soft that they are lazy, but this is generally due to letting them have all grass and irregular work. In any case we would advise letting horses to grass rather than to keep them up without grain.

Concrete Floors for Horses.

A reader in northern Manitoba writes as follows:

"I am building a horse stable (stone basement) and should like to have a cement floor. As I have had no experience with cement for that purpose in this country, I should like to know how the drainage is worked. I mean the outlet in frosty

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weather will it not freeze up? Perhaps some of your readers who have such floors will kindly throw some light on the subject

Shoal Lake, Man.

A. NICHOLSON.

In laying the floor the concrete should be mixed in the ordinary way in proportions depending upon the quality of the cement. As a rule horse stable floors should be made of two layers; the first layer may be made of about one part of cement, to from six to ten parts of sand and gravel, depending upon the strength of the cement, and should be about two to three inches thick. The second layer should be much stronger and about one half to three quarters of an inch thick.

We give it as our opinion, but would be glad to have others, that stables should not be built so that the liquid can drain away. The stalls should have a slope of about one inch from front to back and the passage behind a slope of about one inch to each six feet in width. This would drain the liquid to a division between the stalls and the passage, and when there should be absorbed by straw or some other absorbent. Sometimes dry earth is used.

It is not simply that it is wasteful to drain the liquid through the floor, but it gives rise to the most unhealthy conditions, both for the stock and for people.

In finishing we should advise a rough surface. When a concrete floor is finished with a steel trowel or float it is so smooth that the horses slip easily on it. If levelled with a wooden float the surface is more like sandpaper, and although not so easily kept clean, is safer.

Some horsemen would not have concrete floors in the stalls, while others do not object to them. Where an abundance of bedding is given and horses are not kept standing in the stalls for days at a time, little harm results from cement floors, and it might be said that no horses should be so kept. If any of our readers have different views upon horse stable floors than these expressed we should be willing to publish them and also any that agree with the above, that our correspondent may have plenty of evidence.

Is the Sire or the Dam Responsible for Twin Births?

EDITOR FARMER'S ADVOCATE:

If you remember last year your paper had the photograph of the registered Clyde mare Annie Scott and her twin foals (colt and filly) and as she has produced twin foals again this year (colt and filly) I think it will be of interest to readers of the ADVOCATE to hear of the grand old dam 15 years of age. The point I wish to bring forward is this: The dam had produced 11 foals in her day, and never had twins before. She was bred to the same stallion in 1905 and 1906, with result of twins at each foaling. Last year twins were from the first service the stallion ever gave. The owner of stallion, Wm. Moodie, bred the second mare to him, and the result was twins.

Most veterinary surgeons and expert horsemen claim the sire has nothing to do with the producing of twins. It certainly looks in this case as if he has a bit to do with it. I hope the ADVOCATE will give their opinion on this topic. I should like to have some horse breeders' opinions on this matter later on. Thanking you in anticipation.

Alta.

HAROLD BANISTER.

Our correspondent's enquiry has raised a question which has been debated ever since the

command went forth "to be fruitful and multiply." The phenomena of generation or reproduction are not all visible. The actual wedding of cell unit with cell unit is unseen, yet physiologists tell us approximately what takes place. From the reproductive organs (testicles) of the male come sperm cells (spermatozoa). From the reproductive organs (ovaries) of the female come the ovum or ova (egg or germ cell). The male vitalizing element is usually released during the act of coition (mating); that of the female the germ cells (ovum or egg) at each period of heat. In the case of the male more cells are released than are necessary to impregnation, but it is claimed by physiologists that usually only one germ cell is thrown off at a time by the ovary. The ovum is said to be met by the fertilizing spermatozoon (which resembles one of the little wigglers one sees on the surface of stagnant water) in one of the tubes (Fallopian) connecting the ovary and the uterine cavity (womb), and is there fertilized. Should more than one egg or germ cell be thrown off there are sufficient living (male) sperm cells to impregnate each one, as is exemplified in the case of sows and bitches. The semen of the male contains a great number of spermatozoa, as may be demonstrated by an examination of a drop of the fluid under a microscope. The opinion of scientists is that the female is responsible for twinning, the result of super-activity or fertility of the ovaries. It is well known by students in physiology that the tendency to produce twins in human beings and in mares, is inherited. In the latter it is considered most undesirable by horsemen, for the reason that few equine twins are born alive, or if born have sufficient vitality to live. The case above is certainly unique, but as far as the stallion is concerned it only goes to show that he is very virile, and that the sperm cells ejaculated by him contain vital spermatozoa which when deposited on fertile soil, grow and flourish.

A Canadian Record Needed for Percherons.

One of the features of the horse business in the West the last five years is the coming of the Percheron, which may be largely attributed to the tremendous influx of settlers from south of the international boundary. Several breeding studs have been established and it is now up to the breeders of the grey and black drafters to get together, form a Percheron Association, affiliate with the National Record Association and register their horses at Ottawa. This move is especially necessary with regard to Percherons, as in the U. S., there exist more than one record which induces confusion; and further, all registration fees go to the Percheron registry offices in the U. S. Once a breed society becomes strong there is some profit in recording live stock; and it is the custom in Canada since the National Records have been in existence to return the profits, in the form of grants to live stock associations, for prizes at shows, to the breeders, and by this method place the breed more and more prominently before the public. Breeders and purchasers of Percherons would, if a society were formed and affiliated with the National Live Stock Association, be protected from bogus pedigrees, for the authenticity of each pedigree

coming from the National Records Office is verified by an official before the pedigree is stamped for the Government. In addition, the establishment of a Canadian record for Percherons would put the Customs Department in a better position with respect to the importation of horses, and the home-breeders would stand to benefit thereby. The breeders of Percherons in the West might meet at the time of one of the big summer shows, Winnipeg, Brandon, Regina or Calgary, and form a society and start a register under the auspices of the Dominion Government.

Never use an Unsound Stallion.

The present enrolment ordinance is all right and it has to some extent improved the breeding of horses in this locality, but you cannot do too much towards advising the readers of your paper to breed to none but sound stallions. I am surprised to see so many that think it is just as good so long as the horse looks all right, other ways. A horse of mixed breeding or a grade horse may be used sometimes to an advantage, but a blemished horse never.

Alta.

JOHN LENNAN.

STOCK

When the Cow Does not Clean.

Experience both as a farmer and as a veterinarian demonstrates to one that far too many farmers are apt to neglect the cows after calving, especially when such have failed to clean or get rid of the afterbirth in the natural way. In some stables visited a strong, nasty-smelling odor has been noticed, which on examination has been found to be produced by the decomposing mass of afterbirth partially or wholly retained by the cow. In many cases, the cow shows signs of general ill-health as a result of the retention of the putrescent material, such ill-health being nothing more or less than a slow form of blood poisoning, during which time the milk is unfit for use by man or beast. This by-product of parturition should be removed within a few days after the birth of the calf, at least before decomposition is in evidence. Removal is not a serious matter if commonsense and caution are observed, and in the majority of cases, where possible, it were better to purchase such by the employment of a properly qualified veterinarian. If the help of a man so skilled is not available, the farmer should undertake the removal of the membranes himself, remembering the method by which the attachment is made to the internal surface of the womb. An examination of that surface by the hand reveals the presence, here and there, of little buttons (cotyledons) from which (it can be described no better way), the afterbirth must be gently unbuttoned, each cotyledon as it is come to being gently stripped of its abnormal (at that late date) covering. With one hand stripping the buttons carefully, and the other hand gently exercising traction, it is only a comparatively short time before the cow will be rid of this foreign irritant membrane, for such it has become. The hand



A PAIR OF PARKER AND FRASERS'S (LACOMBE) PRIZE WINNING HEREFORD BULLS, AT THE RECENT CALGARY SHOW AND SALE.



'FARMER' BY DRUMROSIE CHIEF. The highest priced bull at the recent Calgary sale. Bred by Jas. Sharp, Lacombe, and purchased by P. M. Bredt Regina.

of the person engaged in the removal should be free of cuts and wounds, and should be well smeared with carbolic oil or clean unsalted lard, and on the job being finished, a thorough washing should be given in some antiseptic solution. If the membranes have been retained a day or so, it will be found of benefit to irrigate the genital passages of the cow with some solution made up from one of the coal-tar products, and by so doing remove any small pieces or disintegrated portions that may be left to poison the system and induce a feverish condition. We have known some careless and inhuman persons leave cows unattended for a week or more, causing suffering to the animal, as well as tending to induce a very dangerous state of things for the person, professional or otherwise, called in to remove the decaying mass. The annals of veterinary medicine are unfortunately not free from records of veterinarians losing a member (hand or arm) or their lives from blood poisoning through what can only be termed criminal negligence on the part of clients, owners of cows. Delays in such matters are dangerous both to the animal and the person seeking to relieve it.

Colorado and Alberta Steer Feeding.

In the early spring Denver, Colorado, has a fat stock show to which are drawn cattle from a country very much resembling our own Alberta, except that it is more advanced in agricultural practices. At the Denver show this year the champion car-load lot of steers were two-year-old Shorthorn grades; at Calgary they were four-year-olds at least. The Colorado lot were taken off the range in March, 1906, and were at once put on feed, starting slowly with cut alfalfa, corn chop and cottonseed meal fed in troughs. This was gradually increased until they were taking eighteen pounds of corn chop, two pounds of oil meal and ten pounds of cut alfalfa, with whatever long alfalfa they chose to eat per head per day. At the time of putting them up they weighed 800 pounds and by July 1st they had gained about 300 pounds. They were then turned into a pasture for two months and their grain ration gradually reduced to eight pounds of corn chop and twelve of cottonseed meal. On September 3rd the real feeding for the show began and the grain allowance was worked up to twenty-two pounds of corn chop, two pounds of oilcake and eight pounds of cut alfalfa per day, with alfalfa hay or green fodder corn at noons. There was always plenty of salt with sulphur before them and good well water, and about six weeks before the show a little stock food was given to keep up their interest in life. At the time of the show, in March, they weighed on the average 1,444 pounds and sold for \$8.50 per cwt. live weight, which the feeder considered quite a good price and made money on the operation.

We publish the account here, and also an account of how Mr. Tees, an Alberta feeder raised and fed a car-load lot for the recent Calgary show and sale. Feeding in Alberta of course is not so far advanced as in the States, but by an arrangement with the abattoirs in Calgary Mr. Tees got as much for his cattle as the Colorado feeder. However, the Alberta steers were apparently four-year-olds, although Mr. Tees does not say definitely.

From the two cases of the Alberta and Colorado feeders, the lesson to be learned is that the aim in Western Canada should be to first raise low, thick steers, and then bring them to market at a much earlier age than has been the general rule. Alfalfa will help a lot to this end and Alberta oats and barley can easily take the place of American corn until we get a variety of corn that is adapted to Alberta's climate.

How an Alberta Car-load were Bred and Fed.

EDITOR FARMER'S ADVOCATE:

Regarding my cattle at Calgary show. I will give you a short outline of how they were bred and handled. They were bred from grade Galloway cows and purebred bulls. Those in the bunch that had white faces were from a white-faced bull, Hereford, purebred. They ran with their mothers till weaning time, October, and when weaned were turned on my stubble fields and bush land for the winter. From then on till last fall they practically lived on the open range on wild grass.

I commenced grain feeding Dec. 1st, whole oats, and from March 1st till show date fed chop oats. These cattle never were in a shed or barn; I feed in small dry yard always. I have never stall-

fed a car of cattle, so you will see that Dr. Rutherford's remarks meet my approval. My favorite plan for feeding cattle is to have self-feed bins, cattle to have these bins open to them at all times—what we term on full grain feed. But I must say that up to the present time in Alberta the prices for grain-fed cattle would not encourage the feeder to feed so much grain.

Finally, I would say that there are a few things necessary to be a successful feeder financially. First, have the best quality steers, *without horns*, rather dehorned, or breed the horns off. I find the Galloways suit me fine; second, feed plenty of the best quality feed you can find. Third, be sure and have a bunch of hogs in the same yard with the cattle; and last, but very important, with the least possible expense, with the largest profit for this reason, I find the self-feed bin in the open yard very satisfactory.

Alta.

W. E. TEES.

Have Even Started to Adulterate Screenings.

The following quotation from a market report published at Chicago shows that even the screenings business is not free from crooked work.

"When Mexican yearlings, averaging 85 pounds, sell, in the wool, at \$7.60 in Chicago, the feeder would seem to be making all kinds of money; consequently a statement that his account balanced on the wrong side of the ledger would not receive credence without proof. A feeder who finished a band of 10,000 of these yearlings at St. Paul cleaned up this week, getting \$7.60 for the last consignment, and it is a record price. The entire 10,000 head sold at a range of \$6.90 @ \$7.60 and the bulk above \$7.00, and yet his loss was \$4,500. This is naturally calculated to deter an amateur from tackling the game, but the stuff was bought high, costing \$3.85 per head on the range in New Mexico and the feed bill was prohibitive. As the victim expressed it he was "up among the robbers". He was taxed \$13 @ \$14 per ton for mill refuse which was wholly lacking in fattening quality, and consequently got small gains, necessitating a long feeding period to get a finish. Matters have come to a pass where it is dangerous to put sheep on feed around St. Paul even when screenings have been contracted, as the vendor can even the score by delivering straw joints and chaff instead of grain."

Natural Shelter the Best Stables.

EDITOR FARMER'S ADVOCATE:

On page 416 of your March 20th issue I notice "P. E. C." has something to say in regard to wintering cattle, and I might have allowed same to pass had he not brought into his remarks an opinion as expressed by me through the medium of your paper last winter, re wintering steers out of doors that were being prepared for market. He admits that five years ago he could not tell one calf from another, and I very much fear that he is still not much more of a judge or the figures that the article referred to contained would have convinced him that these cattle were fat. Did P. E. C. ever see a bunch of cattle that would average 1,475 lbs., and yet be a heap of bones. The thing is absurd. As to confining cattle as closely as P. E. C. proposes to do, I think he will be disappointed with the results. I have nothing good to say of people allowing cattle to run at straw stacks all winter and lick snow, but I do contend that where cattle other than milch cows, can have their straw drawn into reasonably good shelter and an easily available supply of water is near, these cattle will be found in June to be far ahead of the closely confined ones. But, Mr. Editor, I do not want anyone to think that the right and only way to winter cattle is to feed on straw only. If cattle are to be where they ought to be when spring comes; that is, not simply alive or a little lighter than they were in the fall, but strong and fleshy, ready to make good use of the first bite of grass that comes, they must be fed a grain ration in proportion to what is expected of them. If they are to be run over for another year a smaller amount will do, but if they are expected to be ready for market that season it will be profitable to feed more and so have them ready for an earlier and better market.

Mount Pleasant,

WILLIAM GRAYSON,

Northwestern Man.

The warm Spring weather is proving to be about as severe on range cattle as the cold of winter. Cattle that have stood the cold but become weak do not seem to be able to stand the change which the warm weather works on their systems and succumb just as the chances of life look best.

FARM

Cultivating Growing Crops Kills Weeds.

EDITOR FARMER'S ADVOCATE:

The practice of cultivating growing crops has been regularly recommended by me both in bulletins and on the platform, and many a farmer has benefited from judicious use of light harrow or weeder on the growing grain. This work answers two good purposes, that of checking weeds and preserving moisture. Of course, to get the best results the soil should be in a good state of tilth, as clods are apt to carry the harrows over without the small weeds being disturbed. The work should be done when the weather is bright and warm so that the delicate roots of the young weeds may be destroyed by exposure to the sun. For best results I would harrow before the grain shows above the ground and not again until it has attained to a height of two or three inches, when it is not so liable to injury from the harrow as at an earlier stage. Harrowing or cultivation with a very light drag or weeder might be repeated again at intervals as seems necessary until the grain becomes too far advanced.

Instances have come under my notice where an increase of ten to fifteen bushels of wheat per acre have resulted from this treatment of fields as shown by comparison with adjoining unharrowed fields.

In some cases no doubt injury has been done to crops by using a heavy harrow on a loose loamy soil, especially if spring plowed. Only drilled grain should be harrowed.

Crops have been delayed in growth by excessive harrowing, but if the field were a very weedy one I should be inclined to risk a little to make headway against the weeds. It must be remembered that harrowing weeds that are well rooted and tough is of no use, but they must be attacked when young and tender. Harrowing a crop is of no use to destroy *wild oats*, as they root as deeply as the grain we have sown and will stand as much.

If wheat for seed is plump and of full vitality I should not feel inclined to use more than one and a half bushels per acre, when intending to harrow the growing crop, but if shrunken or frosted I would sow heavier, as the plants from the weak seed could not stand so much rough treatment.

Some farmers prefer the light wooden frame drag to the weeder and on small farms the drag with lever to slope the teeth may be made serviceable.

T. N. WILLING,

Chief Inspector of Weeds in Saskatchewan.

Recommends Cultivation of Growing Crops.

EDITOR FARMER'S ADVOCATE:

Upon this subject exploited in these columns last week, of the handling or use of a harrow or weeder on a crop after it has come up, I would say that while I have not seen any such cultivation used in this country, I have advocated it very strongly before the farmers' institutes and agricultural societies and trust that we shall soon have such a method of treatment of the soil and crop, especially weedy soil. One of the great advantages of a light harrow or weeder, say Breed's weeder (which is the only one at the present time which I would recommend for use) is that it cuts very light and is movable, doing very little, if any harm to the crop, and conserves the moisture, which is one of the special benefits derived from proper care of crop after it has come over the ground. Keeping the soil loose on the surface prevents evaporation and thereby (as before stated) conserves the moisture, but such cultivation would have to be done very carefully at the proper time when the soil is dry enough to crumble into a mealy substance; not to ball or roll; also crops to be so treated would require to be sown deep, say with a disc seeder (which is the best in my mind for deep sowing) and giving a little extra seed to the crop so that in case any was destroyed by carelessness or otherwise, you would have yet sufficient. Also there is considerable advantage in plentiful sowing for weedy soil as the crop under such circumstances is more likely to smother or overgrow the weeds than a thin sown crop. There is no danger in harrowing wheat in this way with harrow or Breed's weeder, but in oats or barley, which are a more tender crop than wheat as a rule, there would have

to be more care exercised, but in this country we have so much light during the early part of the season, especially strong sun, the plants are much tougher and harder than in other countries therefore much less in danger of injury, and I would in the case of oats and barley be sure not to start work too early in the morning and to select a bright, hot, sunny day for such work, as the plants will then be wilted and consequently tougher; and it might be well to examine your plants before commencing and see that they are tough enough for such treatment. Also it would be well not to undertake such treatment on land that was very lumpy with buried large clods, as they will be liable to be raked up or drawn out from the lower part and thereby expose the roots of the plants. Of course with wheat there is really no danger, as wheat, as you know, is a double rooter at any rate, having a top and base root according to its depth of sowing and grows from both or either of them; therefore, if you should happen to injure the top root the lower one will continue to supply nutriment until such time as the top root will have an opportunity of reasserting itself. This treatment is more especially beneficial to weedy soil and I would commence on weedy soil immediately I saw the weeds showing themselves and continue it on every occasion that the soil was fit after rain, until the crop had advanced to a considerable stage, in which you could see that it was injuring the crop. This stage would have to be entirely regulated by the opinion of the operator or farmer, because of the fact of the toughness of the grain having to be taken into account as to the amount of injury likely to be done. I would recommend too, that you have a competent driver for this work, so as not to be crossing the drills instead of running parallel with them with either weeder or harrow.

Man.

J. J. GOLDEN,
Deputy Minister, Agriculture.**Barley Culture and Weed Growth.**

EDITOR FARMER'S ADVOCATE:

Barley has until quite recently been a very secondary crop with the farmers of the West; and it is surprising how many farmers throughout the country do not grow it at all. This has been due no doubt, to the poor market and low prices that have prevailed for this cereal until very recently.

Barley is one of the oldest of our cereal crops and for many years in European countries it was a very close rival of wheat as a human food. The Anglo-Saxon, however, chose wheat for his food and oats for the food of his beasts, leaving barley to the maltsters. But of late years barley has become more appreciated as a stock food, and at the present time our markets give a premium of only one cent per bushel for malt barley over feed barley. In feeding tests, too, barley has proven itself a superior stock food. With this small premium, and considering the opportunity a barley crop gives of ridding our fields of noxious weeds, it is plainly more profitable for a farmer to grow it as a cleaning crop, even if it only produces feed barley. It is from this standpoint that we wish to consider the cultivation of barley.

Barley will do well on almost any arable soil, though it does better on a loamy, well-drained soil than on the heavier clay soils. Its roots are short and grow near the surface of the soil. For this reason it is necessary to have a good firm seed-bed for barley, to prevent it from lodging and to allow the moisture and soluble plant food to come up to the roots. Its short surface roots, and the short period of growth, make it necessary to have a fair amount of available plant food in a good barley soil. There is far less danger of over-stimulating the growth of straw in barley than in oats or wheat, by manuring, and it is the most suitable of these crops for the application of manure. The manure should be evenly spread on the land during the winter or spring and should be well worked in with the soil before planting. In this way the land will be in good condition for a succeeding crop of wheat.

It has been claimed for barley that it will mature quicker than wild oats and hence that a crop of barley will destroy the wild oats by allowing them to be cut before they are mature. This is not effective. Wild oats, though they appear green, will mature enough to reproduce vigorously during the life of a crop of barley. The value of a crop of barley in the struggle with noxious weeds lies in the fact that its short period of growth gives plenty of time for germin-

ating and killing the weed seeds by cultivation, both before seeding and after harvesting the crop.

In order to get the best results for cleaning a field with this crop, it is necessary to disc it lightly as early as possible the fall previous to seeding the barley. This will allow a large number of the weed seeds to germinate, either in the fall or early in the spring. A good "burn" will also help to clean up some of the weeds and make conditions better for germinating those remaining. When a good growth of weeds has started in spring (towards the end of May) the land should be plowed shallow, and harrowed at once to retain the moisture and to germinate more weed seeds. In about ten days (first week in June; the date will vary with the season) it should be harrowed again and seeded to barley. This treatment will germinate most of the weed seed in the surface soil and give a good, firm seed-bed for the barley crop. The shallow roots of barley will not allow of harrowing after the crop is up without considerable loss to the crop, as will wheat. Barley land that has been manured during the winter may be treated in the same way, only the manure should be well worked in to the soil with the disc.

After harvesting the crop, the land should be plowed and harrowed as soon as possible. This plowing should be two inches deeper than the spring plowing to bring up some of the weed seeds lower down and get them germinated and killed in the fall.

This process, carefully carried out, will give (1) a paying crop of barley; (2) clean the soil of many of its noxious weeds; and (3) put the soil in splendid condition for a succeeding crop of wheat—three purposes we should have in view with a crop of barley. Of course, when the soil is badly "possessed," it may be necessary to repeat the treatment, or to summer-fallow. But the above treatment will usually be effective.

C. T. S.

Cost of Growing a Wheat Crop.

Many people ask the question "What does it cost to grow a crop of wheat?" when told about the profits to be made from buying and farming the virgin prairie. Data is not very plentiful in the West on this topic. At Brandon experimental farm the following figures were arrived at:

The experimental acre on which the test was made gave a yield of twenty-nine bushels at a cost of \$7.76. This included every possible item of expense and also two years rent, or interest at six per cent. on land valued at \$15 per acre. The items were: Plowing once, \$1.25; harrowing twice, 20 cents; cultivating twice, 40 cents; seed (one and a half bushels), 75 cents; drilling, 22 cents; binding 33 cents; twine, 10 cents; stooking, 16 cents; stacking, 60 cents; threshing, \$1.46; teaming to market, four miles, 29 cents; rent or interest, \$1.80; wear and tear of implements, 20 cents.

Several years ago Supt. S. A. Bedford stated that a yield of twenty bushels of wheat per acre for which fifty cents per bushel was obtained would pay expenses. In recent years, despite some crop reports, the yield has not been over 13 to 17 bushels per acre on the older worked lands, the deficiency being made up partially by the higher prices obtained for wheat. Some farmers do not hesitate to assert that as a paying crop, either barley or oats are superior to wheat, and when yields and prices are compared their contention seems to be borne out. The figures given above are like those of immigration literature, rather under the mark we believe, and it would seem as if the cost of growing a wheat crop is well over eight dollars per acre. What do our readers think?

Favors Grass and Manure.

EDITOR FARMER'S ADVOCATE:

I have tried different methods of seeding to grass, and I think brome grass seed the more profitable to sow on our heavy clay loam land. In 1901 I had a piece of land that required cleaning and I adopted the Brandon Experimental Farm plan, which has proved satisfactory in every particular. I disc the land in the fall as early as possible and many seeds germinated before cold weather set in, and again toward the end of May the following spring, with the result that practically all the surface seeds grew. I then plowed the land and sowed about twelve lbs. brome seed to the acre on rough plowing, after which I harrowed well. I had a beautiful catch and the heavy mat afforded good pasture for horses and cattle that fall and each fall since. I cut about three tons per acre of hay the first year,

a little less each succeeding year until last year only one and one-half tons per acre were realized. I intend to disc this sod and harrow it this spring as it has become too thick, hoping it will revive it for another crop.

In 1905 I mixed red top clover and timothy seed together and sowed it with one and one-half bushels of oats per acre on land prepared in the same way as for brome and sowed with a press drill about two inches deep. The result was a long heavy crop of oat straw and only a few stems of clover appeared. In 1906 I tried the same mixture again on the same piece of land and results were the same. The tests were made with the intention of taking off one or two crops of clover and plowing immediately after and seeding to wheat, but I find the tests were expensive and shall resort to summer-fallowing as a means of cleaning land.

In the fall of 1897 I drew an old manure pile out and covered about twenty acres as evenly as possible and plowed and harrowed as I spread it on the land. In 1898 I sowed wheat, with the result that a heavy crop of weeds smothered out the wheat and had to be plowed down. This was our very dry year. This piece of land has had very heavy crops of wheat each year since, producing a strong stiff straw with a massive head and always stands up where the manure is, but on the ordinary summer-fallow the straw is sure to be soft and lodge badly. My experience is (costs etc., considered), use manure on summer-fallow and work it well and you can reap twice as many crops of wheat with greater yields per acre and a better sample than on ordinary fallow. Besides, land holds moisture better prepared in this way and keeps humus in the soil.

With regard to rotation of crops, my method is to divide the quarter section into 40 acre lots, if land can be arranged this way, and take two crops of wheat off each quarter; follow with oats and barley and then summer-fallow, except where land is manured. Then more crops of wheat may be taken off before oats is sowed. In this way every fourth or fifth year the quarter section may all be sown with wheat and oats. In this way I do without the capricious hired help at \$35 per month, except in harvest time. Besides, the land will produce a large yield per acre of good, clean, heavy grain.

Rosedale Municipality, Man. W. A. A. ROWE.

Too Much Incompetence in Threshermen.

EDITOR FARMER'S ADVOCATE:

The following are my views on the question of threshing, as concisely as I can express them:

For myself, I may say I am decidedly in favor of the small outfit for the average conditions. When I say small, I do not mean a toy machine, but a separator of say 28" to 32" cylinder, with 18 to 20 h.-p. engine, so as to have plenty of power, as I believe a great many outfits to-day have not sufficient power. To my mind, an outfit of this size, owned jointly by from two to four farmers, depending upon the amount of crop each man grows, is the most satisfactory way of handling the vexed threshing question. One man of the company should be a good mechanic and possess sufficient executive ability to thoroughly handle the men connected with the outfit, and he should be given full active control. Then a business manager should be appointed who would attend to all business, such as collections and payments, keep books, and act as secretary-treasurer. I think the reason that the threshing business is looked upon with disfavor by so many people in the West to-day is because of the fact that so many rigs have fallen into inexperienced and incompetent hands, and when the machinery fails to come up to expectations of the purchaser, it is condemned, together with the manufacturer, as being no good. From what I have seen of the threshing business, I believe it would be a step in advance to institute compulsory examinations for separator men, as well as engineers. Such, in my opinion, would save a lot of trouble and reputations, and a certificate of such nature would be a guarantee to the owner of the machine that he was not being imposed upon by unscrupulous men looking for a job at high wages.

I am in favor of the small outfit for more than one reason. First, it does not cost nearly so much to run it, and when any breakage or stops occur, the expense is not nearly so great while the machine is idle; second, it is handier to move, and can be taken to places where the larger rigs would be stalled; and third, the first cost is not nearly so great in proportion to the amount of work each will do.

The large outfit is all right for the man who has had plenty of experience, and intends to make a business of threshing, but for any farmer buying an outfit, or a share in one, for the sake of getting his threshing done early and when he wants it, I say get the small rig and your threshing troubles will even then be found manifold, and requiring a high degree of mechanical and

executive ability to keep things running smoothly. I think as a general thing the older and more well-to-do farmers seem to favor the small outfit, although that is a rather hard point to give any definite opinion upon. The thresherman, take it all around, has a hard lot, and anything that can be done to help the fraternity should be given favorable consideration.

Sask.

H. N. BINGHAM.

Believes the Course One That Every Young Farmer Should Attend.

EDITOR FARMER'S ADVOCATE:

I take this opportunity to say a few words about our course in the Agricultural College of Manitoba.

The course includes everything bearing on agriculture and I do not think there is a single subject that could be left out. I think it is just what every young man should have before starting out as a farmer. The principles underlying agriculture are taught, and also those underlying other branches of work that go hand in hand with farming. A man learns *the why* and is therefore able to work intelligently. He learns in two winters what other men have learned from years and years of experience.

Although I liked and appreciated all the subjects, yet I think I liked agriculture the best. The subject is very interesting and of practical value to the farmer. It comprises the study of the soil, its formation, composition, and cultivation, maintenance of soil fertility, plant food, plant-growth, and diseases of plants. The subject also embraces the selection and judging of seed grain.

Another subject that I thought very much of was animal husbandry. This takes up the study of the various breeds of animals, care, feed, and management; also the selection and judging of the various types of the different classes of animals.

These two subjects are of the utmost importance to us, as farmers, but I am sure we cannot afford to do without a knowledge of English, mathematics, mechanics, veterinary science and dairying. We, as well as any other business or professional men, must or should, know all about the ins and outs of our business.

From the practical side I am sure all the students will agree with me that we got our money's worth in good measure, and by intelligent work I think we shall prove it this summer. From the social standpoint I think we received much benefit, both from being associated with, and acquainted with, men who were "doing things." Our lecturers were first-rate men, ever ready to lend a helping hand, and each and every one was highly esteemed by us. The boys themselves were bright, generous, good-hearted fellows, who worked when they worked, and when at their games played for all they were worth.

There are two associations that will do much for Manitoba, the literary society and the research association. The aim of the literary society is to educate the boys as to the proper ways to speak and also to conduct meeting of various natures along parliamentary rules. To be able to think and speak clearly and readily before others is the principal aim of the society. We received much benefit from this, as could be seen from the improvement the boys made during the winter, both in the way the meetings were conducted and also in the manner of speaking.

The research association, to which all the boys belong, has for its aim the answering of such questions as are before the province to-day. By united effort we think much can be done. I think that Manitoba will receive very much benefit from the Agricultural College at Winnipeg.

HARRY N. THOMPSON.

Rape on the Summer Fallow.

Some few have tried a light sowing of rape on the summer-fallow with a view to securing some pasture for cattle in the late summer or early fall and with the greater advantage of packing the soil down well by means of the tramping given by the cattle. A short time ago we queried a stockman who has tried this method for years and although he does not condemn it altogether, he is not enthusiastic, for the following reasons. Either it leaves the ground too hard, especially in spots in the hollows where the plowing may have been too shallow, and as a result the young cereal plants are killed by the early spring frosts, or there is increased liability to grubs which have found a suitable host plant in the rape. In order to see if the difficulty mentioned cannot be overcome, he suggests plowing the summer-fallow late in the fall and running the packer over it early in the spring, and if this does not have the desired effect to sow the land to barley. We should be pleased to have the experiences of others who have tried this combination method of soil packing and pasturing.

Would Sow Timothy.

EDITOR FARMER'S ADVOCATE:

I have read the articles in the FARMER'S ADVOCATE of late, re soil fertility and seeding to grass to keep humus in the soil, and I wish to say that this is likely

to be a very important matter with us before many years. The summer-fallow has been very successful with us so far, but some are taking to seeding with grass as an experiment. Others think sowing barley will clean the land and also put it in good condition for wheat again. I have had very little experience with grasses yet, but think from what I have observed that timothy is the best grass seed to sow, not leaving it more than two years. It may be sown with any grain crop and appears to be a sure enough grower if there is plenty of moisture. I believe in putting all the manure I can get on the land, hauling it as made during the winter. We spread it evenly and then when dry in the spring burn off the straw so that it can be plowed in with satisfaction. The burning also kills most of the seeds in the manure. I take about three or four crops off after summer-fallow and then fallow again. I have plenty of slough hay so far, but think the cultivated hay is better as it is more healthy for horses. I have been farming here for over twenty years, and land seems as good as ever it was when fallowed properly.

JNO. DEVYLLS.

East Assinaboia Municipality, Sask.

Advocates Private Ownership of Outfits.

EDITOR FARMER'S ADVOCATE:

In connection with the question of threshing, I may say that much confusion of ideas has arisen by farming being regarded as an industry, but if an industry is a distinct line of business, then farming cannot be regarded as such. Looking back through the historical telescope it appears more like the nebulae of the astronomers, out of which in the gradual process of evolution, industry after industry has been formed. The invention of a machine suited to put the labor stamp on some particular raw material of the farm formed the nucleus of a new industry. Gradually the machine developed from the simple to the more complex, and the management from a partnership to the corporation and finally to the trust.

Now threshing is one of those industries which on account of the introduction of complex machinery has broken away from the farm, and if we reason from the analogy without regard to logical precision, we must infer that the tendency will be towards larger outfits, etc. On closer investigation it is seen that all the specialized industries put the labor stamp on transportable raw material, and operate the year round, which provides for skilled workmen; while the thresherman puts his stamp on material not transportable to industrial centers. Hence threshing must always remain a satellite to the grain growing industry, and as such is absolutely under the control of farmers themselves. Threshermen might form a trust this year and raise rates beyond a fair profit. Farmers could next year by co-operation not only smash the trust, but practically ruin some of the threshermen. This condition, the short period in operation, the amount of capital involved, the scrub gangs of unskilled workmen of the migratory class, and the undesirable nature of the work, all tend to restrict private ownership, or development to larger outfits.

Some years ago the threshermen in this district formed a combination and raised rates beyond what was considered a fair profit. A meeting of farmers followed and satisfactory arrangements were made for that year. Next year a joint stock company of sixteen members was formed under a provincial charter, with \$5,000 stock subscribed by members. A board of five directors was appointed to manage the concern and a large Battle Creek Advance outfit purchased. This enterprise was a success in so far as the object for which it was undertaken was concerned. Rates were struck to cover running expenses, and the outfit was to be paid out of the stock.

Year after year wages rose till last year they were about double what they were when we organized, but we could not agree to a commensurate advance in rates, as it was profitable for the larger farmers to have low rates and if need be draw on the shareholders for deficits.

Last year the directors manned the outfit, gave the manager a free hand to thresh where he could make most money, did not arrange rotation, and kept little or no supervision over it, with the result that several members were compelled to get outside machines. When the outfit pulled in it was found that receipts did not cover expenditure and when the proposal was made to draw on the stock for the deficit the majority decided that the time had come for the outfit to go under the hammer.

This company was too large. To arrange a rotation that would satisfy sixteen farmers who were nearly all ready to thresh the same week was impossible. To distribute shares and adjust rates so as to make an equitable distribution of obligations and benefits is mathematically possible, but to apply such adjustment to a group of co-operating farmers seemed impossible. The expense of a provincial charter is in my opinion unnecessary for such a small concern, while a board of five directors is too cumbersome in a business that can be more efficiently handled by one.

There is one striking feature about threshing, and that is that it has never developed co-operation as a business. Hence we must infer that the nature of the industry is such that individual effort gives better results than co-operation.

It must be conceded that private ownership and management give better results in a vigorous "push" in such concerns. It must also be conceded that co-operation is necessary to regulate rates where the tendency is trust-ward. The FARMER'S ADVOCATE furnishes the best plan of co-operation, combining as it does the merits of private ownership and management with those of co-operation in the production and distribution of agricultural knowledge. These reciprocal benefits, together with ten cents an inch for published material that comes up to a certain standard, is the ideal plan for farmers. Let farmers in a district co-operate to grow clean grain, to arrange stacks for convenience, and a rotation that will mean the least possible moves, to have no cramped quarters, nor manure heaps for the threshing to go through, to have an adequate supply of water and fuel, to make prompt payment, etc., and it appears to me that any thresherman in the district will give reciprocal advantages in rates and careful threshing.

If, however, conditions arise when co-operative ownership and management is necessary, the number in the company should be limited, and one member should manage and accompany the outfit.

When one considers the waste in agriculture from the number of traction engines that are rusting in sheds or in the open for ten months in the year, the number of horses that are eating their heads off for six months, the amount of money in windmills, etc., the tendency for the future should be to eliminate this waste by perfecting a motor that can be attached to any farm implement or machine. Steam power will never fill this need. The gasoline outfit which combines lightness of carriage and less labor expense is gradually working that way, and if Edison's latest invention of an electric motor that can be attached to any farm implement or machine will be the success claimed for it, threshing will gradually find its way back to the farm, and the size of the separator will be measured by the power necessary to run other farm machinery.

Woodlands Municipality. A. M. CAMPBELL.

Defends the Manure Spreader.

EDITOR FARMER'S ADVOCATE:

I am a subscriber to your very valuable paper, and would like to give my opinion on the manure spreader. I invested in a large size manure spreader. I never invested money on any farming implement that gave so much satisfaction. Have never had to put three horses on it to do the work, and think with the manure spreader one man can draw out as much manure as two men can the old way, and it is much more satisfactory, as it is spread so much more evenly, and not only as a manure spreader, but for drawing roots it cannot be beaten. There is a crank goes with it which I use for unloading, and can unload in less than a minute.

I have been keeping my yard cleaned out all winter with the manure spreader, and have used it every winter since I got it. I have had mine four years, and up to now have only laid out one dollar for repairs. I think I am right in advocating the manure spreader as a farm implement, one that no farmer should be without; and I also think, by taking care of it twenty years will still find it doing the work.

RICHARD YELLOW.

Good Words for the Manure Spreader.

EDITOR FARMER'S ADVOCATE:

I should like to say something about the manure and spreader question. I think this subject cannot be too well considered, as it is a very important item to the farmers.

I apply manure with the spreader in the spring at the rate of twelve loads per acre for top-dressing grain, and eight for grass, with a medium-sized machine, with good results. This way is better than spreading by hand in winter, as the machine does a better job, covers more ground with the same manure, and spreads it more evenly. There is also less loss in this way, because the winter-applied manure will be considerably washed away by spring rains. It also keeps ground cold and damp in spring, and early-sown grain is generally the best. I have used a machine for three years, with a cost of \$1.25 for repairs, there being two tires set, and one link or drive chain. The spreader will spread faster than five men, if they will cover as much ground and do as good a job. With a good team you can spread a load in from three to four minutes on an average, with a medium-sized machine, spreading twelve loads to the acre. One load equals about one and one-half ordinary wagon loads. The wheels are five inches wide, and will not cut up fields so badly as a wagon, being a good advantage in a grass or grain field. The manure is distributed very evenly, and coarse manure made much finer than it can be made by hand with a fork. On a farm, where from two to three hundred loads of manure are handled yearly, the spreader will pay for itself in a few years in extra profits, as you can put the manure where you want it most, and with best results. A machine, properly cared for, should last from fifteen to twenty years. I mean by this, well cleaned after using, and put inside, also well oiled when in use.

GEORGE SHARP

The Roads of the Country are Worthy of Consideration

The season will soon be here when municipalities will be engaged with the question of maintaining the country roads in the best possible condition for travelling. All are not agreed as to the best method to follow, although the statute labor way is falling more and more into disrepute, ensuring a maximum of expense with a minimum return in results worth having. The following ideas regarding the roads should be kept in mind when construction is going on:

The ideal road should be perfectly level. If it be not, a large portion of the strength of the horses which travel it will be spent in raising the load up the ascent. In round numbers, upon a slope of 1 in 44 or 120 feet to the mile, a horse can draw only three-quarters as much as he can upon a level; on a slope of 1 in 24 or 220 feet to the mile, he can draw only half as much; and on a slope of 1 in 10 or 528 feet to the mile, only one-quarter as much. This ratio will vary with the nature and condition of the road, for the resistance of gravity is relatively less upon a rough road. Besides the increase of draft caused by gravity, the power of the horse to overcome it is much diminished upon an ascent, and in even a greater ratio than that of man, owing to its anatomical formation and its great weight. Though a horse on a level is as strong as five men, yet on a steep hill it is less strong than three; for three men, carrying each 100 lbs., will ascend faster than a horse with 300 lbs. The bad effects of steepness are especially felt in winter, for the slippery surface causes danger in descending as well as increased labor in ascending. The water of rains also gullies out the surface of the road, causing a constant expense for repairs, which the road must not fall short of, as well as a maximum which it must not exceed. If the road were perfectly level in its longitudinal direction, its surface could not be kept free from water without too great a rise in its middle, but when a road has a proper slope in the direction of its length, not only do the side ditches readily discharge the water which falls into them, but every wheel-track also becomes a channel to carry off the water. The minimum slope is assumed by an experienced English engineer to be 1 in 80 or 66 feet in the mile. The minimum established in France is 42 feet to the mile. In perfectly level country, the roads should be artificially formed into gentle undulations approximating to the minimum limit. To sum up, then, the longitudinal slopes of a road should be kept, if possible, between 1 in 30 and 1 in 125.

The proper width for a road depends of course upon its importance, and amount of travel upon it. Its minimum is about one rod or sixteen and a half feet, sufficient to enable two vehicles to pass each other with ease. For ordinary town roads, a good width is from twenty to twenty-five feet. A width of thirty feet is fully sufficient for any road, except one which forms the approach to a populous city.

When broken stone roads are adopted, it is usual for the sake of saving in the first cost to make only a certain width or "causeway" in the middle of the road of a harder material, and to form the sides or wings of the natural earth which will be preferable in summer and for light vehicles and horsemen. Sixteen feet for the middle and twelve for the sides is a common proportion.

In forming the road bed, or travelled part of the road, the first and most important point in a flat country is to raise it above the level of the land through which it passes, so that it may be always free from water, a precaution which is essentially necessary to keeping a road in good condition. The road must not be flat, but must "crown," or be higher in the middle than at the sides, so as to permit the water of rains to run off at once into the side ditches. The best transverse profile for a road on level ground is that formed by two inclined planes meeting in the center of the road, and having their angle slightly rounded by a connecting curve. The inclinations thus formed will be uniform and the road will thus escape most of the evils incident to a curved profile. The degree of inclination of these planes will depend on the surface of the road, being greatest where the road is rough. A proper medium for a road with a broken stone surface is 1 in 24 or half an inch to a foot.

Other things being equal, every road should be perfectly straight, so that the time and labor expended in travelling upon it should be the least possible. An unnecessary length of road causes a threefold waste; first, of interest on the extra capital expended; second, of the recurring expense of repairs; third, of time and labor employed in travelling over it. But when a road cannot be straight and level at the same time, straightness should always be sacrificed to obtain a level or to make the road less steep. This is one of the most important principles to be observed in laying out a road; and it is one most often violated. In a hilly country, a good road should wind around the hills instead of running over them or incurring a great and unnecessary expense in making deep cuttings and fillings. And it may often thus wind without increasing its length. For if a hemisphere be placed so as to rest upon its plane base, the halves of great circles which join two opposite points of this base are all equal, whether they pass horizontally or vertically. Precisely so may the curving road around a hill be often no longer than the straight one over it.

The split log drag and the road machine have done considerable, the former implement being very cheap, and effectual when the more expensive machine cannot be used. Roads are the arteries of trade and afford access to all the comforts of present day civilization; such as schools, churches, post offices, etc., and as such should be kept in good order.

The drainage of a road by suitable ditches is one

of the most important elements in its condition. All attempts at improvement are useless till the water is thoroughly got rid of, and a bad road may be changed to a good one, by merely forming beside it deep ditches, inclined so as to carry off at once all the water falling upon the road.

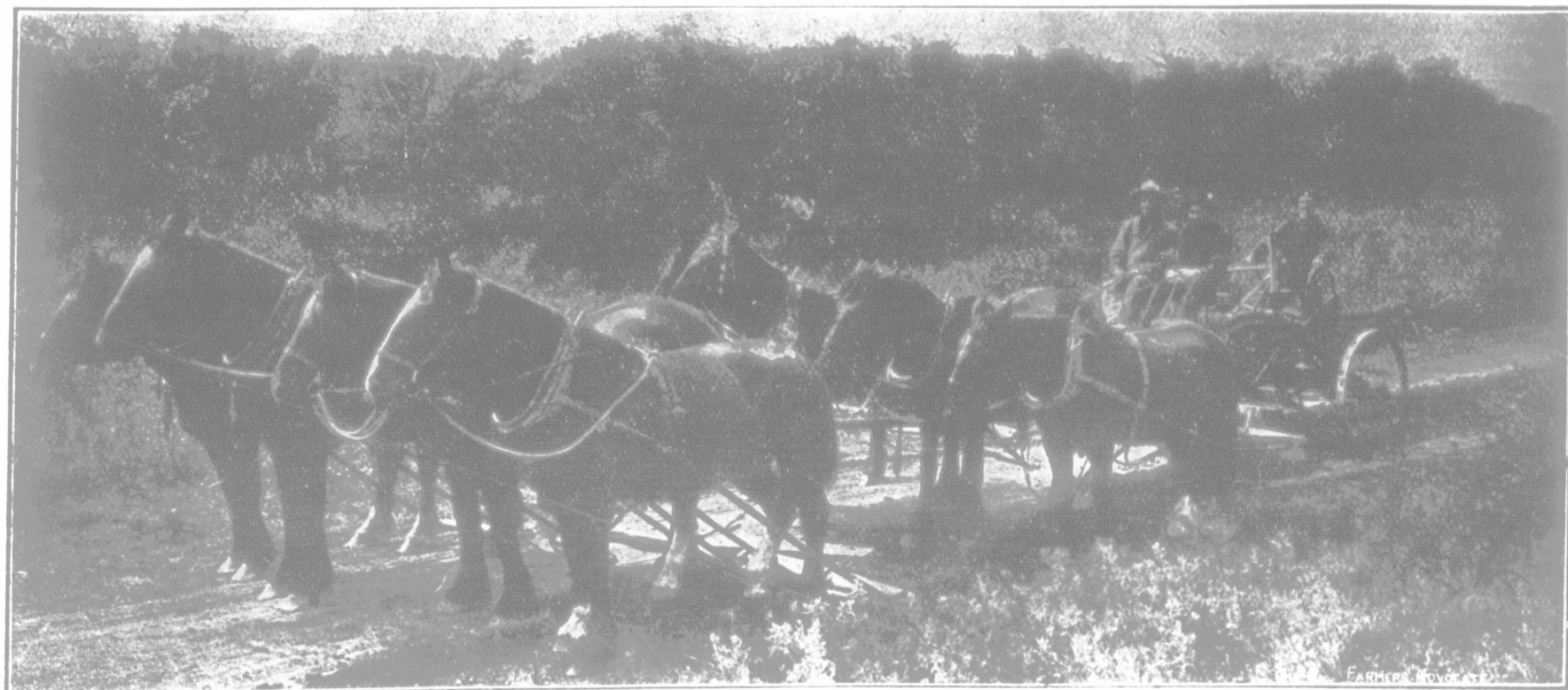
The slopes of cuttings and excavations vary with the nature of the soil. Solid rock may be cut vertically, or at a slope of one-quarter to one. Common earth will stand at one to one, or at one and a half to one; the latter is safer. Gravel requires one and a half to one. Heavy clayey earth will assume a slope of three-quarters to one, and fine dry sand of nearly three to one. When the lower part of a cutting is in rock and has a steep slope and the upper portion in earth has a much flatter one, a wide "bench" or offset should be made where the change of slope takes place. Fillings or embankments have less variety than cuttings in the nature and condition of their materials, and, therefore, have less variety of slope, which is usually one and a half to one, or two to one. The customary form of the side slopes of the cuttings and fillings is that of an inclined plane, though the natural face of an excavation when left to itself becomes curved, convex at the top and concave at the bottom. This curve of stability is more-over that of beauty, but has not yet been put into practice.

The qualifications desirable in the surface of a road are smoothness and hardness, so as to reduce to the smallest possible degree the resistances of elasticity, collision and friction. Smoothness is equally essential to comfort and to economy of labor, of carriage wear, and of road wear. Hardness is that property of a surface by which it resists the impression of any bodies which infringe upon it. It is essential to the preservation of smoothness.

An elastic surface, though pleasant for passengers, would be the worst possible for traction, as the yielding presents before the wheel a miniature hill up which the vehicle must be raised with a certain loss of power. If the depression were one inch and the wheel four feet in diameter, an inclined plane of 1 in 7 would be formed, and one-seventh of the entire weight would need to be lifted up this inch. A solid, unyielding foundation is, therefore, one of the first requisites for a perfect road.

The resistance of collision is occasioned by inequalities, stones, or other loose material against which the wheels strike, with great loss of momentum and waste of power of draft. It is, therefore, important that such obstacles be as few and small as possible, the resistances having been proved by investigation to be proportional to their size.

The resistance of friction arises from the rubbing of the wheels against the surfaces with which they come in contact, and will always exist, however the surface may be improved. Its two extremes may be seen on a road of loose gravel and on a railroad.



By J. A. Nute, Lumsden

GRADING ROAD NEAR LUMSDEN, SASK.

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SHARP

Manitoba Grain Growers' Executive Meet.

The executive of the Manitoba Grain Growers' Association met in Winnipeg on the 17th and 18th insts. to discuss plans and actions. Those present were:

President, D. W. McCuaig, of Portage la Prairie; vice-president, R. C. Henders, of Culross; hon. president, J. W. Scallion, of Viriden; S. C. Doran, Brandon; W. G. Rogers, of Carberry, and William Miller, of Boissevain. In the absence of R. McKenzie, secretary, who was unable to be present, W. G. Rogers was appointed secretary pro tem.

A communication from the Retail Merchants' Association and also from the Jobbers' and Shippers' Association, of Winnipeg, was read, urging co-operation in obtaining redress from the very unsatisfactory transportation conditions now existing throughout Western Canada. The remedy suggested was reciprocal demurrage or a penalty to be paid by the transportation company to the shipper for neglecting to remove a car a minimum distance per day as per a resolution passed at the annual convention in February. A resolution was passed indicating the association's willingness to co-operate in the matter.

The action of the Government in securing amendments to the Grain Exchange by-laws was approved, but in the opinion of the executive the amendments do not yet fully meet the requests of the association, and the following resolution was accordingly carried:

"We, the directors of the Manitoba Grain Growers' Association in executive meeting assembled, note with pleasure the action of the Government in securing amendments to the by-laws of the Grain Exchange, particularly those which refer to the elimination of competition in the purchase and handling of grain and also the removal of restrictions to membership in the Exchange. The amendments to rule 4, by-law 19, and amendments 7 and 8, do not seem to have been fully understood by the Government, and therefore as now amended do not meet our fullest approval, but in view of the fact that at the approaching conference we are assured that a full discussion and settlement of these matters will take place, we do not deem it advisable to make any further pronouncement at present. Carried.

In response to the many complaints received by the association from shippers at flag stations, it was moved by Mr. Miller, seconded by Mr. Doran: That immediate steps be taken to secure suitable persons at all flag stations on the Canadian Pacific Railway to look after car order, book and seal cars, and that Mr. Henders interview the C. P. R. in the matter.

The following resolution was also passed: That in view of the coming conference for the discussion of Government ownership of elevators and other matters, which was postponed until June 5th and 6th, be it resolved that preparations for the same be made."

Horticulture and Forestry**Practical Advice on Planting a Garden.**

EDITOR FARMER'S ADVOCATE:

If I were growing vegetables for my family use only I would adopt the following method: Land in this country being both cheap and plentiful. I would select two plots, or one large plot say one hundred rods, cropping half, in alternate years. During June or July I would summer-fallow and surface cultivate, with a view to having my plot thoroughly clean, and free from weeds the following year; in August manure and plow again, and cultivate thoroughly, mixing manure with soil and leave till following spring. Then say first week in May a scratch over with the harrows will be all that is necessary; then get a Planet Jr. drill with cultivator attachment.

Sow from the 3rd to 9th of May—carrots, beets, parsnips, onions, peas, lettuce and parsley, in rows from twelve to sixteen inches apart. In one hour a man can sow of these seeds as much as one ordinary family will require for a year. Then from the 12th to 16th sow cabbage, celery, tomatoes, beans, marrow, cucumber, squash and pumpkin. If the plot is sloping choose bottom of plot or where you have the greatest depth of soil for celery and sow flat, not in trenches, leaving from five to six feet from row to row.

For cucumbers sow thinly in drill, not in hill, and let drills be from six to eight feet apart. This method for cucumbers will also apply to citrons. For squash and pumpkins, sow in drills about ten feet from drill to drill. When plants have grown from four to six leaves; thin squash and pumpkins from six to eight inches from plant to plant; citrons and cucumbers, from three to four inches from plant to plant, protect at night if danger from frost. For tomatoes sow in rows from three to four feet from row to row. Bake or otherwise destroy sixty per cent. of

seed; mixing destroyed and good seed thoroughly, and sow together. Plants will be found quite thick enough in this way. Set indicator as marked for carrots and sow from one half to three quarter inches in depth on level and even surface. In cabbage sow from twenty to twenty-four inches from row to row, and set indicator between turnips and carrots. For onions let the bed be hard and well packed; sow seed according to indicator on drill and thin from two to two and a half inches from plant to plant.

As to kinds: In carrots, Short Horn and Ox Heart are good both for crop and quality; Beans, Valentine and Wardwells Kidney Wax. These may be sown in drills three feet apart from May the 12th to June 6th for succession crop. Beet, Edmand's Red Turnip and Early Eclipse are both good. Cabbage for early use, Jersey Wakefield, for general crop, Winingstadt; Cucumber, for pickling and general use, Nichols Medium Green; Cauliflower seed being expensive it is advisable to raise in hotbeds or boxes and plant out, from 1st to 10th of June. (Early Snowball is the best.) Parsnip, Elcoms Giant, and Student, are good; onion, Extra Early Red, and Yellow Globe Danvers; lettuce, Toronto Gem, and Paris Coss; peas, Premium Gem, and Rennie's Queen; radish, Early Scarlet, and Improved Chaities; squash, Hubbard; celery, White Plume, and Paris Golden. There are many other good varieties, but the



A RHUBARB (PIEPLANT) LEAF FROM THE KOOTENAY COUNTRY.

above will be found to give satisfactory results. Last year I sowed everything in the open, with the exception of cauliflower, and had very satisfactory results even with cabbage, tomatoes, and celery, (especially the latter). I do not follow the method of summer-fallow, but crop all my land for garden products every year, but have merely suggested the advisability of having land ready in early spring when seeding is all the rage, vegetables, like everything else, to be successful must have early attention, and if grown in the way indicated, will give more profitable results than anything else on the farm, the labor being reduced to a minimum.

S. LARCOMBE.

[Mr. Larcombe is one of the most noted gardeners among our Western farmers.—Ed.]

POULTRY**Hopper Feeding.**

No one will doubt that the hopper method of dry feeding fowls saves a great deal of time, and consequently enables a person to care for a much larger number with the same amount of time and attention. Within the last two years so much advancement has been made in the methods of dry feeding that it has become almost the only method used on large poultry farms. When one feeds only once a day, or once a week, one can handle so many more fowls than by the old method that the profits are much greater.

A person who has always fed certain quantities carefully measured according to the number of fowls

naturally looks doubtfully at a method of feeding which allows the fowls to help themselves when they like. He fears over-eating and indigestion, etc. But one method of feeding cannot be judged by what one observes under the other method. For example, when a flock of hens have been fed, say a quart of grain, three times a day, and you set a dish of grain down in front of them, they at once proceed to gobble down all they can hold. It is natural to suppose that if the dish were left there and always kept full that they would continue to gorge themselves, but anyone who has tried it knows that this is not the case. Fowls that have access to a hopper eat a little now and then all through the day, but never much at a time and will run about digging for bugs and worms quite as industriously as hens fed twice or three times a day. Growing chicks which are fed all the mash they will eat three times a day, will consume more grain than if they have dry grain always before them, and fed no mash.

There is much dispute as to whether hens will lay more fed on mashes or on dry grain. When a poultry raiser has fed mashes and suddenly changes to dry grain he gets less eggs. If another suddenly changes from dry grain to mashes he gets less eggs. Each is sure that the new method is not so good as the old. Any sudden change lessens egg production.

There is absolutely no question but that a larger number of chicks live and thrive when fed dry feed in hoppers than when fed mash at intervals; hundreds of chicks owe their early deaths to wet corn meal. After chicks are old enough to eat whole grain, if given the run of a hopper full of grain and free range, they will do better than by any other method of feeding.

The easiest hopper to make is one made of an empty box five or six inches deep and of any length and width to suit the number of fowls to eat from it. Two feet long and eighteen inches wide is a good size. Boxes of this size and depth can usually be easily gotten at any store. If they are too high it is an easy matter to saw them down to five inches. All that is necessary to complete the feed box is a frame made like a mosquito bar frame for a window and covered with chicken wire. The frame should be enough smaller than the box to let it move up and down easily. There should be about a quarter of an inch between the edge of the frame all round and the sides of the box. Fill the box nearly full of grain and put the frame on top of the grain; as the grain is eaten the frame follows it and keeps the fowls from scratching it out over the sides. Laths can be nailed to the frame an inch apart instead of the chicken wire if desired. The only objection to this hopper is that some of the droppings from the fowls get into the grain, but not so much as one would suppose, and the quickness and ease with which it can be made recommends it. When used in a building it should be nailed up on the sill to keep the fowls from scratching the litter into it.

If one wishes a hopper which the fowls cannot get into for the hen house, one can make it by taking an eight inch board from four to eight feet long according to the number of hens. This board makes the bottom of the trough or hopper. Nail two eight inch pieces sixteen inches long on for ends of the trough. Let them project below the trough bottom four inches to keep it above the floor. Let the end pieces project upward from the bottom twelve inches; then saw the upper ends of these end pieces like the gable ends of a house to carry the roof of the trough; then nail a three inch strip along the bottom and a one inch strip at the eaves and nail lathstrips up and down between, wide enough apart for the hens to put their heads in. Nail two boards together V-shaped at the right angle to fit your gables and you have a cover which can be lifted off to put the grain in. It will keep the rain out if you wish to use it out of doors and will keep the fowls from getting into the grain when used indoors.

Most of the objections which come to one's mind before trying hopper feeding disappear when it is used. There is absolutely no danger that growing chicks will eat too much dry feed, nor that laying hens will over-eat when out on free range. When confined to the hen house in cold weather hens should be fed oats in a hopper and a moderate amount of wheat in the litter. Those that lay will not fatten. Those that do not lay and get fat can be sold to the butcher.

Crossfield, Alta.

W. I. THOMAS.

Use Care When Testing Eggs.

A poultry expert thus testifies in a contemporary on a point of interest to poultrymen:

"We believe many crippled chicks are made the first test. Anywhere from the fifth to the seventh day the eggs are tested. Frequently the egg is rolled between the fingers in front of the tester; sometimes held so close to the flame that the tender germ is cooked; again, so rudely handled as to break or disturb the blood vessels of the tender allantois, the growth which pushes out from the digestive canal of the embryo and which is seen as a bag or sack protruding from the navel. The allantois serves as a temporary lung by which the blood is oxygenated from the outer air, and injury to it at any stage is disastrous to the chick.

Handle the eggs the first twelve days of incubation as if each had a tender living organism inside which would be killed or crippled by careless movement.

Increasing The Egg Yield by Selecting the Stock.

The Maine Experiment Station has for some time past given attention to the poultry industry and commenced investigations in breeding poultry to learn if the egg laying capacities of hens could be advanced and become a fixture in a family of birds. The aim was not to make a few phenomenal layers, but to increase the average yields of the stock for practical purposes. The work was begun eight years ago, by taking a stock of Barred Rocks that had been averaging about ten dozen eggs a year, per bird, and by the use of trap nests, selecting the hens that laid 160 or more eggs and breeding them the following year to the sons of other hens that had laid 200 or more eggs in a year.

During the seven years which have elapsed since the work was begun every generation of pullets has been subjected to rigid culling by trap nests and no bird with a record of less than 160 eggs has been bred. For the last two years the average egg yields of the flocks have been two dozen eggs per bird. While the increase of two dozen eggs per bird may in a measure be the results of improved methods of feeding and handling they feel very sure that it is chiefly due to the rigid exclusion of drone blood.

There is nothing new in the plan pursued. It is only breeding producers to the sons of producers, to get producers, and it has proven as true with the laying hen as it has with the dairy cow and trotting horse, and all other classes of improved animals.

The general use of the trap nests by small operators is not urged, because of the expense of equipping and operating. Anyone who is at all familiar with poultry can go among the pullets on the range in autumn and pick out the ones that are laying, or about doing so, and save them for the next year breeders. Twenty-five pullets picked out in this way from among a hundred in the station flock, averaged 180 eggs each in a year. While this method is not as good as trap nesting, it makes better breeding practical for the farmer.

Keep Charcoal in the Pens.

Charcoal is used to keep poultry and pigeons in a healthy, thriving condition, and this is done by the charcoal absorbing all the foul gases and sourness that may arise in the digestive organs, and preventing diarrhoea.

When the droppings are too soft is the time to guard against diarrhoea by giving more charcoal in the mash; then you will notice that the droppings harden and the bowels resume their natural and healthy condition. Poultry are frequently overfed (even by practical poultrymen) and in nine cases out of ten this will result in bowel disorder, which is guarded against in a measure by the use of charcoal. More little chicks die from diarrhoea than any other complaint; the use of charcoal is of assistance in rearing the little ones, and if kept before them constantly it will help them to reach maturity at an early age.

Charcoal is not a drug; it is a natural purifier from which no bad effects can result. Feed in the mash and in hoppers same as grit and shell.—*Farm Poultry.*

DAIRY

How to Make Devonshire Cream.

A leaflet by the British Board of Agriculture is clipped from the *Dairy World*, in which the art of making Devonshire cream is set forth, so that every dairy farmer may prepare the delicacy if he will. The writer remarks that Devonshire cream is strongly recommended by the medical profession as an excellent fatty food, and is displacing to some extent the use of cod-liver oil amongst invalids. Devonshire cream is very rich, containing from 50 per cent. to over 60 per cent. of fat, and this fat is of a more digestible kind than any other, being present in the cream in a finely emulsified condition. In the preparation of clotted cream, it is desirable to use rich milk, such as is produced from the Channel Island breeds of cattle; but this is not essential, and the evening's milk from Shorthorn cows will produce very good cream indeed. In Devon and Cornwall clotted cream is largely made from the milk of Devon cattle, which are admirably suited for the purpose. Crosses with Channel Island cattle are also commonly employed.

The cream is prepared as follows:

1. Whole milk, warm from the cow, is carefully strained into setting pans. The pans most suitable for the purpose hold about six quarts of milk, measuring fifteen inches across the top, seven inches in depth, and eleven inches across the bottom; they are, in fact, similar to shallow pans, only deeper.

2. The pans of milk are left undisturbed in a cool dairy for the cream to rise. In summer, twelve hours or less is the time allowed, but in winter twenty-four hours is usual.

3. The pans should now be carefully removed and scalded, great care being taken not to disturb the cream on the top of the milk. Scalding is carried out by placing the pans on a hot-water stove and allowing steam to play upon them until, in not less than half an hour's time, they have attained a temperature of 175 to 180 degrees F., when they are removed, and either allowed to cool naturally, or are cooled by placing them in a stream of cold running water. The scalding should not be done too quickly, otherwise the characteristic scald flavor is not produced. The heating may be carried out by placing the pans on a kitchen range or hob, but the hot-water method is preferable.

4. When cold, the cream may be taken off in a thick, clotted condition, and is ready for sale. In summer it is especially advisable to cool the pans as quickly as possible after scalding, as this insures extra keeping properties.

The cream is generally sold by the pound. One pound of cream may be obtained from one and one half gallons of Jersey milk, or less; whereas nearly two gallons of Shorthorn milk may be required to produce the same quantity of cream.

Salting and Working of Butter.

Objects of Salting.—The chief objects of salting are: (1) to impart a desirable flavor; (2) to increase the keeping quality of butter; and (3) to facilitate the removal of buttermilk.

The proper amount of salt to use in order to impart a desirable flavor depends chiefly upon the market. Some customers prefer a medium high salt content in butter; others again like butter which contains very little salt. The English market demands rather light-salted butter. In fact, this is the case with practically all European markets. American markets, as a rule, demand comparatively high-salted butter, as much as will properly dissolve in the butter. The salt-content of butter may vary between nothing and 4 per cent. Butter containing as much as 4 per cent. salt is, as a rule, too highly salted. When it contains this amount of salt, part of the salt is usually present in an undissolved condition. Those who like good butter prefer butter that contains the salt thoroughly dissolved and well distributed.

The amount of salt to be added should be based upon the least variable factor. Some creamerymen measure the amount of salt according to the amount of the cream in the churn. While the box-churn and Mason butterworker were being used, many makers preferred to weigh the butter as it was transferred from the churn to the worker. The method mostly in use now, and to be recommended, is to base the amount of salt upon the number of pounds of fat. The amount of salt to use per pound of fat varies, therefore, according to the conditions mentioned below, and also according to local conditions. Usually from half an ounce to one and a half ounces of salt per pound of butter-fat is most suitable. In whole-milk creameries the salt is often estimated per hundredweight or per thousand pounds of milk.

To get the butter salted uniformly from day to day is very important, as a small variation in the salt-content has a greater effect upon the quality of butter than has a small variation in any of the other butter constituents. A variation of 1 per cent. to 2 per cent. in the salt-content can very easily be detected by the consumer, while that much variation in any one of the other constituents could not be readily noticed.

The conditions upon which the proper amount of salt depend are: First, the amount and condition of moisture in the butter at the time the salt is added. If there is a great deal of loose moisture in the butter, more salt is necessary. This is due to the fact that the salt will go into solution in the water and be expressed during working. Secondly, it depends upon the amount of working the butter receives, and at what time the bulk of the working is done, after the salt has been added. If the butter is medium firm, moisture in the form of brine is being expressed during the working. Consequently the more butter is worked, up to a certain limit, the more brine is being expressed, and the more salt should be added to the butter. Thirdly, the amount of salt to add depends also upon the size of the butter granules at the time the salt is being added, and the hardness and the softness of the butter. If the granules are very small and quite hard, they take salt with difficulty. The salt attracts more moisture from these small granules than from larger ones, which will escape in the form of brine. If the butter is present in a rather soft, lumpy condition at the time the salt is added, and there is no water in the churn, consequently less salt is necessary in the first place.

It is undoubtedly due to these facts that the salt-content and the condition of salt in butter vary so much at the different creameries; they even vary considerably from one churning to another at the same creamery. If conditions are uniform in the creamery from day to day, the amount of salt to add to butter, and the amount of salt retained in the butter when finished, will be comparatively uniform.

It should be mentioned in this connection that butter made from very good cream should not be salted too heavily. Butter made from a rather poor quality of cream may be salted correspondingly heavier. This is due to the fact that the heavy salty taste covers some of the undesirable flavors in the butter. If the butter flavors are good, they should not be hidden by a heavy salty taste. If the butter flavors are poor, then it may be policy to partially cover them up with a medium-heavy salty flavor.

McKAY AND LARSEN

FIELD NOTES

Events of the Week.

BRITISH AND FOREIGN.

Lord Haliburton is dead. He was the son of the well-known Justice Haliburton of Nova Scotia, and Under-Secretary of War from 1895 to 1897.

King Edward's tour of the Mediterranean is likely to result in more friendly relations between Italy and Spain.

Mrs. Esther McNeil, founder and first president of the Women's Christian Temperance Union, died at her home in New York State.

According to the advice of Premier Laurier and General Botha the term "Imperial Council" will not be used in speaking of the Colonial Conference, as it would imply a body of an authoritative rather than an advisory nature.

Several thousand skilled workmen have been dismissed from the Woolwich arsenal as a result of the policy of reduction in military expenditure. They marched to the House to present their case.

The British delegates to the Peace Conference at the Hague in June are Sir Edward Fry, Sir Ernest Satow, Lord Reay and Sir Henry Howard, besides several naval and military experts.

CANADIAN.

The miners and operators of Canadian Western mines have not yet come to terms, though the prospects of a satisfactory settlement look brighter.

The by-law to raise \$250,000 in Calgary, Alta., to establish a municipal street railway passed by a vote of 466 to 148.

A gang of counterfeiters, who have been engaged in making and circulating worthless coins, have been broken up and one of the party arrested at Red Deer, Alta.

Pawnbrokers in Toronto were fined for charging interest on money loaned at the exorbitant rate of a hundred and twenty per cent.

A Dominion blue book recently issued from Ottawa places the number of wage earners in Canada at 814,930 of which 81.75 per cent are males.

Reports have come west that the Canadian Soo is free of ice and ready for navigation.

Endorses Cash System.

EDITOR FARMER'S ADVOCATE: I wish to endorse the article by "Farmer" in your issue of April 10th, on the cash system. As a business man I wish to say it is a curse to both the business man and the farmer, and the sooner it is cut out the better it will be for all parties, and the better value the farmer will get for his money. As it is now, a large number of people buy anything that is offered, because pay day is a long way off and they do not consider very much the quality of the goods or the reliability of the party who is behind them. The result is that the farmers of the West to-day are paying for a whole lot of "hot air," and paying a big price for it too, because of our credit system, with its long price and long time deals.

It may not always be wise for a man to wait till he has all the money to buy an outfit which costs from \$300.00 to \$3000.00, but he ought to have at least 50 per cent. of it, or wait a little longer. In justice to himself he ought not to buy any till he has half the price or more. It is these three, four and five years' payment schemes that make a man poor. I feel satisfied that if a united effort were made by both business man and farmer, in five years this long time credit business would be a thing of the past, and all parties concerned would be benefited.

H. CATER.

Warning on Beardless Barley.

A correspondent sends us the following:—
"Do not sow the so called sixty-day barley. All parties that have tried it here have disposed of the stock and will use the Manchuria or Odessa six-rowed sorts. The sixty-day barley is a failure as a yielder and shells badly; in fact, the whole head breaks off. It does not stool out like the six-rowed, and further, will not kill out the wild oat pest. You cannot grow a grain crop and expect the wild oat not to mature to seed. The above advice may save people useless expense. I. K."

Plows Wild Oats Up.

EDITOR FARMER'S ADVOCATE:

I noticed on page 531, No 759, an article headed "Deep Plowing for Wild Oats." My opinion is not to plow down wild oats but to plow them up. Now, say in the fall the land that has the wild oats on is plowed from one to two inches deep; that will stir the ground up and make them grow from the root and also turn down the seed that has shelled out in the harvest time and they also will sprout. Then just while they are in the spring green summer-fallow or if there is not time cut them green for feed; then plow deep in the fall. If any farmer is benefitted from this method I should feel grateful and should like to hear of how others treat wild oats.

Man.

P. M.

Seed Tested at Calgary.

The following is the list of the number of samples of seed tested at the Western Seed Laboratory at Calgary from January 25th. to April 20th, and indicates that the farmers of the Western provinces have made fairly good use of the opportunities afforded them of determining the vitality and purity of their seeds. Judging by the numbers of samples received from Saskatchewan it would appear that a laboratory for that province would be well patronized.

	Alta.	B. C.	Sask.	Total.
Wheat	63	5	47	115
Oats	188	3	16	207
Barley	33	3	7	43
Rye	1	0	0	1
Peas & Beans	2	0	0	2
Flax	5	0	5	10
Rape	0	2	0	2
Timothy	7	48	1	56
Other Grasses	15	39	1	55
Alfalfa	4	17	0	21
Red Clover	3	56	1	60
Alsike Clover	2	23	0	25
Other Clovers	1	20	1	22
Vegetables	63	0	0	63
	387	216	79	682

Experimental Farm in the Peace Valley.

Readers of the FARMER'S ADVOCATE have noticed articles from time to time by F. S. Lawrence of Fort Vermilion, Alta., on different subjects pertaining to the Peace River and the empire in the far Northwest. Lately Mr. Lawrence has been appointed by the Dominion Government to conduct experiments with farm crops and fruits in the Peace River Valley and to have charge of a meteorological station. The valley is expected to be opened for settlement in a few years and it is desired to have data and demonstrations to inspire confidence in the land. Already over 30,000 bushels per year have been raised at Fort Vermilion and Peace River Crossing, and there is every promise that an immense population can be supported in the country adjacent.

Fredric S. Lawrence was born October 9th, 1875, and went with his father, the late E. J. Lawrence, to the Peace River in 1879, taking from May 2nd to September 8th to reach their destination. He made his first trip up the river in 1891 and brought back a thrasher on a raft, covering the distance, 300 miles, in sixty hours.

In 1893 he made his first exit from the valley fastness and took in the exhibition at Winnipeg and the Worlds' Fair at Chicago.

In 1896, after studying at odd times, Mr. Lawrence entered Purdue, Ind., University and took the mechanical engineering course for two years. After having travelled extensively in Eastern Canada and the United States, he returned with his young bride to their home in the Peace River country, where he, with his brother, has been extensively engaged in farming and milling.

Bulkley Valley, B. C.

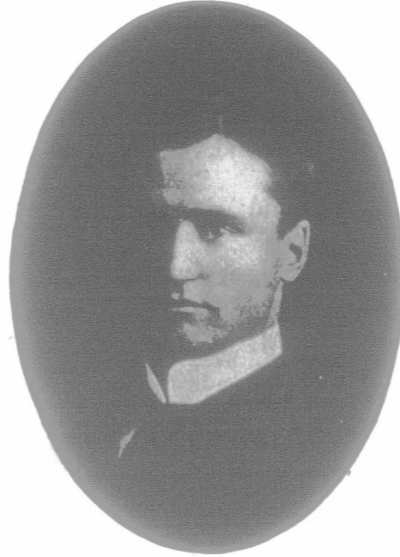
The pioneer is penetrating the seclusions of the Canadian mountains and vast fertile valleys are becoming familiar to the agricultural prospector. One of the latest of these to demand public notice is the Bulkley Valley, which lies in the heart of the mountains some 760 miles north of Vancouver. The valley is reached via Prince Rupert, the Skeena river and the pioneer town of Hazelton. Settlement was begun in the Bulkley Valley some years ago and the land is reported fertile, the climate pleasant and there is the firm conviction in the mind of every Bulkleyite that the G. T. P., the C. N. R. and the G. N. R. will all run through the valley, which is about one hundred miles in length and estimated to be capable of supporting an agricultural population of 100,000. An enterprising lady, Mrs. E. Morrison

Grout, has begun the publication of a paper, the *Bulkley Pioneer*, devoted to the interests of the northern interior of British Columbia and all things considered the Pacific province should this year experience an expansion partially commensurate with her abounding resources.

Room for Lots of Improvement.

EDITOR FARMER'S ADVOCATE:

Practically I am not a thrasher, but have been working around an outfit as a helper some twenty years or more, first as a farm hand and later sometimes as an employer of the machine and sometimes on the gang or crew. My remarks will therefore be made a good deal from observation. It seems a very vexed and unsatisfactory business if we judge from remarks of those who are financially concerned in the success of a threshing outfit, much more so since expensive, complicated machinery has come into use. The principal trouble is that something keeps going wrong and it's buying, repairs, fix, fix, fix, from start of season till end and then an outlay of \$200 and more often more before another season can be rightly undertaken. This is not only on an outfit which has done considerable duty, but on a rig only a year or two in usage. If some of the smaller machines used on the farm gave so much trouble they would soon be discarded.



F. S. LAWRENCE.

In Charge of Experiments at Fort Vermilion, Alta.

There is a strong feeling that these huge engines and big machines are not what they promised to be. They fail to make a return on money invested and for many reasons, some of which are: Dead capital about 10 1/2 months a year; a large force to operate if they run and this force creating a huge loss and expense when they don't run; yearly outlay for repairs and their premature wreck on account of weather usage whether in active service or idle.

I think it more satisfactory to have an individual owner if possible. Too many cooks spoil a meal, generally a business enterprise also. I have known of co-operative ownership, but it does not generally work satisfactorily. Nearly all the outfits operating here are controlled individually, sometimes a partner being taken. I have thought considerable about a different system of threshing; also read all I could to find information. I'll give you my reasoning! An outfit run by a gasoline engine commends itself to me. Suppose we put the price of gasoline against the wages of men and horses necessary to run a steam engine. If it is necessary to have to lay off the expense is practically stopped and it is not necessary to pay a man for firing, say two hours every morning, and no money coming in. A good mechanic ought to be able to superintend both ends if he has a first class article and fully understands his business. This leaves every man to fill some other place. If shock threshing is being done I should like a rig that would handle what four teams would draw in. Should endeavor to have small stationary or portable bins and save grain teams if possible. The horses should not all be threshing on Manitoba farms, but a complete outfit left on each farm enough to work on the land all the time. If rain, wind or breakdown occurs the teams and men engaged threshing should not be any more than two miles or less from their own farms, so they could immediately turn to something else. Three or four farmers could keep this outfit running. They could stack some each before commencing as a means of having some clear land to work on with a cultivator or plow. If a shower interfered with shocks and they were anxious to thresh, the stacks might go. If not particularly necessary to run the men and teams could work at home and the stacks left till the shock wheat was finished. Under present conditions I always stack, as I have no say in a machine and no idea when I might get threshed; consequently deem it advisable to clear the fields. Another point I have against shock threshing is on account of the outfits at present bringing such a large gang that if a lay-up occurs on many of them the farmer bears the whole expense and inconvenience. This would be eliminated on a small outfit with men and teams not far from home. Supposing the outfit were owned as a complement of the farm machinery of four farmers. If they had time to spare a job

or two extra might be taken in, the farmers finding their own men and teams in proximity to where the threshing is done. I should have no objection to shock threshing under conditions similar to the above, as it is a matter not very encouraging to stack or handle grain twice in a short season, as it is not often we make any more than one or two cents premium over what is threshed in fairly good time. I still believe, however, that stacking improves the grain, but the stacker is not recompensed enough under our present selling system. I have had no experience in co-operative ownership, but my first year's crop was threshed by a syndicate outfit in which I was persuaded to join and shock thresh and I was not in love with the system at all. They told me five jobs would take about three weeks, but we were about two months and I never got a plow cleaned that fall. The small outfit commends itself to me, for the following reasons: Less dead money invested; chances of better employment of time; separator easier put out of the weather the time not in use or canvassed during bad weather while in use; the engine housed more conveniently in winter or summer and used for crushing or cutting, perhaps sawing wood occasionally. Sawing wood, however, is perhaps too easy a job for an engine developing enough power to thresh with. As I have been told they use the same amount of gasoline as when employed on heavier work.

The trouble with a steam engine in Manitoba is getting the fuel. Straw may be wet or it may be so windy only an occasional day is suitable and we have lots of work in fine weather, but less in rough or wet time. This is just where a gasoline would come in. A small building would hold all under cover and I don't think there is much danger of fire. Lack of knowledge or experience in handling a gasoline engine will deter its usage for some time as a general thing. The price of whatever material is used as the explosive will also be a feature to reckon with. I think our young men who are not particularly employed in winter or needed on the farm ought to study engineering and obtain knowledge as practical machinists.

I should prefer for the farmers to hire and control the harvest and threshing hands altogether. Under present system the farmer and thrasher work in opposition to each other in their endeavor to secure their men. The farmer has to put up the board work or no work and it's not a social affair to some men to sponge board, neither is it just for the farmer to put up board free.

In 1905 some threshers claimed they ought to have 6 cents for shock threshing oats and barley. Some years oats are only 20 or 22 cents a bushel. Supposing this the case, if we take a tenant farmer who pays one-third for rent, say 7 cents on a bushel, and 6 cents for threshing, besides board and his own work at threshing, say 7 cents more and he has 7 cents for all the rest of his work. How many acres or how many bushels to the acre would it take for the farmer to have margin enough to live? The stack threshing price of 4 cents is also too high. A good man on a flail or "poverty stick" can make fair wages at that price if he works the hours he does on a threshing crew. Complex machinery is above its value when it increases the cost of production over manual or hand labor. The quality of crop a machine (either large or small) has to thresh will many times make the balance profit or loss. Farmers themselves can control this to a certain extent. Some have dirty or bad threshing every year; poor crop; tangled, over ripe, bad sheaves; wet stacks, or weedy land; threshing preparation only half ready and things out of shape in general. Others seem to have it vice versa. It is a matter that could stand lots of discussion and improvement.

GEO. ARMSTRONG.

Rabies (Hydrophobia), Madness in Dogs.

In another place reference was made to a mad dog scare which exists in some parts of Manitoba, and in order to give a little information on a subject which fortunately rarely crops up, some of the evidences of this disease as it appears in dogs are submitted, and the length of time usually elapsing between a bite from a mad dog and the appearance of the disease in the animal bitten.

In all cases the transmission of the infective matter to other animals appears to be directly effected by the bite of a rabid animal without any intermediate bearer. Rabies is therefore to be looked upon as an inoculation disease, the saliva serving as the vehicle for the contagium. Roux and Nocard have pointed out the very important fact that two or even three days before the appearance of rabies the saliva contains the contagium, and is consequently virulent towards the end of the period of incubation.

If the virus contained in the saliva of a rabid animal penetrates the skin, it may remain for a long time at the site of the bite, or it may enter sooner or later into the body by means of the blood or along the nerve-tracts. According to the most recent investigations, it appears that the virus of rabies moves from the bitten part chiefly within the nerve tracts in a direction towards the central nervous system. It is evident that the virus becomes best developed in the brain and spinal cord—the former being the principal seat for the development of furious madness, the latter for that dumb madness—two forms which appear in the dog. Inoculation experiments have shown that the disease breaks out

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ROUG.

Dogs.

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most rapidly from direct inoculation into the brain, under one of its coverings (the duramater), and that the period of incubation (length of time disease takes to develop) is proportionate to the distance of the site (bite) of the inoculation from the brain.

The period of incubation is longer than in other infective diseases, and in dogs amounts on an average from three to six weeks, with a maximum of several months, and a minimum of only a few days. (Hunting, a noted English veterinarian, puts the usual period at about twenty-five days.) The virus may remain for a long time (as we have already said) at the site of the bite and may become absorbed only in small quantities at a time; or it may rapidly and in large quantities penetrate into the body. According to one authority, the younger the animal the shorter is the period of incubation; it will thus be seen how important it is that muzzling regulations should be observed and enforced in their entirety.

The percentage of deaths in mankind is considerably influenced by treatment. Bollinger states that of 100 bitten men only from 8 to 47 become infected. Pasteur puts the percentage at from 16 to 80. The Pasteur treatment is that giving the best results and the sooner it can be had after being bitten the greater the chance of the avoidance of this fearful disease by the person inoculated. The symptoms of this disease in dogs depend on the form such has taken, for as in other domestic animals, it occurs in two forms; namely, *furious madness and dumb madness; the former being the more frequent.* Pasteur considers that furious madness takes place when the brain is attacked, and also when the virus has been inoculated into the brain; and that dumb madness is manifested when the spinal cord is specially invaded. *The two are consequently only different forms of one and the same disease,* and are not different diseases, as was held in former times. A furiously rabid dog can transmit dumb madness, and vice versa. We must also lay stress upon the fact that there are many intermediate forms between these two varieties, which often merge into each other so intimately that a distinction is impossible.

SYMPTOMS OF THE DISEASE IN A DOG.

The premonitory stage of the rabies lasts on an average from twelve to forty-eight hours, and sometimes even longer. The preliminary signs consist especially in the altered behavior of the animal, which becomes capricious, sullen, peevish, excited, nervous, irritable, frightened, restless, distrustful, or obstinate. It likes to hide itself, frequently changes its resting place, and often starts up suddenly; or it may become extraordinarily affectionate and confiding. Some dogs suffer from an abnormal itching of the site of the bite, which they gnaw and lick. There is a characteristic perversion of taste which has much similarity with that in pica (licking disease) of cattle. Although at the commencement of the disease the patient has a good and sometimes a voracious appetite, later on it turns away from its accustomed and even favorite food. The affected dog is fond of licking cold objects; bites and gnaws at whatever comes across its way, and sometimes swallows foreign bodies, especially straw, grass, earth, stones, pieces of wood, bits of glass, rags, and even its own feces and urine. Some dogs continually smell or lick their sexual organs or those of other dogs. Even in this stage we may sometimes notice light spasms in swallowing, panting, difficulty in breathing, fever and continued stretching out of the neck. The patient generally suffers from constipation. The second stage, that of irritation, lasts three or four days and is characterized by attacks of fury, which may continue for some hours, and convulsions with remissions. Among other signs of restlessness the dog evinces a violent desire to run away from its home. With this object, a very quiet and domesticated dog, which have been kept in confinement, destroy their kennel or break their chain, and dogs that live in the house remain close to the door so as to escape, and when they get into the open they wander about aimlessly, run to and fro, depart on long journeys, or boldly enter strange houses. They often cover in a very short time great distances, thirty or forty miles for instance. In some cases they return home. At the same time they are seized by a more or less excessive morbid desire to bite, which may increase to senseless fury and true mania. At first this inclination to bite is only slight, and is evinced by the dog snapping at inanimate objects, animals or people, and also, in its state of mental confusion, at imaginary objects in the air (snapping at flies). It is also very irritable. Later on it bites, sometimes blindly, sometimes aggressively, everything that comes in its way, such as human beings, including its own master (especially if he provokes it by punishment), horses, sheep, goats, fowls, and particularly dogs and cows. The animals bitten die within four to eight weeks, although symptoms may take a longer period to develop.

The altered behavior often takes the form of increased vivacity and increased friendliness of disposition. This high strong demonstrative state lasts only about a day or so, and then rapidly changes into the melancholy stage.

In other canine patients, depression is more prominent than maniacal excitement. They appear dull and imbecile, have hallucinations, stare constantly at one spot, snap at imaginary flies, howl continually, and are perfectly insensible to blows and kicks. In a few cases well-trained dogs obey commands of their master to the very last.

Dumb madness is distinguished from the furious form chiefly by the absence or very short duration of the stage of irritation or mania. Consequently paralysis, especially of the lower jaw, appears comparatively early. Death takes place in two or three days.

In cattle and horses the disease appears in from four to eight weeks after being bitten by a mad dog; cats evince madness in two to four weeks; pigs develop the disease in two to three weeks; sheep three to four weeks.

U.S. Boosts Salaries of Meat Inspectors.

The United States Civil Service Commission announces an examination to secure eligibles from which to make certification to fill at least twenty vacancies in the position of veterinary inspector in the Bureau of Animal Industry, Department of Agriculture. The entrance salary of this position has been increased to \$1,400 per annum, promotion to \$1,600 to be made after two years' satisfactory service at \$1,400, and promotion to \$1,800 after satisfactory service for four years at \$1,600 per annum.

Hitherto the U. S. veterinarian on duty at the abattoirs (packing houses) has been termed a meat inspector. The official title has been changed to veterinary inspector.

Lumber Dealers Declared in a Combine.

The committee of the Dominion Parliament which have been making enquiry into the condition of the lumber trade in Canada has completed its work and made its report to Parliament. From the evidence obtained the committee unanimously agreed and reported that there is a combine in connection with the retailers' association and also in connection with the manufacturers' association. The committee also reported that as a result of this the price of lumber in the West is excessive. No recommendations are made but it is morally certain that the Government will take steps to put an end to the combines as commercial institutions.

Brandon Farm has New Superintendent.

After being superintendent of the Dominion Experimental Farm at Brandon, Man., for about a year Prof. Newton Wolverton has resigned, the term of his active services to end on June 1st, next. On being relieved of duty at Brandon Prof. Wolverton will go to the Kootenay country to engage in fruit growing.

In appointing a new superintendent for the farm the Government has acted quickly and wisely in selecting James Murray, B. S. A., at present Superintendent of Fairs and Farmers' Institutes in Saskatchewan. Mr. Murray comes well equipped for the work of an experimentalist and investigator. His agricultural education has been of the broadest character. The first twenty years of his life he spent on his home farm at Avening, Simcoe Co., Ont. In 1898 he began his four-year course at the Agricultural College, Guelph, and graduated in 1902 with a most creditable standing. Immediately on graduation he was selected by the Dominion Department of Agriculture to assist in the advancement of the pure seed propaganda which was just then being exploited. Later he came to the West as the representative of the Seed Branch and had charge of the work of preaching the gospel of seed improvement in the four Western provinces. In 1906 he joined the strong staff of agricultural experts with which Hon. W. R. Motherwell has surrounded himself in the Saskatchewan Department of Agriculture.

Mr. Murray is essentially a thoroughly practical farmer, both by instinct and choice, and brings to his work at Brandon a happy blending of experience, discretion and youthful energy. Manitoba is fortunate in the possession of so promising an agriculturist.

A Mad Dog Scare in Northwestern Manitoba.

Some time ago a dog was reported to have bitten live stock in the vicinity of Oak River, the animals bitten dying in every case. The dog was shot, but it is not known whether other dogs were bitten before it was killed. Later on another outbreak of rabies was reported a little further north and west, with similar fatal results, and recently Shoal Lake is said to be the scene of another outbreak of rabies, the two forms, dumb and furious, being present. At the present time six townships are under quarantine, in which dogs must be muzzled or tied up; if found at large, they are promptly shot. The Veterinary Branch have the matter in charge and are taking vigorous steps to stamp out this terrible menace to human life. It's a pity the scare re dogs was not more widespread, if it would have the effect of ridding the country of mongrels so plentiful in some districts. While the heading might be interpreted by some that the alarm was not well founded, we understand on good authority that the many deaths from dog bites, of horses, cattle and swine point conclusively to the presence of rabid dogs in that part of the country. People will be wise not to take chances, and dispose of wandering curs on sight.

Things to Remember.

- Western Stock Growers' Assoc., Calgary.....May 9
- Purebred Cattle Sale, Calgary.....May 9
- Purebred Cattle Sale, Brandon.....May 30
- Central Alberta Stock Growers' Association Meets.....June 9
- Shorthorn Sale, A. & G. Mutch, Regina Exhibition Grounds.....June 26
- Calgary Exhibition.....July 9, 10, 11 and 12
- Portage la Prairie Exhibition.....July 9, 10, and 11
- Hackney Sale, Rawlinson Bros., Calgary.....July
- Winnipeg Exhibition.....July 13 to 20
- Regina Exhibition.....July 30, August 2

MARKETS

Last week the wheat markets all over America made a continuous advance due to the reports of damage done in the southwest by green bugs and cold weather. During the week May wheat advanced four cents on New York markets and in Winnipeg the advance in cash wheat last Friday was 1 1/2 cents, the same on May and July, and 2 1/2 cents on October. Prices have also advanced in Europe and some good export business has been done.

Navigation is open down the lakes two weeks later than last year and when the washouts on the railways are repaired there should be rather a lively movement of freight.

The lateness of the season is on every person's mind, but as yet no apprehension is evident. People are becoming accustomed to the vagaries of our climate, and also to almost certainty that crops come good anyway, so are abiding the time.

Quite a sensation was created last week when the leading Crown counsel in the case against the Grain Exchange, R. A. Bonnar, retired from the prosecution. As a consequence Judge Phippen enlarged the case for ten days.

At last week end Thompson, Sons & Co. reported as follows of the Winnipeg market: "Up to Friday Winnipeg market was firm but advanced scarcely as much as U. S. markets, and our May wheat was almost weak owing to the liquidation of the May option. This would have been otherwise if lake navigation had been open, as then the demand for cash wheat for boats would have held the price up better. Prices are 1 Hard 80 1/2c., 1 Nor. 79c., 2 Nor. 76 1/2c., 3 Nor. 74c., and No 4 wheat 71 1/2c., spot or enroute; and on the option market May 79 1/2c.; July 81 1/2c., October 82 1/2c.

GRAIN AND PRODUCE (WHOLESALE).

No. 2 white oats	36 1/2		
No. 3 Barley	44 1/2		
No. 1 flax	1 25		
Bran	17 50		
Shorts	18 50		
CHOPPED FEEDS—			
Barley and oats	24 00		
Barley	20 00		
Oats	26 00		
HAY, per ton (cars on track,			
Winnipeg)	12 00	@	14 00
Loose loads.	13 00	@	15 00
POTATOES, per bu. 80			
CREAMERY BUTTER—			
Fancy, fresh made bricks	32	@	34
Second grade bricks	25	@	27
DAIRY BUTTER—			
Extra fancy	21	@	22
Prints, fancy, in small lots	17	@	20
Dairy, in tubs			17
CHEESE—			
Manitoba	14 1/2		
Ontario	15	@	15 1/2
Ontario, twin	15 1/2	@	16
EGGS—			
Manitoba fresh gathered, f.o.b.			
Winnipeg	18	@	19
POULTRY (cold storage stock)—			
Spring chickens	15 1/2	@	16
Spring ducks	16		
Fowl	12		
Young turkeys	18		
Geese	14		

LIVE STOCK.

There is still a good demand for the butchers cattle that are coming in at five cents. Country points also pay five cents and better. Poorer stuff is graded and some is even so good that it looks as if it might owe the feeder and buyer something. Hogs sell readily at \$7.75 without culling. Judging by the stock coming in the popular hog is a cross between either a Tamworth or Yorkshire and a Berkshire. Sheep are \$5 to \$6 per cwt. and lambs \$6 to \$6.50.

HOME JOURNAL

Life, Literature and Education

IN THE WORLD OF LITERATURE AND ART.

The Ontario public schools are to be given a new set of readers, and those in use at present are to be recalled.

* * *

Mr. Maurice, the Canadian artist, has two pictures on exhibition in Paris; one at the salon of the Societé Nationale and the other at the Luxembourg.

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Knox College, Toronto, conferred the degree of doctor of divinity on Rev. Hugh McKay, B.A., missionary to the Indians at Round Lake, Sask.

* * *

The President of France has conferred the Cross of the Legion of Honor upon Andrew Carnegie in recognition of the work he has done in the interests of Peace. The presentation was made by Baron de Stourmelles de Constant at the banquet of the Peace Congress in New York.

* * *

At Charlottetown, P. E. I., diamond medals have been given to Capt. John Champion and Capt. Daniel Fraser; watches to Jas. Cahill, William Leavitt, Geo. McBeath, Chas. McNeill, Frank Skerry, Chas. Perry, John McCabe and Wm. Smith for rescuing the crew of the schooner of A. J. McKeen, wrecked last November.

* * *

Sir Ernest Cassel's magnificent marble palace in Park Lane is being embellished with 60 tons of Canadian blue marble, about which the Princess of Wales is so enthusiastic, and which beautifies many of her rooms in the Marlborough House.

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The story of "Ben Hur" as dramatized has just been given on the stage for the 2,500th time in New York City. Beside it has been given five hundred times in Philadelphia, a thousand in Columbus, Ohio, fifteen hundred at Drury Lane Theatre, London, Eng., and two thousand in Chicago. It is calculated that six million people have seen it during the eight years it has been in drama form.

* * *

No singer since Adelina Patti was ever so careful of the voice as the little tenor Signor Bonci. He refuses all social invitations, lives only among his intimate friends and seldom ventures into the theatre except when he is going to sing. Rarely has he been seen in one of the city restaurants where his colleagues gather daily. Signor Bonci has learned from experience that his voice can be kept in condition only by careful living and a limited amount of singing. He therefore follows very strictly his rules of conduct. In these days in which singers are eagerly chasing after every kind of social attention his case is striking.

THE COAL MINERS AND THE ANTI-STRIKE LAW.

Last year under the name of the Industrial Disputes Investigation Act, a bill was brought into Federal Parliament and has since become law. This act provides for the constitution of boards of investigation whose duty it is to deal with any differences between employee and employer which cannot be settled without recourse to strike or lockout. Until disputes have been submitted to this board, investigated thoroughly and reported upon, it is an offence for employees as a body to quit work or for employers to close

down on purpose to keep the men out. The master acting contrary to the provisions of this law is liable to a fine of from a hundred to a thousand dollars for every day or part of day that the lockout exists. The men who go on strike (that is, cease work in a body as the result of a common agreement or understanding) shall be liable to a fine of from ten to fifty dollars for each day or part of day that the strike continues. Penalties are also imposed on the persons exciting or encouraging in any way either employers or employees to violate the provisions of this act. After the disputed points have been investigated by the board and its recommendations have been reported, the parties are at liberty to accept or reject its findings as they see fit.

The first to test the strength of the new law are the mine workers of Alberta and British Columbia. They have asked the mine operators for fortnightly pay, eight hours a day and a general increase in wages of ten per cent. They object to the condition insisted upon by the operators that the agreement between the latter and the men might be changed if the laws of the land imposed new burdens upon the mines or miners. The two forces have not yet discovered a basis of agreement, and the men in most of the Western Canadian coal mines have quit work. They maintain, however, that they have not violated the new law because they have gone out as individuals without a general understanding or direct orders from the union, thus avoiding, they believe, rendering themselves liable to the penalties named in the act.

It is sincerely to be hoped that the law may prove adequate to this situation and speedily manifest it, for with scarcity of fuel added to insufficient means of transportation the prospect of another winter of discomfort and suffering seems imminent.

THE HAGUE CONFERENCE.

In 1898 the first Peace Conference of the nations of the world met at the Hague in response to the call of the Czar. At that conference three planks were laid in the platform of the peaceful intercourse of the nations—provision for arbitration and mediation, the Geneva Convention of 1864, and the rules for the government of maritime warfare. The question of the limitation of armaments was brought forward by Russia but was set aside as involving useless discussion.

The second Peace Conference will meet in the same city this year some time in June. For the past year diplomatic discussions have taken place in the various capitals as to the matters to be brought before this second conference, and now these have been collected and formed into a program issued by the Russian Government. A noticeable omission from this program is the reduction of armaments, omitted on the ground that its discussion led to nothing at the former meeting. But some of the powers are of the opinion that a Peace Conference without disarmament negotiations is Hamlet without a ghost. Those who most strongly disapprove of ignoring this important detail of the peace movement are Great Britain, United States and Spain, who

each have put themselves on record as reserving the liberty of submitting to the second Conference the question of the reduction or limitation of armaments in addition to the items on the prepared program. Russia, Germany and Austria-Hungary are the chief powers endeavoring to prevent the appearance of this obnoxious subject. Italy, persuaded by Germany, will likely follow her ally's example, and while France has a strong peace party, the foreign office is inclined to side with Russia.

CHANGES IN POSTAL ARRANGEMENTS.

A surplus in the revenues of the Canadian Post Office Department is not a thing of which to be proud so long as there are so many crying needs in the service which that money ought to relieve. Western Canada has suffered much because postal facilities have limped along so far in the rear of commercial expansion, and complaints have come from every direction about the inadequacy of the provision made to serve the public.

Postmaster-General Lemieux has seen the need and is endeavoring to bring about improvements. The estimates for the coming year call for \$50,000 to be devoted by the Department to the institution of free delivery in cities of ten or twelve thousand whose annual revenue amounts to \$10,000. If the revenue reaches the required amount and other conditions are favorable, the minimum population will not be insisted upon. Provision has also been made for the liberal increase in salary to postmasters, a step in the way of reform that will meet with the approval of Canadians in general.

New arrangements have been made in our postal dealings with Great Britain and the United States. With the latter an agreement has been made whereby newspapers and periodicals mailed in the one country and addressed to the other are subject to a rate of four cents a pound prepared by stamps. It is a conservative estimate that for every ton of printed matter going from Canada to the United States there are twenty tons make the journey across the border into the Dominion, which means that Canada has all the work of distributing and none of the revenue arising from this immense amount of literature. As matters stand now the only way for American magazines to avoid paying the new postage is to send the periodicals by freight or express into Canada and have them mailed from a Canadian post office at domestic rates, in which case Canada gets the benefit of the revenue returns.

Up to the present time the rate on British newspapers and magazines has been eight cents per pound, a rate so high that comparatively few Canadians could afford to buy the press products of the Mother Country. With a desire to encourage freer intercourse between Great Britain and Canada and a wider knowledge each of the other, the British Postmaster-General has agreed to reduce the postal rates on registered newspapers, bona fide magazines and trade journals, published at regular intervals of not more than one month, to two cents per pound, packets to be limited in weight to five pounds. In return for this consideration the Dominion Postmaster-General undertakes to convey, free of ocean transit charges, all such journals sent to Canada by vessels under contract with the Canadian Government. Such an arrangement should make it possible for every Canadian to take a British periodical which will keep him in touch with the world and quicken his interest in the problems and welfare of the Empire.

SUORA MARIANNA.

In a convent, old and quiet, near a little country town,
On a chestnut shaded hillside, to the river sloping down,
Dwelt a few of those good sisters who go out among the poor,
Who must labor late and early, and much weariness endure;
And the one who did in patience and in all good works excel
Was the Sister Marianna, she whose story now I tell.
She was ever kind and willing, for each heavy task prepared:
No one ever thought to spare her, and herself she never spared.
All unpraised and all unnoticed, bearing burdens not her own,
Yet she lived as rich and happy as a queen upon her throne!
She was rich, though few would think it; for God gave her grace to choose,
Not the world's deceitful riches, but the wealth one cannot lose.
There are many heap up treasure, but it is not every one
Who will take his treasure with him when his earthly life is done.

* * *

But there came a time—poor sister!—when her rosy cheek grew pale,
And her eyes, with all their sunlight, seemed to smile as through a veil;
And her step was weak and heavy, as she trod the steep ascent,
Where through weeks of wintry weather to her loving work she went.
'Twas a footpath, lone and narrow, winding up among the trees,
And 'twas hard to trace in winter, when the slippery ground would freeze
And the snow fall thick above it, hiding every sign and mark;
But she went that way so often, she could climb it in the dark!
'Twas to nurse a poor young mother, by fierce malady assailed,
That she made the daily journey, and she never once had failed.
Now the short, sharp days were over, and the spring had just begun;
Every morn the light came sooner, and more strength was in the sun.
Many nights had she been watching, and with little rest by day,
For her heart was in the chamber where that helpless woman lay;
There the flame of life she cherished, when it almost ceased to burn,
Praying God to help and keep them till the husband should return.
'Twas the old and common story, such as all of us can hear,
If we care to, in the mountains, every day throughout the year!
She who languished, weak and wasting, in the garret chamber there,
Had been once as strong and happy as the wild birds in the air,
She had been a country beauty, for the boys to serenade;
And the poets sang about her, in the simple rhymes they made,
And with glowing words compared her to the lilies as they grew,
Or to stars, or budding roses, as their manner is to do.
Then the man who played at weddings with his ancient violin,
With his sad, impassioned singing, had contrived her heart to win;
And one brilliant April morning he had brought her home, a bride,
To his farm and low-built cottage on the mountain's terraced side.
'Twas a poor, rough home to look at, and from neighbors far away,
But with love and health and music there was much to make it gay.
They were happy, careless people, and they thought not to complain,
Though the door was cracked and broken, or the roof let in the rain:
They could pile the fire with branches, while the winter storms swept by:
For the rest, their life was mostly out beneath the open sky.
Time had come, and brought its changes—sunshine first, and then the shade,
Frost untimely chestnuts blighted. Sickness came and debts were made;
Fields were sold, alas, to pay them; yet their troubles did not cease,
And the poor man's heart was troubled thus to see his land decrease!
Fields were gone, and bread was wanting, for there now were children small;

THE QUIET HOUR

Much he loved them, much he labored— but he could not feed them all.
So he left them, heavy-hearted, and his fortune went to try
In the low Maremma country, where men gain or where they die,
With its soft and treacherous beauty, with its fever-laden air;
But as yet the fever spared him, and they hoped it yet would spare.
'Twas a long and cruel winter in the home he left behind;
Lonely felt the house without him, and the young wife moped and pined:
Still her children's love sustained her, till this sickness laid her low;
When good Sister Marianna came to nurse her, as you know.
Week on week had hope been waning, as more feeble still she grew:
Marianna tried, but vainly, every simple cure she knew.
Then the doctor gave up hoping, and his long attendance ceased:
'I can do no more,' he told her; 'you had better call the priest.
To her husband I have written; he will have the news to-day;
If he cares again to see her, he had best be on his way!'
Now the priest had done his office; at the open door he stands,
And he says to Marianna: 'I can leave her in your hands,—
I have other work that calls me: if to-night she chance to die,
You can say the prayers, good Sister, for her soul as well as I.'
So they left her, all unaided, in the house forlorn and sad,
Still to watch and think and labor with what failing strength she had.
There was none to share her burden, none to speak to, none to see—
Save a helpful boy of seven, and a restless one of three,
And their little dark-eyed sister (she was five and came between),
And a baby, born that winter, which the father had not seen.
Two days more! Her friend lay sleeping, and she watched beside the bed:
In her arms she rocked the baby, while the Latin prayers she said—
Prayers to help a soul departing—yet she never quite despaired!
Might not yet the Lord have pity, and that mother's life be spared?
'Twas so hard to see her going—such a mother, kind and dear!
There was ne'er another like her in the country far or near!
(So thought Sister Marianna.) Yet to murmur were a sin.
But her tears kept rising, rising, though she tried to hold them in,
Till one fell and lay there shining, on the head that she caressed,
Small and pretty, dark and downy, lying warm against her breast.
She was silent; something moved her that had neither place nor part
In the grave and stately cadence of the prayers she knew by heart.
Then she spoke, with eyes dilated, with her soul in every word.
As to one she saw before her—'Thou hast been a child, my Lord!
Thou hast lain as small and speechless as this infant on my knees;
Thou hast stretched towards Thy Mother little helpless hands like these:
Thou hast known the wants of children, then—Oh, listen to my plea,
For one moment, Lord, remember what Thy Mother was to Thee!
Think, when all was dark around Thee, how her love did Thee enfold;
How she tended, how she watched Thee; how she wrapped Thee from the cold!
How her gentle heart was beating, on that night of tears and strife,
When the cruel guards pursued Thee, when King Herod sought Thy life!
How her arms enclosed and hid Thee, through that midnight journey wild!
Oh, for love of Thine own Mother, save the mother of this child!'
Now she paused and waited breathless; for she seemed to know and feel
That the Lord was there, and listened to her passionate appeal.
Then she bowed her head, all trembling; but a light was in her eye,

For her soul heard the answer; that young mother would not die!
Yes, the prayer of faith had saved her! And a change began that day:
When she woke her breath was easy, and the pain had passed away.
So the day that dawned so sadly had a bright and hopeful close,
And a solemn, sweet thanksgiving from the sister's heart arose.
Now the night had closed around them, and a lonesome night it seemed!
For the sky was black and starless, and for hours the rain had streamed:
And the wind and rain together made a wild and mournful din,
As they beat on door and window, madly struggling to come in,
Marianna, faint and weary with the strain of many days,
On the broad, stone hearth was kneeling, while she set the fire ablaze,
For the poor lone soul she cared for would, ere morning, need to eat.
'Now, God help me,' said the sister, 'this night's labor to complete!'
'Twas a meal she knew would please her, which she lovingly prepared,
Of that best and chosen portion from the convent table spared,
Which she brought, as was her habit, with much other needed store.
In the worn old willow basket, standing near her on the floor,
On her work was much depending, so she planned to do her best;
And she set the earthen pitcher on the coals as in a nest,
With the embers laid around it; then she thought again, and cast
On the pile a few grey ashes, that it might not boil too fast.
But the touch of sleep was on her, she was dreaming while she planned,
And the wooden spoon kept falling from her limp and listless hand.
Then she roused her, struggling bravely with this languor, which she viewed
As a snare, a sore temptation, to be fought with and subdued.
But another fear assailed her—what if she should faint or fall?
And to-night the storm-swept cottage seems so far away from all!
How the fitful wind is moaning! And between the gusts that blow,
She can hear the torrent roaring, in the deep ravine below.
And her head is aching strangely, as it never did before:
'Good Lord, help me!' she is saying: 'this can last but little more!
O my blessed Lord and Master, only help me through the night—
Only keep my eyes from closing till they see the morning light!
For that mother and that baby do so weak and helpless lie,
And with only me to serve them—if I leave them, they may die!
She is better—yes, I know it, but a touch may turn the scale.
I can send for help to-morrow, but to-night I must not fail!'
'Twas in vain; for sleep had conquered, and the words she tried to say
First became a drowsy murmur, then grew faint and died away.
And she slept as sleep the weary, heedless how the night went on,
With her pitcher all untended, with her labor all undone;
On the wall her head reclining, in the chimney's empty space,
While the firelight flared and flickered on her pale and peaceful face.
Was her humble prayer unanswered? Oh, the Lord has many a way
That His children little think of, to send answers when they pray!
It was long she sat there sleeping—do you think her work was spoiled?
No, the fire-wood kept burning, and the pitcher gently boiled:
Ne'er a taint of smoke had touched it, nor one precious drop been spilt;
When she moved and looked around her, with a sudden sense of guilt.
But her eyes, when first they opened, saw a vision, strange and sweet,
For a little Child was standing on the hearth-stone at her feet.
And He seemed no earthly infant, for His robe was like the snow,

And a glory shone around Him that was not the firelight glow.
And Himself her work was doing! For He kept the fire alive,
And He watched the earthen pitcher, that no danger might arrive
To the simple meal, now ready, with the coals around it piled;
Then He turned His face toward her, and she knew the Holy Child.
'Twas her Lord who stood before her! And she did not shrink or start—
There was more of joy than wonder in her all-believing heart.
When her willing hands were weary, when her patient eyes were closed,
He had finished all she failed in, He had watched while she reposed.
Do you ask of His appearance? Human words are weak and cold;
'Tis enough to say she knew Him—that is all she ever told.
Yes, as you and I will know Him when that happy day shall come,
When, if we on earth have loved Him, He will bid us welcome home!
But with that one look he left her, and the vision all had passed,
(Though the peace it left within her to her dying hour would last!)
Storm had ceased, and wind was silent, there was no more sound of rain,
And the morning star was shining through the broken window pane,
Later, when the sun was rising, Marianna looked to see,
O'er the stretch of rain-washed country, what the day was like to be,
While the door she softly opened, letting in the morning breeze,
As it shook the drops by thousands from the wet and shining trees.
And she saw the sky like crystal, for the clouds had rolled away,
Though they lay along the valleys, in their folds of misty grey,
Or to mountain sides were clinging, tattered relics of the storm.
And among the trees below her she could see a moving form;
'Twas the husband home returning, yes, thank God! he came at last:
There was no one else would hasten up that mountain road so fast.
Now the drooping boughs concealed him, now he came in sight again;
All night long had he been walking in the darkness, in the rain;
Through the miles of ghostly forest, through the villages asleep,
He had borne his burden bravely, till he reached that hillside steep:
And as yet he seemed not weary, for his springing step was light,
But his face looked worn and haggard with the anguish of the night.
Now his limbs began to tremble, and he walked with labored breath,
For he saw his home before him, should he find there life or death?
How his heart grew faint within him as he neared the wished-for place!
One step more, his feet had gained it, they were standing face to face.
'God has helped us!' was her answer to the question in his eye;
And her smile of comfort told him that the danger had gone by.
It was morning now, fair morning! and the broken sunlight fell
Through the boughs that crossed above her, where the buds began to swell,
As adown the sloping pathway, that her feet so oft had pressed,
Went the Sister Marianna to her convent home to rest.
It was spring that breathed around her, for the winter strove no more,
And the snowdrifts all had vanished with the rain the night before.
Now a bee would flit beside her, as she lightly moved along;
Or a bird among the branches tried a few low notes of song.
But her heart had music sweeter than the bird-notes in her ears!
She was leaving joy behind her in that home of many tears:
Hope was there, and health returning; there were happy voice and smile,
For the father at his coming had brought plenty for awhile.
And she knew with Whom she left them, for herself His care had proved,
When her mortal eyes were opened, and she saw the Face she loved,
On that night of storm and trouble, when to help her He had come,
As He helped His own dear Mother in their humble earthly home.

FRANCESCA ALEXANDER.

"NAMELESS" METHOD OF BREAD MAKING.

Dear Dame Durden:—Immediately upon receipt of your letter I sent the articles promised to the address you gave. The parcel did not contain quite what I said it would, because the mice had found it between the time of my writing and yours, and had quite ruined one or two things. Those mice make me more work than my money does.

"An Alberta Reader" asks about the temperature for setting bread. I have the yeast and water at a temperature of ninety degrees in the winter and take the chill off the flour. In summer I have it cooler or it might sour. I use the following recipe for yeast and find it excellent, especially in winter, as a freezing doesn't hurt it. In summer it should be kept cool, which is beyond me, for I have no cellar, so I make only a third or a quarter the quantity.

Yeast; nine large or twelve medium potatoes, boiled and run through a ricer or mashed finely; 11 large spoonfuls of flour; $\frac{1}{2}$ cup brown sugar; $\frac{1}{2}$ teaspoon ginger; tablespoon salt; 3 yeast cakes; 3 quarts water from 80 to 90 degrees according to the season. Set yeast cakes to soak for 15 minutes in part of the water; mix the dry ingredients thoroughly, preferably while the potatoes are hot, and when sufficiently cooled add yeast cakes and water; stir well and set in a warm place to rise for 12 hours, when it is ready to use. To make the bread, take six or seven quarts of flour (unless the flour is exceptionally fine and dry you will need seven) with the chill taken off, one quart of yeast and two quarts of water. Mix up well in the morning and you should have one ovenful baked inside of four or five hours. If I have more than one ovenful I only mix or knead it once before putting in the pans, as the last is likely to be too light and wanting in that element of sweetness that distinguishes good bread from bread. That suggestion re using a candy pail for bread-bowl was timely for me. A pail is so convenient in size and shape and so cheap. I am grateful to the one who suggested it.

I am writing with a baby on my knee and another at my elbow, so I trust you will excuse the writing.

NAMELESS.

(Thank you very much for so promptly sending the parcel. What a pest the mice are, and so hard to discourage. I have heard that they dislike pepperment; and carbolic acid smeared round the holes by which they enter will drive them away, but the latter is so dangerous to have about the house, where there are children, that it is better to try other methods first.—D. D.)

A HAPPY HOME.

Dear Dame Durden:—I trust you will admit another member from the Old Country to your Ingle Nook. I have not yet been in your country a twelve-month, but I must tell you I think Canadians are a very kind-hearted people. I feel quite at home amongst all my neighbors, who, one and all, have made me welcome from the beginning. I came out to my sweet-heart, who had been out four or five years. We were married on my arrival and I am pleased to tell we are perfectly happy in our little home. You will laugh, no doubt, but through this winter I have often wished our parents, brother and sisters could just get a glimpse of us. We have quite a distance to go to church, and the drive there in the early part of the winter was quite a novelty to me. After that heavy blizzard our horses seemed sometimes to get half buried in the snow. It seemed useless to try to pick a good road anywhere. I had never ridden in a cutter before and thought it very fine, and such a pretty sight on coming out of church to see so many cutters and sleighs all going in different directions. But the winter has nearly left us now, and it is nice to feel spring is almost here, which again reminds us we must be up and doing. Now, I am sure by this time you will think I have not written to you for nothing. I was

INGLE NOOK CHATS

nearly sending you a recipe for lemon cheese, which I see you have found, but I thought as so many things go under different names here that it might mean something totally different. May I ask some kind friend to give through your columns a recipe for a good gingerbread? I found a very good soft gingerbread in your columns a little while ago, which I thought very nice, but my husband says he likes a good "solid-eating" one. I don't know what he would say if he knew I sent you his own words. I find the *Advocate* (I should say we) a very useful guide, and wish it in future every success. I will enclose a recipe for Vanilla Biscuits.—Whites of 3 eggs whipped to a stiff froth; add 4 ozs. castor or granulated sugar; 1 teaspoon baking powder; a teaspoon vanilla or orange flower water. Put the mixture out in teaspoonfuls on to a papered sheet; bake in a cool oven until hard. These are very nice and very dainty-looking, and are improved by whipping some cream and putting between two.

tablespoon ginger, half a teaspoon each of cinnamon and cloves. Stir the dry ingredients gradually into the liquid, and add more flour if necessary to make a stiff dough. Bake in a bread pan in a moderate oven.—D. D.)

THE VERANDAH ON THE FARM HOME.

The praises of country air have been sung for ages, and its sweet, wholesome, healthgiving properties have not been over-rated in the least. The farmer knows of it by actual experience, but too many farmers' wives know of it only by hearsay. The washing and ironing and scrubbing and baking and sweeping and sewing and a hundred other things make it almost an impossibility for her to get through in time to catch a breath of fresh air while the sun is shining. And there seems no help for it; the work must be done.

The only remedy is to carry the work out into the air. You can't do that, perhaps, with sweeping and scrub-

easily done, and the ironing as well if the stove is not too far away. The sewing-machine can be brought out for the afternoon, and taken back in again before the dew falls. The baby will enjoy his nap, the children study their lessons, and the head of the house read his paper, all more enjoyably than within the solid walls. And inside, things are kept clean and neat with very little effort, almost the only work being in the bedrooms. A verandah pays, as a garden pays, in comfort and health and enjoyment.

TEACH THE GIRLS AT HOME.

Dear Dame Durden:—I have been wishing for some time to join your Nook and now will muster up courage as I would like to get "Irish Girl's" address. I think if her work is satisfactory, it would be nice to have a few doilies and center pieces of real Irish lace.

There are so many topics I would love to talk over, but will only touch upon the article in Mar. 27th issue of the *FARMER'S ADVOCATE*, written by "Dell" upon "Mother's Recipes." Now I think, as Dame Durden says, some people are natural cooks, and it seems hard to teach others how to make every thing "just up to the mark;" but a great deal can be done by teaching the girls at home, and not by mother doing it all, for fear of something being spoiled. Just let them try their luck. "Practice makes perfect," and then there are so many helpful hints in "Ingle Nook" that one who is observing and wishes to learn cannot help being benefited by having a chat now and again. I will send you the recipe for a pudding we had for dinner to-day, which we think very good:—One cup brown sugar; $\frac{1}{2}$ cup black strap syrup; 2 eggs; $\frac{1}{2}$ cup lard; $1\frac{1}{2}$ cups buttermilk; 1 teaspoon soda; 1 teaspoon salt; 2 teaspoons ginger; flour to make a thick batter. Steam 2 hours and eat with whipped cream.

Puss.
(I hope to be able to send you "Irish Girl's" address in a few days and hope your correspondence will be enjoyable.—D. D.)

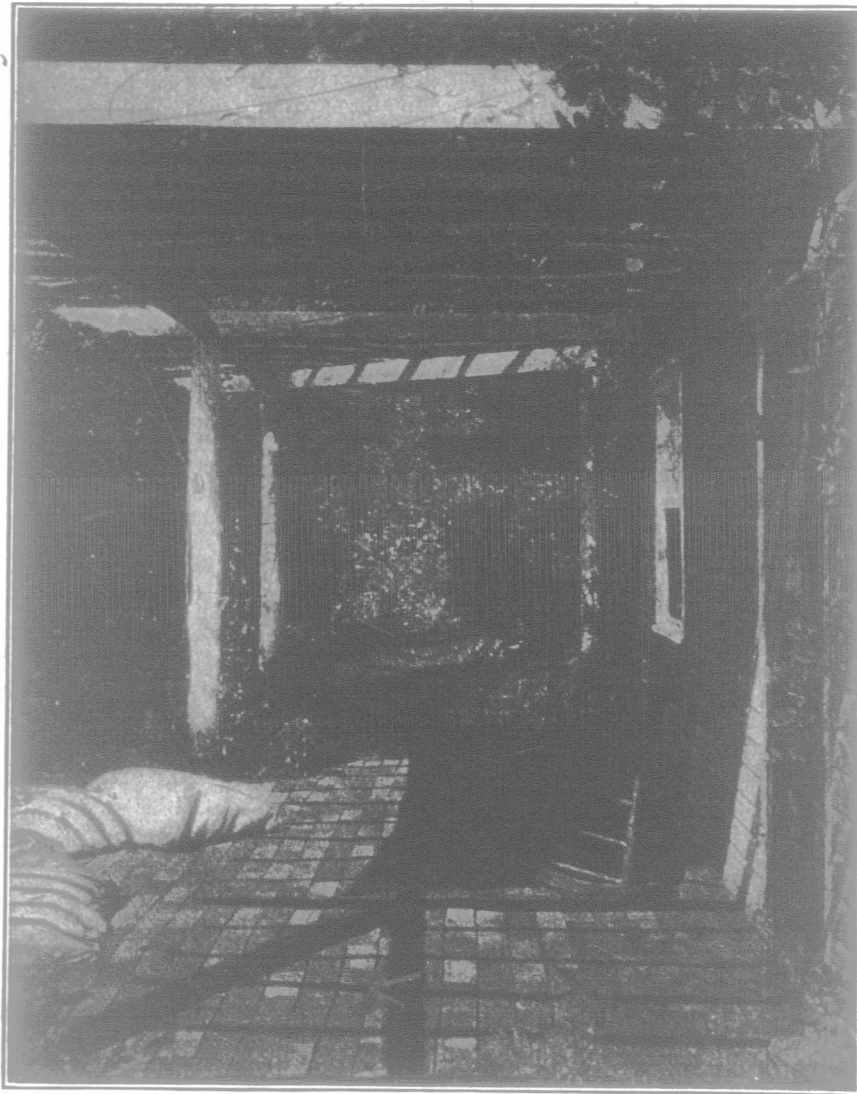
PLEASE SEND FULL ADDRESS.

Just as sure as a letter comes in with only a portion of the address, along comes a request from some member to correspond with the writer of that incomplete letter, and then at least two weeks must elapse, and often three or four, before communication can be established between the two. For example, "Puss" writes to say that she thinks she would like some lace made by "Irish Girl" and would "Dame Durden please furnish the address." Delighted, I'm sure, if it were possible but I've got only part of it. Will Irish Girl kindly write me as soon as possible and supply the deficiency. "Louie," "Aberdeen," "Canadian Song Sparrow," "E. G. R.," "Merrie England," "S. F. M. C.," "Gold Elsie" and "Oba-San" would also be conferring a favor if they would send full name and address to the Ingle Nook. These are never published and never given, even to other members, if the wish that they shall not be is expressed, but to have them at hand is very often a great convenience and saves much time.

DAME DURDEN.

A SISTER FROM ACROSS THE SEA.

Dear Dame Durden:—I am resolved even as Buster Brown, to come in, so please do not call me an intruder. We do not take your paper, but a next door neighbor takes it, and as they cannot read it I run over and get it as soon as it comes. For I love to read it; it makes me look on the bright side of everything. There is so much help in it to myself and husband that I have been coaxing him to get the paper for ourselves, but I do not know if I shall succeed for we are Finlanders. They are a hard working people, the Fins, but do not care much for reading. My husband cannot read or write English neither do my mother or father and I have had no schooling. I have mostly picked it up, as son come says, as it is not much, and I ask you not to



A HOME-MADE VERANDAH WITH POSSIBILITIES FOR SUMMER USE.

Don't attempt these as I did first, when you will want the oven badly for something else before they are done.

A SOMERSET LASS.

Here are two ways of making gingerbread, which may please that good husband of yours.

GINGERBREAD.

Cream a cup of butter with a half-cup of sugar; add a cup of molasses, one teaspoonful of cinnamon, one-half teaspoonful of salt and a quarter-teaspoonful of ginger. Mix well and add a cup of boiling water in which a heaping teaspoonful of baking soda has been dissolved. Lastly, stir in three cups of flour. Bake for three-quarters of an hour in a large pan.

2. A cup of molasses is placed in the mixing bowl, and 2 level teaspoons baking soda are added and beaten thoroughly into the molasses. Take a quarter cup of butter, pour over it one-third cup of boiling water; and when the butter is melted pour it into the molasses. Stir together three cups of flour, half a teaspoon salt,

but the rest can be accomplished by having a verandah at the back door. A necessity in its construction is a rain-tight roof and a floor that does not imperil the safety of one's limbs; beyond those two requirements, it can be as primitive as suits the fancy or the pocket-book. The supports may be of poles, and vines trained on wires round at least half of the space will provide a shady corner when shade is desired. A plain deal table, some chairs (including a low rocker), and a home-made cupboard will furnish this out-door room sufficiently unless there is room for a hammock or an easy old cot or couch fitted up with a few cushions. A shelf fitted to the outside of the kitchen window is a convenience; dishes and small articles can be passed through instead of being carried round by the door.

It is surprising how many kinds of housework can be carried on there just as well as inside. Vegetables can be prepared, and meals served. The visitors will enjoy it better there than in the house, even if the service is not so elaborate. The washing can be more

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laugh at my ignorance. The Ingle Nook looked so inviting that I couldn't help it—I had to write. Now, if any of you would care for Fin recipes I have some. They would be new to you all, as they are Fin and they have fine names. May I ask, if it is not too much, if any one of you know what is good for chapped hands and face? Oh dear, I shall have to close for this time, for my courage is ebbing for fear that this note will be laughed at and thrown in the waste basket.

FINLANDER.

(Laugh at you? Call you an intruder? There is not the least danger of our doing either of these things, for, indeed, in both writing and composition your letter is the equal of many written by English people, who have spoken our tongue all their lives and have had a fair education. Don't stay away from us, since you say you enjoy our cosy corner. Your husband with you to read and translate for him, should get some help from the other departments.

Here are two preparations for your chapped hands and face. (1) Two ounces of pure glycerine mixed with the juice of one lemon to which is added six drops of carbolic acid. This suits some skins but others find it too strong. (2) One ounce pure glycerine, one ounce oil of sweet almonds and two ounces of melted leaf tallow, from a lamb, and strain the tallow; add to it the glycerine and oil, beating the three together until almost cold. Put it in dishes that can be covered. Rub well into the skin at night after washing in warm soft water. It is well to keep on hand a bottle of witch hazel to rub on the hands immediately after washing dishes or other work where the hands have to be in water.

We shall be very glad to have your Fin recipes, and hope you will not forget to send them. (D. D.)

ANIMAL CHARACTERISTICS.

Farmers find many curious things happening around them every day which they cannot understand, and nobody, even the scientists, can explain for them. Why, for instance, does a horse strain a drink of water through its lips? Why does a cow poke her entire face into the bran mash, eat all she can, then lick her nostrils with her tongue? Why does the chicken drink exactly opposite to the horse and cow, having to hold its head up when it swallows a drink of water? Then note the pigeon, of the same feathered family, as it keeps its bill immersed while drinking. But a dog laps the water in its mouth. This animal, moreover, never chews its food, while the cat, his companion household pet, always chews thoroughly before swallowing. How is it that a dog failing to masticate does not hurt a dog, while in case of all other animals, including man, unchewed food causes dyspepsia. Why has a cow a cud and why can a horse shiver its hide to drive away flies? These questions and many more like them that might be asked will show us that we are far from knowing it all.—*Live Stock World.*

THE DANGERS OF CAT DIPHTHERIA

As illustrative of the grave danger of cats suffering from diphtheria transmitting the disease to other felines and to human beings who fondle the sick pet, the story was published in the New York papers on March 1st of a stray cat, befriended by little Annie, daughter of H. A. Yale, Patchogue, L. I., that returned evil for good by causing the death of its benefactress. The child, who frequently caressed the cat, soon contracted diphtheria, and the germ has been traced to the cat. The account states that this is the second occasion on which a cat has spread death in Patchogue. A Mrs. Gordon and her four children, some four years ago, died under similar circumstances. Then it was definitely known that the cat was responsible: and it was examined after the deaths and found to be suffering from black diphtheria.

MISTAKE IN RECIPE.

In the recipe for muffins sent by "Nor Creina" and appearing in the Ingle Nook of April 3rd, it should read "one half a generous pint of milk" instead of a pint. I hope this correction comes in time to prevent the failure of any of your experiments.—(D. D.)

SPRING HOUSE CLEANING.

Now that the bright, warm spring days have come, the house cleaning germs are beginning to run riot in the veins of the most of womenkind. We all profess to loathe the thought of this annual extra work imposed upon us, yet, if the innermost secrets of the feminine mind were known, it would be found that we really yearn for the season of step-ladders, endless rags, mops and the smell of paint. But although we still cling to the old custom that calls for a tremendous yearly upheaval of household possessions, we do not follow the old plan of turning everything upside down and inside out at the same time. So far is the modern method removed from that in vogue when mankind, coming home, was liable to trip over a pail of water and a lot of bric-a-brac put in some unaccustomed place; and then when he sneaked down the back steps from the scene of disaster, he was very likely to upset a pail of water—and himself at the same time. The poor helpless men folks were fain to flee to some distant shore where the inhabitants were clothed with a glad smile and lived out of doors. Thanks be, we have learned an equally effectual and far less troublesome method, so that now, perhaps the first intimation of the dread season given to the men of the house is the news that the house cleaning is finished.

until the mixture becomes like soft putty. Press this into the cracks with a knife, while warm. The windows are washed and rubbed with kerosene, wiped, and look as well as though they had been taken out and washed with great labor in a tub.

If you are going to have new wall-papers, choose them carefully. Remember that you have to live with a wall-paper all day and every day, and a loud design gets very wearisome. With a plain paper one can never go much astray, providing the color harmonizes with the room.

Spring scrubbing should be particularly thorough, with one of the new-fangled mop brushes and plenty of warm water containing a goodly supply of washing powder.

In cleaning wood-work do not take a large space at one time. If you do, you will likely have a streaked effect, anything but pleasing to the eyes or proving satisfactory.

Now that the year's accumulation of rising smoke and microbes has been effaced, it will only be a few hours' work with the new varnishes to brighten up every bit of wood-work and furniture. With clean curtains, and bedding, everything spick and span, we may view our work with pleasure and enjoy ourselves.

So many on the prairie are living in frame houses that are not finished inside. Perhaps someone so living

(I did not have paint), the walls were ready to have the paper applied. I invested in wall paper having a neat pattern, and hung it very carefully so as to have it without a wrinkle, and well matched. The change in the appearance of the room was very much for the better. Nice clean curtains and blinds on the windows, a few good pictures on the wall and four large mats, hooked during the winter, placed upon the floor, and I could view my work with satisfaction and pleasure.

DELL.

THE MILLINERY MENU.

Summer bonnets are to be trimmed with small fruits; flowers will appear in the fall designs. This is done to prevent women from wearing the summer hats in the fall.—*Millinery Edict.*

A few potatoes on the brim,
Arranged in some artistic plan,
Will put the wearer in the swim,
But only through the month of Jan.

Some early lettuce torn to shreds
And woven in a dainty web,
Will nod upon the stylish heads
That know what is the mode for Feb.

Young onions of the palest green,
Arranged to form a swaying arch
Of tossing tops, will soon be seen
As quite the only thing for March.

Strawberries with a net of lace
That simulates the light whipped cream,
Will form a finish for the face
That April styles will cause to gleam.

A bunch of cherries and green peas,
And little apples, too, will sway
Upon the bonnets that will please
The fashionable folk in May.

A wreath of roses—bear in mind
That they must not come in too soon
You're out of style if we should find
You wearing them preceding June.

The morning glory hat will be
The idol of each woman's eye,
When, garnished with skyrockets, she
Will see it flourish in July.

The poppy hat—now, do not let
Your recollection slip a cog,
To be in fashion, don't forget
You must wear poppy hats in Aug.

The golden wheat and rye, through
which
The zephyrs of summer crept,
Will make a bonnet rare and rich
And rule the thirty days of Sept.

If you should wear crysanthemums,
Your friends would be extremely shocked
Should you forget that bonnet comes
Upon the fashion stage in Oct.

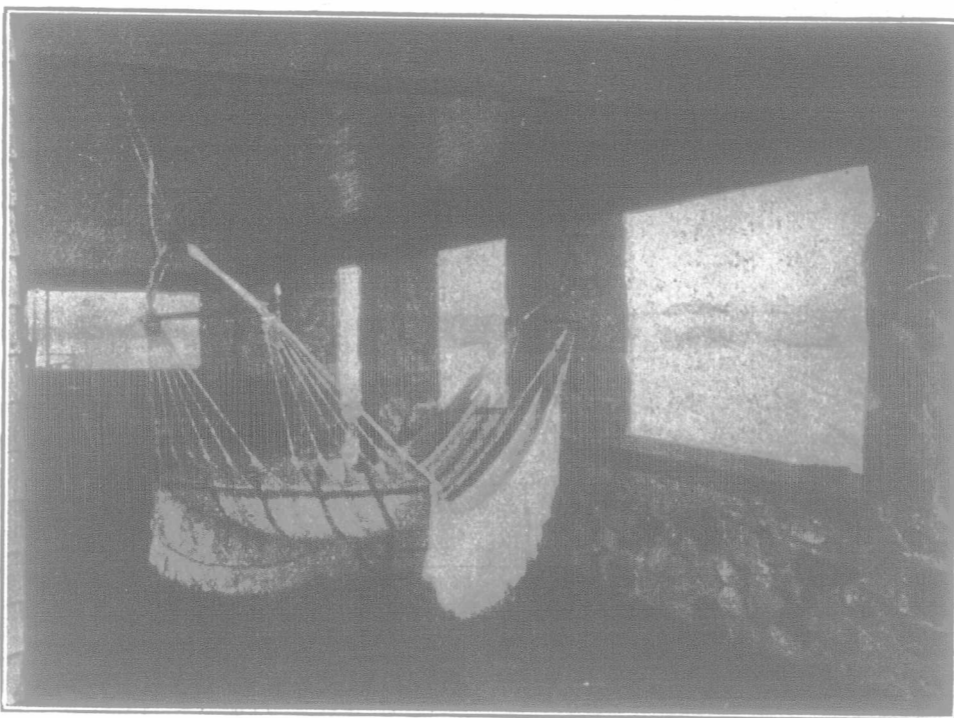
A turkey wing and pumpkin shell
Are millinery's treasure trove—
You'll find that they'll do very well
To show you're up-to-date in Nov.

A Christmas tree, with ornaments
Of tinsel balls and candle grease,
Will make a hat that represents,
The nobbiest design of Dec.
—*Chicago Tribune.*

TRUE BEAUTY.

What matter, though enshrined in plainest casket,
If a pure gem within that casket lies?
What matter, though a face is plain and homely,
If a pure soul is shining from the eyes?
We never give a thought unto the casket,
If but within the gem is pure and fair;
We never gaze as critics on the features
Of those we love, if the true heart is there.
We grieve not though the gem has plainest setting,
If but the life with deeds of love abound;
We care not for the earthly fading beauty
If but God's image in the heart is found.

—ELLEN LING.



A SIMPLY BUT STRONGLY CONSTRUCTED VERANDAH WHICH CAN BE USED AS A LIVING OR SLEEPING ROOM IN SUMMER.

The reason? When the first warm days come and we feel the house-cleaning fever throbbing through our veins, we just let our extra force expend itself in setting to rights the bureau drawers, trunks and boxes. As likely as not the next day will be cold and stormy and the "house-cleaning fever" will have abated somewhat.

Then we do not clean more than one room at a time and unless we have lots of help, no more than one room a day. By taking things coolly we save strength and temper, and do not neglect the children or meals. Then too we have gotten rid of all or nearly all the carpets, that would have tried the patience of Job himself if he had striven to beat and re-lay them. Only one carpet in the house should be a fixture—that on the stairs. Rugs are so much cleaner, prettier and cheaper. Where it is desirable to take up an old carpet and replace it with a rug, the floor underneath may not be hardwood, but that does not matter so long as it is even and well matched.

Clean the floor thoroughly and then fill the cracks with putty and let it harden. Paint or stain the floor. It need be done only round the edges as the rug covers the rest of the floor.

Another way, which is cheaper and is so easily made and applied that unsightly floors really have no excuse for remaining so, is to stir one pound of flour and a tablespoon of alum into three quarts of water and as soon as this boils, stir in strips of newspaper

may be at a loss to know how to go about making the walls of even one room look as though there were a woman about the place.

The home my husband took me to was just such a house. No nice white walls, like we had been used to. I thought of a number of ways to "fix up," but all the material on hand of any use consisted of two boxes of tacks and plenty of newspapers, and it was not long before I had one room, studding and all, shingled with the papers. This made the place brighter and cleaner looking anyway, and as I had left the papers folded they served a double purpose, keeping out considerable cold. The following spring I bought enough cheap cotton, the cheapest I could buy (after sewing it in strips) to cover the walls and tacked it very carefully, so as not to have the least little wrinkle in it. It is a wise plan to tack the cotton at the top all around the room, then pull it down well at the bottom, tacking at each studding. The ceiling was done in the same way, but I had to have a little help from one of the men. I was very well satisfied and everything in the room seemed to have improved in beauty. The next spring I nailed a narrow board at the top of the wall, a wider one at the bottom and another just where the chair backs and the table touched the wall. This was done all around the room. Then I got narrow pieces of board and nailed them for casing round the door and windows and applying art wall finish to the mop board and cas-

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Are You The Man?

For an Ideal Home in the glorious
KOOTENAY FRUIT LAND

Have you been dreaming of a home in an environment where you could live by the way as you journey through life? Let your dream come true.

The Opportunity

The famous Cold Spring Ranch, the most extensive improved property in the Kootenay, is now being subdivided. It is on far-famed Kootenay Lake, eighteen miles from Nelson, the capital of the Kootenay, on a Canadian Pacific transcontinental route; rail and water transportation at the door. Wild land, cleared land, orchard land from which to choose. Any size lot from three acres up. Abundance of water—springs and running streams. Prices from \$10.00 to \$300.00 per acre. Easy terms. Orchards will net \$200 to \$500 an acre within three years. No worry from coal strikes—unlimited supply of wood. A big income from vegetables and berries while the orchards are growing. Poultry, too—eggs 75c a dozen in Nelson.

Place for a Colony

Cold Spring Ranch makes a splendid location for a colony or neighborhood group. The ranch home is the most comfortable, convenient and modern farm home in the Kootenays. Piped with spring water, good plumbing, large rooms, wide verandas. It has a slightly location overlooking Kootenay Lake. Trains stop at the gate and steamboats land right in front of the house. Large greenhouses. Plenty of water for forcing vegetables.

A group of friends or associates, religious or otherwise, would find this property ideal for a home.

Ideal Climate

is claimed for the Kootenay country of British Columbia. Just winter enough for a tonic and to give quality to fruit. Just altitude enough to escape excessive moisture. Warm summer days, cool nights. No blizzards, no mosquitos, no sandstorms, no cyclones or terrifying thunder storms. Grand mountain lake scenery. Freedom from fruit pests. Irrigation unnecessary.

Finest Temperate Zone Fruits

Apples, pears, peaches, cherries, prunes, plums, strawberries, raspberries, gooseberries of this district unrivalled. First place in competition with all the British Empire.

Best Fruit Market in the World

Stiff duty on U. S. fruit, rigid inspection of importations, and an area to supply of a million square miles that cannot raise fruit and into which 300,000 people are going annually. High prices, quick sales. Excellent transportation facilities. Very limited area for good fruit land. Big demand, small supply.

Act Quickly

Choose your piece and "get busy" at once. Don't put off the day of your happiness or lose the first section of the famous Cold Spring subdivisions!

At present all applications for a subdivision of this property will be received subject to preference for applicants for the farm home piece and their friends and associates. If you and your neighbors are thinking of a new money-making location in a mild climate with grand and beautiful natural surroundings, write at once for particulars.

HANSEL, LANGAN, KNAPPEN CO.

35 Aikins Building, Winnipeg, Manitoba

CHILDREN'S CORNER

ANOTHER HUNTER.

Dear Cousin Dorothy:—I am a Yankee boy ten years old. I went from Indiana seven years ago to North Dakota. Four years ago I came to Manitoba. We live on a farm seven miles from Cartwright. We keep horses, cattle, hogs, chickens, ducks and turkeys. I have four brothers whose names are Fred, Louie, Niron, and Ernest, the baby. He is three years old and can speak quite a few pieces. I and my two eldest brothers go to school. There is no school now but it will start in about two weeks. We caught seven muskrats, a mink and two weasels. We sold the muskrats for 15 cents each and the mink and weasel for \$1.50.

Wood and oil were very scarce here. We had but little wood and no oil at all. We burnt candles. We got the last candles in town and when the candles are gone I guess we shall have to sit in the dark. We could have burnt straw to keep us warm. It makes a very hot fire. In Dakota we burnt straw for two months once and our meals were as good as they ever were. It makes quite a lot of clean ashes but you keep good and warm. I got a nice big book for Christmas. It has 400 pages. We

this spring, and a calf that will be a year old next April.

KATHRYN P. McINNES.
Alberta Co., Alta.

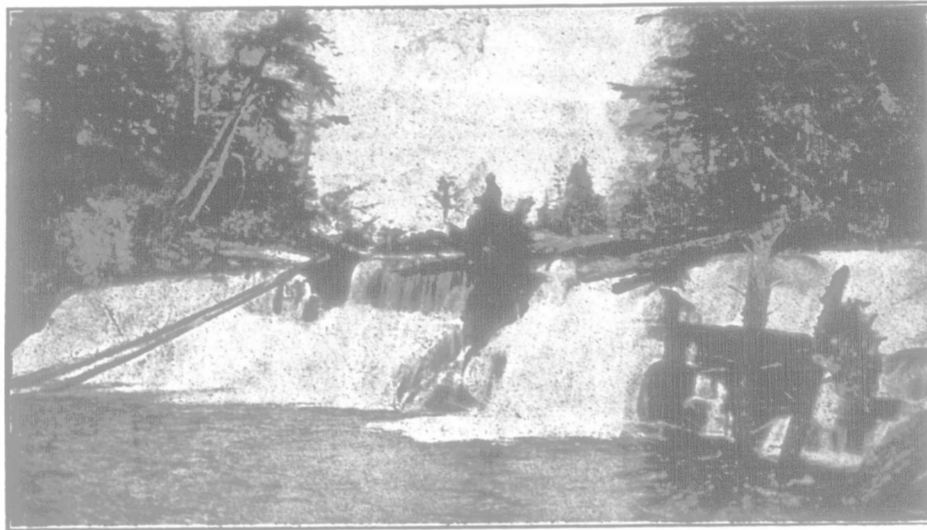
FIVE OXEN.

Dear Cousin Dorothy:—I should like to join the Children's Page. This is my first letter, and I thought I would tell you about our things. We have twenty-six cattle, and five of them are oxen. Their names are, Tom, Jerry, Joko, Samson and Duke. We have thirteen pigs, nine cats, and fifty chickens. Oh yes, and my sister and I played on a large drift in front of our house last winter.

STELLA WEBER. (10).

PLOWING BY STEAM.

Dear Cousin Dorothy:—I am nine years old. I am going to school every day and am in the second reader. I live on a farm. We have six horses and ten head of cattle. My father and brothers own a big wheat farm six miles from Fielding. They run a threshing machine in the fall and plow



SHAWATTAN FALLS, NEAR PRINCE RUPERT, B. C.

have the telephone. There are ten on our line. I like this part of the country very well.

Mamma is reading us a book about the Coral Islands. It is about three boys. It is a very nice one. Papa is making a pig rack. We sold five hogs this year and we killed three and one beef for our own use. I will close my letter by sending a puzzle. Why is a colt like an egg? Ans.—Because it is of little use before it is broken.

GUY THOMPSON.

Souris Co., Man.

(Your letter is very interesting, but your spelling and writing were not the very best.—C. D.)

TAKES MUSIC LESSONS.

Dear Cousin Dorothy:—We came to Leavings, Alberta, a year ago last fall, from Edgeley, North Dakota. I should like to know the town in North Dakota where Ruth M. Benson came from. She might have been somewhere near me. I have a piano and take music lessons. My teacher is going to have all her pupils play a piece sometime this month and invite their parents. My teacher's name is Miss H—. I like her fine. The piece I am going to play is called "Dorothy."

My brother and I go two miles to school. We did not go much this winter because it was so cold and there was so much snow. I am in the fourth reader and my studies are arithmetic, grammar, geography, drawing, history, agriculture, spelling, composition, writing, and physiology. I was twelve years old on the twenty-ninth of December. We have seven horses, seven cows, four calves, one dog, and about one hundred hens. I have a colt that will be two years old

in the summer with the engine. I have a pet cat twelve years old; he weighs fourteen pounds. Can any of the cousins beat that?

AUSTIN H. SMYTHE.

SEVEN SISTERS.

Dear Cousin Dorothy:—I should like to join your circle of letter writers. I have seven sisters. Their names are Marion, Jessie, Ethel, Ruby, Kathleen, Isabella, Gladys, and a brother in Victoria, B. C. We have a farm. I have a lot of pets—five pigeons named Peter, Lulu, Billy, Jack and Jill and two cats. Tib and Flip. We have a piano and all my sisters play it; also Dad and Mother. I had several nice lit le presents at Christmas and a Buddy Tucker Book. Do any of your little readers know this old fashioned riddle: Four stiff standers, four down hangers, two hookers, two lookers, and a whisk about? Hoping this will amuse you.

WINIFRED NEATE (12).

Assiniboia Co., Man.

LEARNING ANOTHER LANGUAGE.

Dear Cousin Dorothy:—My father has taken the FARMER'S ADVOCATE for about two years and likes it very well. I like reading the Children's Corner. I live seven and a half miles from Wetaskiwin, our nearest town, two miles from our church, and one and a half miles from school. We go to the Swedish Church and I can talk Swedish. I have three brothers and four sisters, but one of my sisters is dead. My birthday was on the 20th of February. I was twelve years old. I would like to see Cousin Dorothy's picture in the FARMER'S ADVOCATE.

RYAN PAVELINE PEARS ON.
Southtona Co., Alta.

OUR NEW OFFER

Wonderful Reduction in Prices.

We offer the best Stoves and Ranges at about half the price others ask. Thousands are taking advantage of our extremely low prices. Manufacturers and dealers everywhere wonder how we are able to make these phenomenally low prices and furnish the highest grade Stoves and Ranges. Our new catalogue explains all.

\$9.50 buys this new steel Cook. It has a heavy steel body, heavy top, covers and centers, an excellent fire box. Burns coal or wood. Has four 8-in. lids. A perfect steel cook that will stand hard service and give satisfaction.

Our new catalogue tells the rest. Send for it—it's free.

\$16.50 for our special Steel Cook. A handsome blue polished Steel body, asbestos lined, heavy fire-box with duplex grate. Large 8-in. oven, four 9-in. lids, large top shelf with trimmings handsomely nickeled, furnished with reservoir at a small extra charge. Illustrated in our new Stove Catalogue and details given. Write for our new Catalogue—it's free.

\$13.50 buys the large Cast-Steel Cook. Four 8-in. lids, 16-in. oven. It burns coal or wood. A new construction, will give better results with half the fuel the old cast stoves require. Large jouch feed. Heavy fire-box. Thoroughly up-to-date in every respect, and a marvel at the price. Handsome nickel panels and open top. Can be furnished with reservoir at a slight additional charge. Our new Stove Catalogue will explain everything in detail. It will tell you of our wonderful stove offers. Show you where you can save \$5.00 to \$40.00 on every purchase.

This big, full size four-hole New West steel range with steel high closet, handsomely nickel-plated, just as illustrated. A most wonderful value, less than what your dealer must pay for the ordinary cheaper constructed range. Just the Range for the small family. Has all the advantages of the higher priced range, furnished with reservoir at a small extra charge. Our new stove catalogue tells you all about it and how you can save money by buying your stove and range from us at less than wholesale prices. Send for it now.

\$16.95 buys the Royal Wingold Steel Range, our latest production. Handsomest Range made. Beautiful blue polished steel, handsome large, high closet, enamel reservoir, pouch feed, magnificent trimmings, handsomely nickeled. This Royal Wingold has four 9-in. and two 11-in. lids, large 18-in. oven, burns wood or coal. A perfect baker, and most economical in the consumption of fuel. We have other sizes, and our new catalogue will tell you all about them, and how you can save money by dealing with us. Thousands have taken advantage of our extremely low prices.

Our new Stove Catalogue tells what you want to know. It tells you how to save \$5.00 to \$40.00 on every purchase; it tells you where you can buy your stoves and ranges for less than what your dealer pays. Remember, we have no agents. We sell direct to consumer only. Every stove guaranteed, and 30 days free trial given. Mail us your name and address, and say, Send me your new catalogue. Do it now—it's free.

\$38 buys the Royal Wingold Steel Range, our latest production. Handsomest Range made. Beautiful blue polished steel, handsome large, high closet, enamel reservoir, pouch feed, magnificent trimmings, handsomely nickeled. This Royal Wingold has four 9-in. and two 11-in. lids, large 18-in. oven, burns wood or coal. A perfect baker, and most economical in the consumption of fuel. We have other sizes, and our new catalogue will tell you all about them, and how you can save money by dealing with us. Thousands have taken advantage of our extremely low prices.

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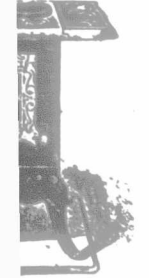
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The WINGOLD STOVE Company, Ltd.

Dept. F. A.
245 Notre Dame Ave. WINNIPEG

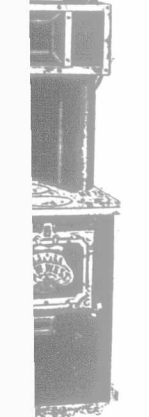
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The Advice of Experts:

"It is always a mistake to plant old seed, and often it is well to procure a supply from a different part of the country, but not very remote nor too different in climate. Seeds of weeds that are hard to kill out are sometimes found in field and garden seeds, and precautions must be exercised against them."

The above is a quotation from *Farmer's Bulletin, No. 94*, of the *United States Department of Agriculture*, and its application to Canadian Growers is this:

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and we stand behind it with a record of thirty-seven years' honest service to the Canadian farmer.

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BUY YOUR BINDER TWINE NOW

BY doing so you take absolutely no risk for we sell it on the distinct understanding that if your crops are destroyed by hail or excessive rain we will take back the twine and refund the purchase money. And should the twine, which we know to be the best grade of 550 foot twine, offered for sale in Western Canada, be unsatisfactory for any reason, return it to us and get your money back.



Our prices are considerably lower than the general prices which have prevailed throughout the country for similar twine. The brand we sell is made specially for us by a leading manufacturer and is known as the Diamond **E** Golden Manila Twine. It measures 550 feet to the pound and contains about 50% of pure Manila. It is smoothly woven and can be used with perfect satisfaction in every pattern of knotted.

Our prices are 11¢c. per pound at Winnipeg, 12¢c. at Brandon, 12½¢c. at Regina and 12½¢c. at Calgary. To these prices must be added the local freight rates, from any one of these points to the point to which you want your twine delivered.

The most economical way to buy twine is in car lots. You can get it laid down anywhere in Manitoba for 12¢c., which is an exceedingly low price for this grade of twine. Have your neighbors combine with you, and send your orders all together, and even if you have not a full car, send them to us, for it is quite possible that we have other orders for your station that will make up the car lot. If not, we will see that you get the twine in the cheapest way possible. Trusting that we may receive your order within the next ten days.

We beg to remain, Yours very truly,

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WRITE FOR PARTICULARS

The Farmer's Advocate of Winnipeg, Limited, Winnipeg, Manitoba

VERY NEAT WRITING.

Dear Cousin Dorothy:—I go to school and am in the fourth reader. School closed at Christmas and opened the first of March. Hazeldean is the name of our school and my teacher's name is Miss S—. I was 13 years old the 6th of March. I got quite a few Christmas presents. I go for the cows in the summertime and help to milk them. I have three cats and one dog whose name is Macdonald. I help mother quite a little. I have read quite a few books. Is my writing as good as other girls of my age?

JANET RENWICK.

Souris Co., Man.

STARTING SCHOOL AGAIN.

Dear Cousin Dorothy:—I have taken great delight in reading the Children's Corner and thought I would write also, if you would be so kind as to publish it. We have lived here for two years and are about three quarters of a mile from the station. I have two sisters and one brother. My eldest sister is married. We have three horses and a pony, a colt and three cows. It has been a very hard winter here. There have been hundreds of cattle that have died around this country this winter. You can see them lying around everywhere you go. I hope that you will excuse this writing as I have not been to school for over two years, but I am going to commence again.

THOMAS WEBBER (11).

Alberta Co., Alta.

A TAME ROOSTER.

Dear Cousin Dorothy:—Santa Claus was bad this last Christmas, for he never brought me anything. I have two sisters and one brother. I have a tame red rooster and a pet horse named Bessy. She is three years old. We have sixty-three head of cattle, seventeen head of horses, and about one hundred hens. We have two dogs and five cats. I have a twenty-two rifle.

BERT LYTLE. (10).

Portage la Prairie Co., Man.

(Better luck next Christmas, Laddie. There was part of your riddle I could not quite make out. Will you send it in again some time?—C. D.)

DROVE THE TEAM.

Dear Cousin Dorothy:—I was ten years old yesterday. Mamma made taffy for my birthday. We live about fifteen miles east of Winnipeg and we have a school house on our place. I go to school most of the time. I am in the fourth grade and study reading, arithmetic, geography, spelling and grammar. We have eight head of cattle and eight head of horses and two calves. One of the calves came on my birthday and it is going to be mine. The horses' names are Billy and Jess, Daisy and Nance, Pete and Mack, Jack and Dolly. I ride Mack for the mail and also go for the cattle in the summertime.

I drove a team when papa was loading a car at the station. The station is two miles from our place.

LORNE MURDOCK.

MIGHT HAVE BEEN WORSE.

Dear Cousin Dorothy:—My father and mother came from Wales fourteen years ago, and they have three-quarters of a section of land. We are going to start to school next Monday. It was very cold so that we could not go to school after Christmas. Our teacher's name is Mr. R— and they say he is very good. We had a lot of snow this year, but they said we hadn't got it very bad to compare with other parts of the world. I have three brothers younger than myself and one little baby sister. I and my eldest brothers go to school. We have eighteen head of cattle, seven horses, three colts, and a good, dog Carlo.

NINA MORGAN. (10)

DEWEY AND NIGGER.

Dear Cousin Dorothy:—I go to school and am in the third reader. My teacher's name is Miss A. I have two little brothers. We live on a farm. We have three horses, four cows, three calves, three pigs, forty-five hens, and five ducks. I have a dog and a cat. My dog's name is Dewey, and I call my cat Nigger.

HAZEL BLANCH FRAZER. (9)

A MIGHTY HUNTER.

Dear Cousin Dorothy:—I was fourteen last December sixth, and my youngest brother was two years old the day before.

I have a pup and I call him "Sharp." He is a black and brown collie and I think he will grow to be a big dog. I am going to train him to draw a sleigh or a cart, and fetch things out of the water. Last year I wished I had a dog to bring out ducks. The first shot at ducks I got two, and that afternoon I got two more, but with two shots. While going after the two ducks that morning I very nearly got stuck in the bog. A few days later I went out one evening after school and came to a pond where there were nine ducks sitting on an island drying their feathers, shot in among them and got six and wounded one more. I went in after them and found that the place was a bog hole. I got them together and started out, and with my extra load and my excitement I got so nearly stuck that when I was out I was played out. This winter I was out for about an hour and shot eleven rabbits, and for the first time got two at a shot. As I am very fond of sporting with a gun, I should like to hear from some other boys about my own age, about some of their shots where they got more than they expected.

Excuse me for bragging, but I feel about the same as "Warner" did when he killed his first bear.

BOYCE ROBBINS (14).

Dauphin Co., Man.

(I read that story. It is a good one.—C. D.)

A HOUSE WITH A FURNACE.

Dear Cousin Dorothy:—We live ten miles east and two miles north of Ponoka. Our school is a mile and a half from here, but there hasn't been any school here this winter as it is so cold. We have got a section and a quarter of land, a large herd of cattle, thirty pigs, one hundred chickens, three hens. I am in the second reader and walk a mile and a half to school every day.

MILDRED CARLIN.

KILLED THE DOG.

Dear Cousin Dorothy:—I live in a little place called Knalt. My father has two farms. I go to school every day. I have three little sisters and one brother. We have twenty-three hens. I am in the second reader. I walk a mile and a half to school. We have a horse and three cats. I had a dog but we had to kill him. I was very sorry.

ROBERT CARLIN. (10)

A HUSTLING TOWN.

Dear Cousin Dorothy:—This is my second letter to the Children's Corner. I enjoy reading the letters very much. I did not see my last one on account of being away from home. But my cousin who lives in Wolesley saw it. We have had a very severe winter, the worst I ever saw. We live in a hustling little Western town. My aunt keeps the post office and my father owns a fine big hardware store. He says business has been very quiet owing to the scarcity of money. I am in the fourth class. I have three brothers and two sisters. My second brother got a lot given to him because he was the first baby born in Lang.

WILLIE WRIGHT (13).

Qu'Appelle Co., Sask.

THE BEAUTIFUL SWAN RIVER VALLEY.

Dear Cousin Dorothy:—I live in a beautiful Swan River Valley, situated between the Duck Mountain and the Porcupine. We live four miles from the nearest railroad station and a mile and a half from school. Our teacher's name is Mr. R—. I like to go to school very much and am going as soon as the weather changes. I have got two brothers and two sisters. My oldest sister and I go to school. The two brothers and the other sister are younger than I.

EVAN MORGAN. (9)

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ITS PURITY, STRENGTH AND WHOLESOMENESS ASSURE THE VERY HIGHEST RESULTS. A POUND TIN WILL CONVINCED YOU OF ITS MERIT. AT ALL GROCERS.

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A REMARKABLE INVENTION FOR THE Culture of Hair

THE EVANS VACUUM CAP is a practical invention constructed on scientific and hygienic principles by the simple means of which a free and normal circulation is restored throughout the scalp. The minute blood vessels are gently stimulated to activity, thus allowing the food supply which can only be derived from the blood, to be carried to the hair roots, the effects of which are quickly seen in a healthy, vigorous growth of hair. There is no rubbing, and as no drugs or chemicals of whatsoever kind are employed there is nothing to cause irritation. It is only necessary to wear the Cap three or four minutes daily.

60 DAYS' FREE TRIAL!

The Company's Guarantee:

An EVANS VACUUM CAP will be sent you for sixty days' free trial. If you do not see a gradual development of a new growth of hair, and are not convinced that the Cap will completely restore your hair, you are at liberty to return the Cap with no expense whatever to yourself. It is requested, as an evidence of good faith, that the price of the Cap be deposited with the Chancery Lane Safe Deposit Company of London, the largest financial and business institution of the kind in the world, who will issue a receipt guaranteeing that the money will be returned in full, on demand, without questions or comment, at any time during the trial period.

The eminent Dr. I. N. LOVE, in his address to the Medical Board on the subject of Alopecia (loss of hair) stated that if a means could be devised to bring nutrition to the hair follicles (hair roots), without resorting to any irritating process, the problem of hair growth would be solved. Later on, when the EVANS VACUUM CAP was submitted to him for inspection, he remarked that the Cap would fulfil and confirm in practice the observations he had previously made before the Medical Board.

Dr. W. MOORE, referring to the invention, says that the principle upon which the Evans Vacuum Cap is founded is absolutely correct and indisputable.

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BY MARY E. ALLEN-DAVIDSON M.D.

CHAPTER IV.

(Continued from page 584.)

of children. This may predispose to coughs, colds, catarrh, etc. An irritating cough at night is often caused by dry air and will cease at once if moisture be applied. If parlor heaters are used a kettle of water should always be kept on the same, the steam from which will supply the necessary moisture. Where furnaces are used, the reservoir does not supply sufficient moisture to the heated air even if kept filled. Set tin pails in the registers and keep filled with water. The evaporation of this water into the warm air passing over it causes a quite perceptible difference in the moisture of the air. Where steam or hot water is used for heating the air is not so likely to be too dry. So much for general ventilation and heating. Something may be added when the sleeping rooms are discussed.

As to lighting—be prodigal of sunlight through the day. Disease is a thing of darkness, and lurks in damp, sunless corners. Have plenty of windows and don't keep the blinds down. Never mind the curtains and carpets. Better that these should fade and lose their freshness than that the children should be pale and peaked and without the red roses of health blooming on their cheeks. Let in the sunlight, flood the house with it. It will search out the cob-webs, show up the dust, sweeten and purify everything and revive you with its warmth and cheer. The sun and the elements are always our friends. The former gives light and warmth and light; while earth, air, fire and water, Nature's tireless cleansers, are at constant war with our enemies, filth and disease. So welcome the sunlight and make the elements your co-workers. Burn every useless thing if it can be burned. It will not then become a source of contamination. Call earth and air and water to your aid in keeping your home healthful and so restful to mind and body.

For artificial lighting the electric is the most sanitary. Coal oil and gas use up a great deal of oxygen and throw off carbon dioxide gas. Be sure to allow a lot of extra fresh air if these are used. See that the coal oil is pure and never burn with wick turned low. Shade lamp if necessary or set in an adjoining room. There is great danger of explosion when the wick is turned low, because the escaping gas, so perceptible by its odor, is very inflammable and easily ignited. The consequences need not be dwelt upon—they are only too fatally common.

LIVING ROOMS.

Kitchen.—This should be the largest, cheeriest room, in farm houses at any rate, because no matter how cosy the parlor may be, even if there be a good sized dining room, which does not obtain in the majority of farm houses, still the kitchen ever will be the living room, because the mother must spend the major portion of her waking hours there, and she is the magnet that draws all the inmates of the home into the charm of her presence. So, mothers, I address myself particularly to you. This is your especial domain; does it seem a lowly place and your daily round menial and commonplace? Not so. It is a throne-room, and though the toil is unceasing and severe, you are inculcating principles and giving a matchless example of fortitude and endurance, and of self-sacrifice for your loved ones, that will go a long way toward shaping the destiny of an empire; for the mothers of Canada are giving us men and women who will make our native land a nation of ideal homes and the home of an ideal nation. So mothers have your workroom spotless. Let it preach sermons to all who enter it, of law and order. Keep it clean and healthful. Never allow the kitchen to become close smelling. No clothing should hang on the walls as a thing of routine. Have a closet for these outside wraps, overshoes, etc., that litter up your kitchen, bringing with them horse odors and barnyard smells. Don't allow any top barrels to stand in the kitchen. Fermentation goes on, using up the

oxygen; gases are given off that foul the air and infect the food. Now comes the most important thing. *Forbid spitting absolutely.* It is a disgusting and most dangerous habit. It is astonishing how prevalent this habit is. Many of my readers will exclaim, "Surely not!" But I have been taking note of this for years and many men and women (and of course their children too) who are respectable and even fairly clean in other ways, spit wherever they chance to be—on the floor at home, in church or neighbor's house. There really are beings who chew tobacco and spit on the floor. What matter that their unfortunate babies whose play-place has been so defiled have to creep through this vileness? Isn't it horrible? How can such children ever struggle into decency and self-respect? These expectations, on drying, are raised in dust, and taken into the lungs, and deposited on the food and in the milk and water. Fathers who smoke or chew, I beg of you to forget your selfish, yes, most cruelly selfish appetite long enough to think a few minutes. Think of the lumps of foul-smelling contamination you are making of your own bodies. Go and look at yourself in the glass and take an honest picture into your mind. There you are, with the trade marks of tobacco the strongest characteristics of your personal appearance. Yellow, tobacco-stained teeth, perhaps worn into ugly jags and hollows to accommodate the pipe. Lips, dry, livid, perhaps cracked, or with sores that may be incipient cancer; or, if you chew a dirty brownish rime defiles and disfigures the mouth that should be as clean and red-lipped as when you were a baby. There is a general dustiness and slouchiness about your whole make up. Your hair is dry and unkempt, for the poisonous nicotine has stolen its rich glossiness. Your eye is not so bright as it should be. The clear white has turned to a dirty yellow. Isn't it so? Where is the freshness, the clean wholesome well-groomed appearance that should be yours? Has tobacco so undermined your self-respect that you don't care what you look like or how others regard you? Your breath! Its nastiness is indescribable, and your clothes, even your body, emit a rank odor of stale tobacco that smells to heaven! Isn't this a true picture? How selfish you are to persist in such a defiling habit, with your dear ones around you. For love of you and your better nature they endure what must be disagreeable in the extreme. This habit is most injurious to their health, indirectly, as well as to your own. How can your family respect you or be proud of you, when you are weak enough to yield to an enslaving habit that is such an injury to you, impoverishing you in mind, body and estate. Remember that tobacco weakens all your powers, bodily and mental. You would be stronger physically and more alert and successful financially, if your powers were not narcotized by tobacco. It makes you irritable, unkind and supremely selfish, or you wouldn't persist in the habit when it means so much harm and loss to your dear ones and to yourself. I appeal to every tobacco user, for the sake of your better nature, for the sake of the health and moral training of your children, for the sake of God who gave you a clean beautiful body that your mother gloried in, stop this defiling habit! Don't set an example to your children that if followed, will make them less strong-limbed and clean and bright-eyed and clever than they are now. Help them to live clean, wholesome lives. Help them to hold up their heads in self-respect, knowing that they are good to look upon, a benefit, instead of a nuisance to the community, and that all their powers are theirs to use for good, instead of weakened, perverted and criminalized by the curse of tobacco.

In regard to kitchen utensils—watch the sink. Disinfect the pipes often with boiling water having a little lye in it. The same applies to all the bath-room pipes.

As to the dining-room. Do not put food—milk, butter, meat, vegetables or breadstuffs—on the table until the family are ready to sit down. Better they should wait awhile than that they should dine off what the flies have perhaps crawled over. Clear off the table as soon as the meal is over. Leave nothing that will attract flies. If you leave a cloth on your table let it be a dark one unless you can exclude every

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fly. If any flies do gain access try to clear your dining room of them before and after every meal, by waving a large cloth to drive them out. This room may be darkened when not in use, as it is not a living room, but see that there is plenty of ventilation. If needful use fly-pads, but it is better to exercise vigilance in keeping them out of the house altogether. Have every door and window of your house closely screened. Make this a thing of prime importance. Impress it on the children's attention. Tell them why flies are such enemies to health and enlist their help in keeping every fly out of all the house by being careful to brush flies away before leaving or entering the house and closing the screen door tightly and at once. Be specially careful to exclude these pests from your kitchen, pantry and dining room, because there the food supply is in danger of contamina- tion.

Sitting-rooms, that is, parlor, library, drawing-room, etc., I will pass over quickly, only saying that these should always be well ventilated, of comfortable temperature, and with plenty of light, summer and winter. Don't close up these rooms, pulling down the blinds, and turning them into twilight abodes of musty mystery, only to be opened and used on state occasions, when if your children are permitted to enter they will feel awkward and away from home, afraid to move or touch anything for fear of spoiling so much grandeur. The children should never have to be taught "parlor manners." They should be taught to be kindly, courteous, deferential to elders, and helpful to every one, because this is a large part of life's work and God looks to them to do their work well. Then they cannot fail in truest courtesy, which is always the simplest expression of kindly feeling. For the rest they should be left free to work out their own individuality in parlor or in field. They will be natural, sympathetic men and women.

Keep your sitting-rooms light; use the blinds only to temper the heat of the

day or the too direct rays of the sun. Have sensible furniture that is substantial and that won't gather dust and get musty. Upholstered furniture, except in leather, is most unhealthy from every standpoint and should be banished from every home. Have only what is necessary. Nothing looks worse than a room crowded with all sorts and sizes of chairs, tables, settees, etc., They take up space and so lessen the available oxygen. Banish clutter; such as tidies, mats, too many curtains and drapes. Polished floors are the best from a health standpoint and in my judgment from that of good taste also. Rooms should never look crowded and mussy, but spacious for their size. Don't have many pictures. Anything that takes up space and gathers dust should be sparingly indulged in.

When letting in air through the windows loop back the curtains so that any dust in them will not be loaded on the incoming air. After sweeping, let your curtains fall straight; then carefully brush with a long-handled hair brush. If the menfolk indulge in smoking, try to windsweep the room as soon as possible afterward, to prevent the odor of stale smoke from lodging in every fabric and so making the air continually offensive and unwholesome for the children. Don't allow spittoons to poison the air and offend the eye. Take out, scald with boiling water and bring in again if you must. Poor mothers and daughters, it is disgusting work, and you should not be compelled to do anything so repugnant to you, just because those who should shield you from every disagreeable task as far as possible choose to be selfishly indulgent. But you will do this as you do everything, because it is for the well-being and health of all the family, and because "Love constraineth."

Sleeping rooms. — Special thought should be expended on keeping these in good condition, for many reasons, some of which are: Because we spend from one-third to one-half our time in

(To be continued).

Bob, Son of Battle

(Continued from page 622.)

o' t' Dyke," he announced shortly, jerking his thumb over his shoulder.

"The Killer?"

"The Killer."

The cordiality beaming in every wrinkle of the little man's face was absorbed in a wondering interest; and that again gave place to sorrowful sympathy.

"Dear, dear! it's come to that, has it—at last?" he said gently, and his eyes wandered to the grey dog and dwelt mournfully upon him. "Man, I'm sorry—I canna tell ye I'm surprised. Masel, I kent it all along. But gin Adam M'Adam had tell't ye, ye'd no ha' believed him. Weel, weel, he's lived his life, gin ony dog iver did; and noo he maun gang where he's sent a many before him. Puir mon! puir tyke!" He heaved a sigh, profoundly melancholy, tenderly sympathetic. Then, brightening up a little: "Ye'll ha' come for the gun?"

James Moore listened to this harangue at first puzzled. Then he caught the other's meaning, and his eyes flashed.

"Ye fool, M'Adam! did ye hear iver tell o' a sheep-dog worryin' his master's sheep?"

The little man was smiling and suave again now, rubbing his hands softly together.

"Ye're right, I never did. But your dog is not as ither dogs—There's none like him—none, I've heard ye say so versel, mony a time. An' I'm wi' ye. There's none like him—for devilment." His voice began to quiver and his face to blaze. "It's his cursed cunning that's deceived ivery one but me—whelp o' Satan that he is!" He shouldered up to his tall adversary. "If not him, wha else had done it?" he asked, looking up into the other's face as if daring him to speak.

The Master's shaggy eyebrows low-

ered. He towered above the other like the Muir Pike above its surrounding hills.

"Wha, ye ask?" he replied coldly, "and I answer you. Your Red Wull, M'Adam, your Red Wull. It's your Wull's the Black Killer! It's your W'llus bin the plague o' the land these months past! It's your Wull's killed ma sheep back o' yon!"

At that all the little man's affected good-humor fled.

"Ye lee, mon! ye lee!" he cried in a dreadful scream, dancing up to his antagonist. "I knoo hoo 'twad be, I said so. I see what ye're at. Ye've found at last—blind that ye've been!—that it's yer ain hell's tyke that's the Killer; and noo ye think by yer leein' imputations to throw the blame on ma Wullie. Ye rob me o' ma Cup, ye rob me o' ma son, ye wrang' me in ilka thing; there's but ae thing left me—Wullie. And noo ye're set on takin' him awa'. But ye shall not—I'll kill ye first!"

He was all a-shake, bobbing up and down like a stopper in a soda-water bottle, and almost sobbing.

"Ha' ye no wranged me enough wi'oot that? Ye lang-leggit liar, wi' yer skulkin' murderin' tyke!" he cried. "Ye say it's Wullie. Where's yer proof?"—and he snapped his fingers in the other's face.

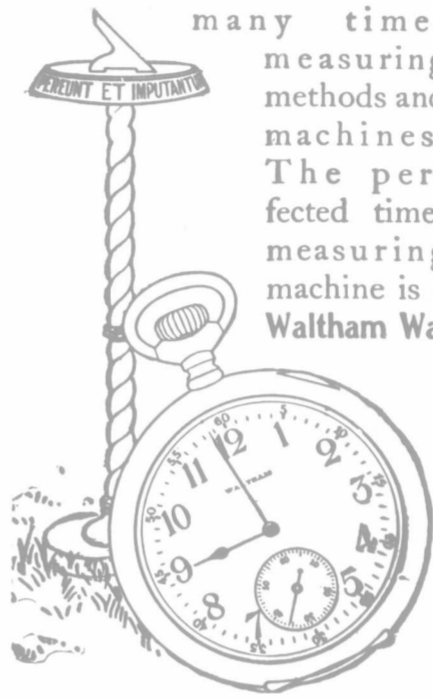
The Master was now as calm as his foe was passionate. "Where?" he replied sternly; "why, there!" holding out his right hand. "Yon's proof enough to hang a hunner'd." For lying in his broad palm was a little bundle of that damning red hair.

"Where?"

"There!"

"Let's see it!" The little man bent to look closer.

"There's for yer proof!" he cried, and spat deliberately down into the



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| EDMONTON, Alta.
T. M. Turnbull, Manager | PORTAGE LA PRAIRIE, Man.
A. L. Hamilton, Manager |
| ELGIN, Man.
H. B. Haines, Manager | PRINCE ALBERT, Sask.
C. D. Nevill, Manager |
| ELKHORN, Man.
R. H. Brotherhood, Manager | RADISSON, Sask.
C. Dickinson, Manager |
| GILBERT PLAINS, Man.
E. J. Meek, Manager | RED DEER, Alta.
D. M. Sanson, Manager |
| GLEICHEN, Alta.
F. J. Turner, Manager | REGINA, Sask.
H. F. Mytton, Manager |
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A. B. Stennett, Manager | SASKATOON, Sask.
W. P. Kirkpatrick, Manager |
| HIGH RIVER, Alta.
C. R. W. Pooley, Manager | STAVELY, Sask.
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| HUMBOLDT, Sask.
F. C. Wright, Manager | STONY PLAIN, Alta.
C. S. Freeman, Manager |
| INNISFAIR, Alta.
H. L. Edmonds, Manager | STRATHCONA, Alta.
G. W. Marriott, Manager |
| INNISFREE, Alta.
W. P. Perkins, Manager | SWAN RIVER, Man.
F. J. Macoun, Manager |
| KAMSACK, Sask.
G. G. Bourne, Manager | TREHERNE, Man.
J. S. Munro, Manager |
| KINISTINO, Sask.
E. R. Jarvis, Manager | VEGREVILLE, Alta.
W. P. Perkins, Manager |
| LANGHAM, Sask.
W. J. Savage, Manager | VERMILION, Alta.
A. C. Brown, Manager |
| LASHBURN, Sask.
S. M. Daly, Manager | VONDA, Sask.
J. C. Kennedy, Manager |
| LEAVINGS, Alta.
Thos. Andrews, Manager | WADENA, Sask.
W. E. D. Farmer, Manager |
| LETHBRIDGE, Alta.
C. G. K. Nourse, Manager | WATSON, Sask.
A. L. Jensen, Manager |
| LLOYDMINSTER, Sask.
S. M. Daly, Manager | WETASKIWIN, Alta.
H. I. Millar, Manager |
| MACLEOD, Alta.
H. M. Stewart, Manager | WEYBURN, Sask.
J. D. Bell, Manager |
| MEDICINE HAT, Alta.
F. L. Crawford, Manager | WINNIPEG, Man.
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FARMERS' BANKING

Every facility for farmers' banking. Notes discounted, sales notes collected. Deposits may be made and withdrawn by mail. Every attention paid to out-of-town accounts.

A SAVINGS BANK DEPARTMENT AT EVERY BRANCH 76
Deposits of \$1 and upwards received and interest allowed at current rates

The Empire Proves Its Claims

The cream separator of Quality—Quality in work and quality in construction—is the

Improved Frictionless

Empire Cream Separator

In construction it is admittedly the simplest in principle. Its bowl is the lightest and turns the most easily. It is free of all complicated parts and is most easily washed. Its improved bearings make it as nearly absolutely frictionless as it is possible for a machine to be.

It is so well built and made of such good materials that it outlasts three or four ordinary separators, and very seldom needs repairs.

It gets all the cream and of the highest quality. In convenience, in economy and in satisfaction, it is emphatically the Separator of Quality.

We Prove These Things. We don't ask you to take mere "claims." We give you proof. Send us for our new catalogue. It is well worth your while to find out about the Empire.

Ontario Wind Engine and Pump Company, Ltd.,
Winnipeg, Manitoba,
Canada.



other's naked palm. Then he stood back, facing his enemy in a manner to have done credit to a nobler deed.

James Moore strode forward. It looked as if he was about to make an end of his miserable adversary, so strongly was he moved. His chest heaved, and the blue eyes blazed. But just as one had thought to see him take his foe in the hollow of his hand and crush him, who should come stalking round the corner of the house but the Tailless Tyke?

A droll spectacle he made, laughable even at that moment. He limped sorely, his head and neck were swathed in bandages, and beneath their ragged fringe the little eyes gleamed out fiery and bloodshot.

Round the corner he came, unaware of strangers; then straightway recognizing his visitors, halted abruptly. His hackles ran up, each individual hair stood on end till his whole body resembled a new-shorn wheat-field; and a snarl, like a rusty brake shoved hard down, escaped from between his teeth. Then he trotted heavily forward, his head sinking low and lower as he came.

And Owd Bob, eager to take up the gage of battle, advanced, glad and gallant, to meet him. Daintily he picked his way across the yard, head and tail erect, perfectly self-contained. Only the long grey hair about his neck stood up like the ruff of a lady of the court of Queen Elizabeth.

But the war-worn warriors were not to be allowed their will.

"Wullie, Wullie, wad ye!" cried the little man.

"Bob, lad, coom in!" called the other. Then he turned and looked down at the man beside him, contempt flaunting in every feature.

"Well?" he said shortly.

M'Adam's hands were opening and shutting; his face was quite white beneath the tan; but he spoke calmly.

"I'll tell ye the whole story, and it's the truth," he said slowly. "I was up there the morn'—pointing to the window above—"and I see Wullie crouchin' down alongside the Stony Bottom. (Ye ken he has the run o' ma land o' neets, the same as your dog.) In a minnit I see anither dog-squatterin' along on your side the Bottom. He creeps up to the sheep on th' hillside, chases 'em, and doons one. The sun was risen by then, and I see the dog clear as I see you noo. It was that dog there—I swear it!" His voice rose as he spoke, and he pointed an accusing finger at Owd Bob.

"Noo, Wullie! thinks I. And afore ye could clap yer hands, Wullie was over the Bottom and on to him as he gorged—the bloody-minded murderer! They fought and fought—I could hear the roarin' o't where I stood. I watched till I could watch nae langer, and, all in a sweat, I rin doon the stairs and out. When I got there, there was yer tyke makin' fu' split for Kenmuir, and Wullie comin' up the hill to me. It's God's truth, I'm tellin' ye. Tak' him hame, James Moore, and let his dinner be an ounce o' lead. 'Twill be the best day's work iver ye done."

The little man must be lying—lying palpably. Yet he spoke with an earnestness, a seeming belief in his own story, that might have convinced one who knew him less well. But the Master only looked down on him with a great scorn.

"It's Monday to-day," he said coldly. "I gie ye till Saturday. If ye've not done your duty by then—and well you know what 'tis—I shall come do it for ye. On ye gae, I shall come and see. I'll remind ye agin o' Thursday—ye'll be at the Manor dinner, I suppose. Noo I've warned ye, and you know best whether I'm in earnest or no, Bob, lad!"

He turned away, but turned again. "I'm sorry for ye, but I've ma duty to do—so've ye. Till Saturday I shall breathe no word to ony soul o' this business, so that if you see good to put him out o' the way wi'oot bother, no one need iver know as hoo Adam M'Adam's Red Wull was the Black Killer."

He turned away for the second time. But the little man sprang after him, and clutched him by the arm.

"Look ye here, James Moore," he cried in thick slushy, scurvy voice,

"Ye're big, I'm sma'; ye're strang, I'm weak; ye've iver ye iver one to your back, I've niver a one; you tell your story, and they'll believe ye—for you gae to church; I'll tell mine, and they'll think I lie—for I dinna. But a word in your ear! If iver agin I catch ye on ma land, by—!"—he swore a great oath—"I'll no spare ye. You ken best if I'm in earnest or no." And his face was dreadful to see in its hideous determinedness.

(To be continued.)

MR. SPURGEON AND HIS PHYSICIAN.

An amusing story is told of a professional interview between the late Sir William Gull, the eminent physician, and the late Mr. Spurgeon. Sir William had a habit of referring to himself in the third person, and as he shook hands with his patient, he observed, "Sir William Gull has had a busy day. First he attended . . . Then . . . and now, last, but not least, he is called to attend the renowned Mr. Spurgeon himself." After diagnosing the case he paused, and then, gazing gloomily at Spurgeon, he began slowly: "Mr. Spurgeon, there can be no question as to what is the matter with you—no question at all. What you suffer from, sir, is overeating. Sir William Gull repeats, overeating." The preacher protested that he rose up early and had exhausting work. "Sir William Gull gets up early," answered the slow voice of the other. "Sir William Gull leads an active and exhausting life, but Sir William Gull has never found it necessary to overtax his stomach. Doctor," turning to the man with whom he was in consultation, "have you never told Mr. Spurgeon that his diet is too generous?" The answer was an affirmative. "Has Mr. Spurgeon obeyed your orders?" The doctor regretted that on that point his patient did not agree with him. Gull's face assumed a deepened gloom and solemnity. "Well, then, Doctor, if Mr. Spurgeon won't obey your orders, there is only one thing to do"—(with a sudden briskness the physician arose and dropped his thermometer into his breast pocket)—"and that is to let him die."—Manchester City News.

WITH THE COMING OF SPRING this disease is again making its appearance and the careful cattle raiser is considering the advisability of vaccinating his stock so as to prevent the ravages of this disease. There is no longer any question but that Blackleg Vaccine will positively prevent the disease, provided a reliable vaccine is used and in ample time. The loss of a single animal due to delay or faulty vaccine will frequently amount to more than the cost of sufficient vaccine for the entire herd.

It is to the French scientists, Professors Arloing, Cornevin and Thomas that we are indebted for the discovery of a reliable Blackleg Vaccine. They are recognized as being the greatest authorities on the subject and their vaccines have been successfully used all over the world for more than twenty years. Their vaccines can still be obtained through the Pasteur Vaccine Company, Ltd., of Paris and London with New York and Chicago offices in this country. They introduced Blackleg Vaccine into this country over ten years ago. Their vaccine is furnished in three forms—powder, cord and pellet. Numerous experiments have shown that their cord form, which is called "Blacklegine," is the best and most satisfactory form of Blackleg Vaccine. Each dose is separate and ready for use, and the necessary instrument is the most inexpensive on the market. The doses of Blacklegine are of a convenient size that can readily be handled and can be seen during the entire operation. There is, therefore, no question as to whether all the animals have been vaccinated when this form of vaccine is used.

We would suggest that you write to the Pasteur Vaccine Company, mentioning this paper, when they will be glad to give you full particulars.

Going to School or Learn a Trade?
If so, write for our fine new catalogue giving complete information about the special opportunities offered for obtaining an education in almost any subject and learning some of the best trades. Address
O. H. Longwell, Pres. Highland Park College,
Des Moines, Ia.

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PILES CURED

ZAM-BUK SUCCEEDS WHEN ALL ELSE FAILS

To get relief from the agony of piles just take this simple course. Apply a little Zam-Buk either with the hand direct or on a clean warm lint to the piles. If internal make a small wad of clean old lint (not new linen or cotton as these are likely to contain the chemicals used in bleaching which are very harmful). Melt a little Zam-Buk and thoroughly soak the wad, then apply to the part, anointing well with the balm. Do this just before retiring and then lie on a fairly hard mattress. You will be amazed at the ease which follows. This course taken on a few consecutive nights and a little attention paid to the bowels to prevent or remove constipation, will be found to cure.

Mr. Neil Devon, of Webbwood, Ont., says:—"I was bothered for eight years with piles and nobody knows what I have suffered. I tried Zam-Buk and the result was so pleasing that I secured a good supply. Now I am cured."

Mrs. Elizabeth Taylor, of Greenwood Avenue, Toronto, whose photo we reproduce above, says:—"For four years I suffered acutely from bleeding piles and spent an immense amount of money on 'remedies' and doctor's prescriptions but got no ease. Zam-Buk was different to everything else I had tried and it cured me. I am grateful for the cure, and as I have never had piles once since, I know the cure is permanent."

Zam-Buk cures cuts, burns, abrasions, pustules, scalp sores, itch, eczema, ulcers, boils, abscesses, blood poison, etc. All druggists and stores sell at 50c. a box, or post free from the Zam-Buk Co., Toronto, for price. 6 boxes for \$2.50. Send 1c. stamp for trial box.

Advertisement for Steedman's Soothing Powders. Features a central illustration of a woman in a long dress and bonnet. Text includes: 'EE', 'SOOTHING Powders', 'Relieve FEVERISH HEAT. Prevent FITS, CONVULSIONS, etc. Preserve a healthy state of the constitution during the period of TEETHING.', 'Please observe the EE in STEEDMAN.', 'CONTAIN NO POISON', 'EE'.

Trade Notes

THERE ARE SO MANY DIFFERENT styles of roofing on the market at the present time that a person needs to enquire into the merits of each before deciding which best suits his purpose and which would be the most economical to use. One of the latest of the prepared roofings to come under our notice and which is advertised in another column is the Amatite roofing. Amatite has a mineral surface which takes the place of paint and is claimed to be much more durable. Farmers who have any roofing to do should obtain a Free Sample, which may be done by addressing the Barrett Manufacturing Company, New York, Chicago, Cleveland, Allegheny, Kansas City, St. Louis, Minneapolis, Philadelphia, New Orleans, Cincinnati, or Paterson Mfg. Co., Toronto, Ont.

WE ARE IN RECEIPT OF A CATALOG from the Wingold Stove Co. of Winnipeg, mail order dealers in stoves, harness, sewing machines, hardware and stable sundries. This book contains over forty pages of a full list of all kinds of stoves suitable for the farm and home. This firm has been established for considerable time in the city of Winnipeg, and is doing a large mail order business throughout the country. They have shipped their goods to all parts of the Dominion. They are thoroughly reliable and our friends can be assured of the best of treatment from the Wingold Stove Co. of Winnipeg. The catalog will be mailed free to all who request it, mentioning the paper in which they saw this notice.

CAUSTIC BALSAM FOR SPAVIN' AND RINGBONE.

Casselton, Ont., Feb. 6th, 1905. The Lawrence-Williams Co., Cleveland, Ohio:

I have used your GOMBAULT'S CAUSTIC BALSAM for spavin, ringbone and a good many other ailments, and found it very good for all.

ALF. LALONDE.

"CAUSTIC BALSAM GIVES UNIVERSAL SATISFACTION."

Wapella, N.W.T., Canada April 22, 1904. The Lawrence-Williams Co., Cleveland, Ohio:

Please send me by mail any nice show cards or advertising matter so I can make a good show. I have sold quite a lot of GOMBAULT'S CAUSTIC BALSAM and it has given universal satisfaction. Yours for push and sales.

JAMES A. MACDONALD.

EVERYWHERE IN THE WEST, there is a great demand for fruit lands, and especially for irrigated lands. Down in Washington orchard lands have grown in value to \$1,000 and \$1,500 an acre.

Soon many thousands of acres in the fertile irrigated valleys of British Columbia will be on the market.

The Kettle Valley Irrigated Fruit Lands Co., operated west of Midway are now ready for buyers of five and ten-acre tracts, tracts of high-grade soil, with water assured and with an unexcelled climate.

Recent reports from that district show no injury from the unusually cold weather of the past winter. Large plantations will be set out this spring. The land is now open for sale. Further particulars can be had from the Kettle Valley Irrigated Fruit Lands Co. of Midway, B. C.

Alex. Galbraith and Son, Brandon, Man., writes us as follows:—

"We have just sold the Baron's Pride Stallion Bulwark, illustrated last month in the ADVOCATE, to a syndicate of enterprising farmers at Carman, of which Mr. Alex Morrison is president and Mr. T. W. Ivey is secretary. This is the third Clydesdale stallion we have sold to this same syndicate and their pluck in securing such a valuable horse as Bulwark is most commendable. This horse is own brother to the Show horse Dunbar and also to Empress—the mare that beat everything in Scotland in 1899."

A Hint to Butter Shippers

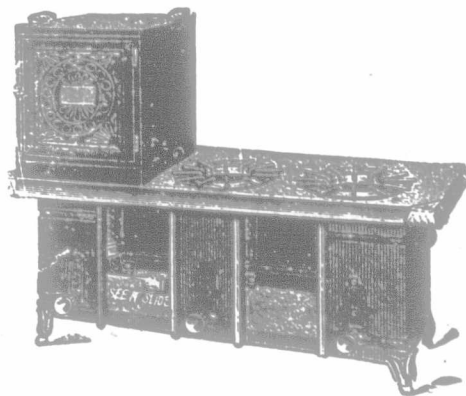
The Bristol (England) Dairy Commissioner states: "Some consignments of Manitoba Butter arrive in a dirty condition, on account of the tubs being very badly coopered. We would much prefer goods in clean, well-made packages, and hope the department will assist us in the matter." Therefore, Mr. Butter-Packer.

INSIST ON

E. B. EDDY'S WIRE-HOOP BUTTER TUBS

They are clean, well-made from white spruce, and the hoops will not fall off. For sale by all first-class dealers.

"Always—Everywhere in Canada—Use Eddy's Matches"



Cheapest!

Cleanest!

Safest!

Not like those Sold in Stores, Absolutely Safe from Explosion.

Burns Barrels of Air The Most Wonderful Stove Ever Invented

CAN'T CLOG UP!

Causing great excitement wherever exhibited. Fuel drawn principally from atmosphere. Uses 395 barrels of air while consuming one gallon of oil. Wood, coal and oil cost money. Only free fuel is air. Supply is unlimited. No trust in control. Air belongs to rich and poor alike.

Harrison Valveless, Wickless, Automatic Oil-Gas and Air Burner Stove

Automatically generates gas from Coal Oil, mixing it with air. Burns like gas. Intense hot fire. Combustion perfect. To operate turn knob, oil runs into burner, touch a match, it generates gas, which passes through air mixed, drawing in about a barrel of air to every large spoonful of oil consumed. That's all. It is self regulating. No more attention. Same heat all day or all night. For more or less heat simply turn knob. To put fire out simply turn knob. As near perfection as anything in this world. Not like those sold in stores. No leaks, nothing to clog up. No wick, not even a valve; yet heat is under perfect control. Cheapest fuel on earth. The only stove absolutely guaranteed to be safe from explosions. No hot fiery kitchens. Not dangerous like gasoline. Simple, durable, lasts for years. Prices, one burner, \$3.75; two burners, \$7.50; three burners, \$11.50. Write to-day. All orders receive prompt attention.

International Supply Co.

Suite 3, McKay Block

299 Portage Avenue

WINNIPEG

MANITOBA



The FARMER'S ADVOCATE has won a place in your Home because it has filled a want.

It would prove its worth to your neighbor if you introduced it to him.

Talk it over, and if you send in one new name we will extend your subscription for six months, or for two new names accompanied by \$3.00 we will send your paper one year free of charge.



LOSSES PAID IN FULL

283 Loss Claims Paid by this Company Last Year
Amounting to \$51,421.17

\$2,700,000
INSURANCE NOW IN FORCE

Rate of Assessment last year 14 cents per acre
Total losses paid for years 1905 and 1906, \$144,000
Average rate of Assessment last 4 years 15½ cts. per acre. Over 3,750 farmers
now insured with us. For further particulars write the Company.

Assets, \$121,000

The Manitoba Farmers' Mutual Hail Insurance Company

W. C. GRAHAM, Manager - Box 513, WINNIPEG

Bonded Bankers: Bank of British North America Licensed

Farmers! Ship your Grain to the GRAIN GROWERS' GRAIN CO. Ltd.

Commission Merchants, Track Buyers and Exporters

Wheat, Barley, Oats and Flax bought on track or handled on commission

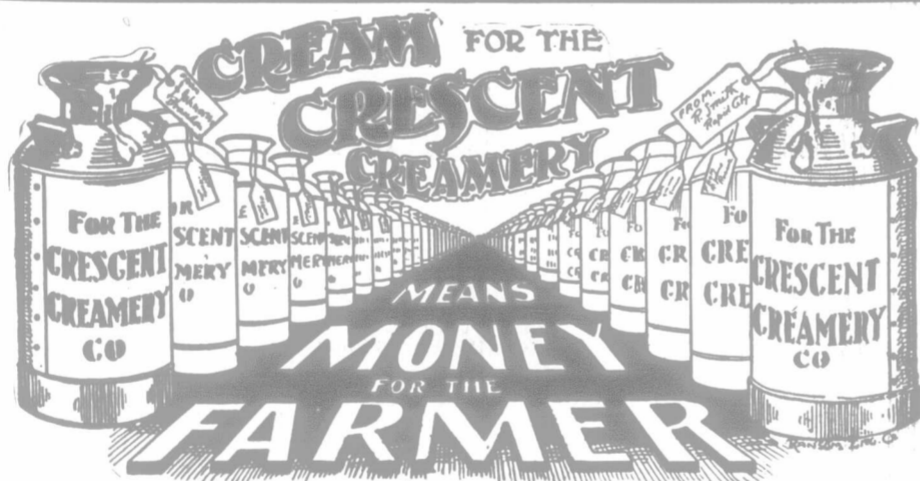
We would ask every farmer, whether a shareholder or not, to consign his grain to us or wire for bids when car is loaded. Let every farmer take a share or shares in the Company and increase our working capital. The larger the Company the greater the economy in operation and ease in maintaining satisfactory export connections. Although enjoying the privileges of membership on the Winnipeg Grain and Produce Exchange, we will take every opportunity to enlarge our export connections and trade in Eastern Canada and the Old Country.

You must pay someone for the service of handling your grain. The Company will employ part of the profits of the business in spreading the organization, improving conditions and developing markets; the balance of profits will be available in the payment of dividends on paid-up capital. Those of our subscribers who have only paid 10% on shares had better meet the 20% call since made, at once, and so share to a greater extent in the profits of this season's business.

Get your neighbors as shareholders, if possible; if not, try and induce them to patronize the Company.

Bill your grain to the order of the Grain Growers' Grain Co., at Fort William or Port Arthur, according as you are on the Canadian Pacific or Canadian Northern railway system

Write across the bill "Advise Grain Growers' Grain Co., 5 Henderson Block, Winnipeg."



Farmers' Interests
Are Our Interests

We Originate
Others Imitate

We have facilities not possessed by any other creamery in Manitoba for pasteurizing and ripening all cream we receive. This enables us to turn out a strictly A1 article, thereby ensuring our patrons the highest price at all times.

Our system of weighing, sampling and testing each individual can of cream which we receive is as near perfect as can be.

Highest Prices
Prompt Payments

Accurate Tests
Trial Solicited

Crescent Creamery Co. Limited

WINNIPEG and BRANDON

Wedding Rings

There is no question of the quality of wedding rings stamped "DINGWALL," 18k or 22k.

Our No. 2123.	An 18k ring.	\$4.00
" No. 2125.	" " "	6.00
" No. 2127.	" " "	8.00
" No. 2129.	" " "	10.00

These rings we have selected as being the most used. Should a special design be required we will make same to order. Order by mail, stating number.

Catalogue on request.

D. R. DINGWALL, Ltd.

Jewelers and Silversmiths
WINNIPEG

THE NORTHWESTERN HIDE & FUR Co. say of the market on April 15th, "The hide market continues to decline. The over supply in the large packers' hands, also the dealers' hands throughout the country, has a depressing effect. There is only an occasional car sold and each time at a reduction of the previous sale. We have to reduce ¼c. and warn our shippers to expect another ¼c. decline inside of a week. Horse hides are lower.

"Wool and pelt market all quiet. Prices are merely nominal and will likely continue until the new clip comes in. Prices are expected to be 2c. or 3c. less than last year. Large stocks are carried over from last year in the large wholesale centers.

"Fur market rather quiet. All late caught grade low in quality, except muskrat, beaver and otter. They will continue prime for a few weeks as long as the waters are icy cold; then they will deteriorate rapidly. All trapping should cease May 1st, as the law will then be out, and even water animals will be getting poor.

"Beeswax and feathers in moderate demand without change."

ALEXANDER DEY goes to Brownsburgh, Que.—The many friends of Mr. Alexander Dey of the Stanley Gun Club, Toronto, will be pleased to know that he has been appointed to take charge of the Dominion Cartridge Co., shot shell loading department, and is now living in Brownsburgh, where the Company's factory is located. The Dominion Cartridge Co. are also to be congratulated in securing the services of such experienced a man for this department, and we don't doubt but that trap-shots throughout Canada and sportsmen generally, will feel, if possible, increased confidence in the Dominion ammunition—knowing that Mr. Dey has had "a finger in the pie."

Questions and Answers

GROWING ARTICHOKE.
Can you tell me anything about the growing of artichokes?

Ans.—An authority consulted states that artichokes will grow in practically any soil and climate and produce annually heavy crops of tubers for many years. In point of nutritive value, the artichoke excels all other tubers, while with only ordinary care and a little manuring each season they will easily produce three or four times as many bushels per acre as will potatoes. Horses, cattle, sheep, and swine are fond of them and thrive on them wonderfully. Even without any cultivation and manuring, they will produce fine crops year after year and this without replanting, for their great tenacity of life and their disposition to reproduce themselves will save the necessity and expense of annual replanting. No matter how thoroughly the crop may be harvested, there will be enough left in the ground to produce even a fair-sized crop for the following year, and this fact, coupled with the spreading tendency of the plant, has caused the artichoke to be feared as a pest.

By planting in an out-of-the-way place and using ordinary precautions to keep them within bounds, such a

plantation will be found to be very profitable and can be depended on to produce a big supply of fine stock food each season at practically no outlay except a little manure and the harvesting.

They can be planted either in the fall or spring, in hills three feet apart each way, covering them about three inches deep. Either small tubers or cuttings from larger ones, containing eyes, can be used. The first season, at least, draw a little earth around the roots or stems, as a support. By pinching off the tops of the stalks, when well grown, the size and yield of the tubers are increased.

They can be harvested as wanted until the ground freezes. The freezing does not hurt them at all. They can be stored the same as potatoes, or in outside pits or in dry sand in the cellar. After harvesting the crop, turn in the hogs. While they will get plenty of food, there will still be enough left in the ground to make a crop next season.

CONCRETE FOR GRANARY.

Will you kindly advise me on cement or concrete through your most valued paper? Can you recommend it for a granary? If so, how much cement, sand and small stone will be required for building 16 x 30 x 8? Gables will be seven feet rise from plate. Would a cement floor be advisable or would it be damp? How thick should the foundation be? Also the walls? What is the price of cement? G. W.

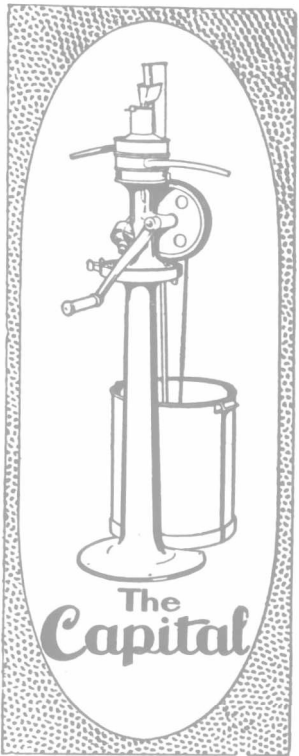
Ans.—Yes, concrete can be recommended for practically all buildings, as it can be built into walls in all possible ways, solid walls or hollow walls or as a veneer. The concrete floor would be dry enough, especially if the soil upon which it was laid were not damp and springy. In making concrete the proportions of cement, sand and gravel would depend upon the quality of the cement. Portland cement is much stronger than the rock cements and of course requires less for a given bulk of wall. An average proportion of Portland cement for walls, floors, sidewalks, etc., is one barrel of Portland cement, two and a half barrels of sand, and five barrels of loose gravel or broken stone. This will make up into about twenty-five cubic feet of wall. In the building referred to there are 784 cubic feet in the walls, making them on an average of twelve inches thick, which at a barrel of cement for every twenty-four cubic feet would require thirty-three barrels. Then the gables would probably require another barrel or two. If the walls were to be supported or the granary divided so that there would not be a full pressure at the middle, the thickness could be reduced. In any case it would be better to make the walls thicker at the bottom than at the top, say from twelve to sixteen at the ground and six to eight at the top. The foundation should be laid on firm ground or below the line of severe frost and should be considerably thicker than the walls above ground. In our calculations we have not allowed for foundations, not knowing how deep this would be.

If rock cement were used it would require from one third to one half more, but the price is less. The sand used should be clean and free from clay, the stone hard and clean and the concrete well mixed.

Mixing should be done on a flat, water-tight platform in the following manner: Measure the sand and spread it in a layer of even depth. Place the cement on top and turn with shovel at least three times, or until the two are thoroughly mixed, as shown by uniform color. Stone (thoroughly wet) should then be thrown on top of the whole and turned at least three times, water being added on the second turning, the quantity varying according to the nature of the work. In general, sufficient water should be used to give a "mushy" mixture just too soft to bear the weight of a man when in place. Concrete mixing machines should be used on large jobs as a matter of economy. Water should be added to the mixture of stone, sand and cement, a little at a time, until the proper consistency is reached. A sprinkling pot is handy for adding water, as it does not wash away the cement. Do not use a hose unless you are an experienced hand,

Double Your Dairying Profits Without Buying A Cow

SUPPOSE somebody offered to swap a ribbon, prize-winning milker for any cow in your dairy-herd, — without a cent to boot? Wouldn't you jump at the chance?



I will do as well as that for you. I will show you how to get as much real money out of an ordinary herd of dairy cows as you'd get by your present methods out of a herd of prize-milkers. I will prove to you there's twice the money in dairying you've been getting, — and you needn't spend any money to get the difference. I will do this just as soon as you write me and say: "I keep so many cows. I get such-and-such a price for my milk—or cream—or butter" (whichever end of the dairy business you follow).

I am not setting any traps for your dollars or your brains. The more skeptical you are, the harder I'll convince you. The best friends I've got among my customers are the men who didn't believe any cream separator amounted to much.

They found out different after they got a Capital Separator and put it to work getting back the money they'd been feeding the pigs and vealing the calves. They found out that the Capital Separator adds over thirty dollars a year to the actual net earnings of every cow they keep. So will you find that out, if you'll write to me and ask for the plain truth about this whole separator idea.

Thirty dollars a year more profits out of every cow you keep for profit's sake, — whether you keep four cows or forty! That is what I promise you. That is what the Capital Separator will get for you—and it is the only thing that will get it. Yes, indeed, I CAN prove it, right up to the handle. Ask me and see.

And I will not only show you why and where and how the Capital gets that extra profit for you, but—I will show you in plain words how you can make that profit with a fraction of the work you have to do to-day to get half as much. That is where my plan for SELLING butter and cream comes in,—my plan specially devised for your special case and your special locality, and

which you can work yourself without sharing the profits with anybody.

Maybe you don't need the plan; but I know you do need the separator, and I can prove to you why and where and how you need it, and what it will pay you if you get it.

Half the work you have to do now to make any money out of dairy-farming, —that's another thing the Capital Separator means to you. Half the work, every day in the week; and thirty dollars more a year from every cow.

Half the work,—much less than half the work, maybe, but half at least,—simply because the Capital Separator is the machine that runs with the least elbow-grease and makes by far the least work for everybody who has anything to do with the dairy side of your farm. That's due to three things: the Capital bowl, the Capital gears and the Capital really-low-down whole-milk tank.

The Capital bowl gets all the cream possible out of the milk because it is the bowl that weighs least of any and sends the milk through a wing-cylinder that simply can't let any cream stay in the skim milk. The Capital bowl is as easy to clean as a lamp-chimney—doesn't take five minutes to cleanse it perfectly.

The Capital gears run so easily that a ten-year-old boy can handle the milk of eight cows in twenty minutes, and not be out of breath when the run is over. The mechanism is so perfectly balanced, so nearly automatic, that the whole work of perfect cream separating, twice a day, won't use up as much energy as it takes to carry a bucket of water fifty yards.

The Capital whole-milk tank is the only really low-down tank there is—because it's just as low-down as a tank can be put,—it stands on the floor! That one thing does away with more waste effort, banishes more bother, abolishes more muss and slop, than you'll ever think possible until you've seen and used the Capital.

But all these things, and many more, are things you ought to know about in detail. I can't tell you about them here,—no room to. But if you will simply write to me and ask for the facts, I will show you why the Capital Separator is the one thing your farm needs right NOW,—and I will show you that you CAN afford to get it right now. Doesn't matter if money's a little tight with you,—I can fix it so the Capital will buy itself before you have to pay a cent for it. Write to me and hear the whole story,—it's worth while.

Robert Ferguson

National Manufacturing Co., Limited
52 Mail and Empire Building, TORONTO, ONT.

It Pays to Advertise in THE FARMER'S ADVOCATE.

DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN." all one-cylinder engines; revolutionizing gas power. Costs Less to Buy and Less to Run. Quickly, easily started. No vibration. Can be mounted on any wagon at small cost—portable, stationary or traction. Mention this paper, SEND FOR CATALOGUE THE TEMPLE PUMP CO., Mfrs., Meagher & 75th Sts., Chicago. THIS IS OUR FIFTY-SECOND YEAR.

WANTS & FOR SALE

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

TERMS—Two cents 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 50 cents.

FOX AND MINK Trappers—I teach you eight secrets free. No fake. I buy the furs at highest prices. Enclose stamp. E. W. Douglas, Box 44, Stanley, N. B.

POTATOES FOR SALE—Vicks Early and Six Weeks, two of the best varieties of early potatoes grown. Price \$1.00 per bus., sacks 10c. Also Red Fyfe seed wheat. J. T. McFee, Headingly, Man.

WANTED—Ladies in rural districts desirous of engaging in profitable business will do well to write the Robinson Corset & Costume Co., of London, Ont.

WARM LANDS of all description in Manitoba Saskatchewan and Alberta. Some excellent propositions in improved farms with small cash payment, balance in half crop. Write for particulars to Western Canada Real Estate and Business Agency, Souris, Man.

FOR SALE—Three two-year-old and one three-year-old Kentucky Saddlebred Stallions registered, black, bay, and chestnuts. D. P. Woodruff, Caldwell, Alta.

FOR SALE—Bees from Moore's famous honey gathering strain. Edmund J. Berry, Brombe, Que.

BEES—Italian bees for sale, order now. Jno. Houston, M.D., Starbuck, Man.

FOR SALE—Grain and stock farm, 2 1/2 miles from Foxwarren. 480 acres, 140 under cultivation, farm well fenced, creek runs through farm, can put up from 40 to 60 tons of hay yearly. Good frame house, barn 30x60 feet with stone basement. Granaries frame, holds 5,000 bushels. Apply to H. S. Rochett, Foxwarren.

FOR SALE—Three puppies two and three dollars each; also one cattle dog, 9 months, good heeler, eight dollars; pair Golden Wyandottes, three dollars; two Buff Rocks, four dollars; pair Embden geese, five dollars; pigeons, canaries, etc. A. Guilbert, Letellier.

FOR SALE—Single Comb Brown Leghorns, Third prize cock at Edmonton, he is a beauty, almost ideal but his comb was slightly frosted; price \$8.00. Also a cockerel, beautiful shape and color and standard comb.—\$10.00. Cockerels common stock of good quality, all the way from \$1.50 to \$5.00, each. Satisfaction guaranteed. Eggs from my Edmonton prize winners, including the first cockerel and first pullet, \$8.00 per setting, and from general stock headed by high scoring males, \$2.00 per setting or \$10.00 per 120 eggs. H. A. Samis, Olds, Alberta. Box 12.

FOR SALE—Uruguayan potato (Solanum comersoni violet) the new wonder, the finest tuber; it beats them all in productiveness and in quality as can be seen by the reports of the French National Society of Agriculture. They thrive best in wet, marshy land, but they will do well in any soil and beat any other kind; three thousand bushels have been raised in one acre; no fiction, just facts. Any quantity will be sent postpaid to any address on receipt of price: One dollar per pound; order now, no better investment. E. Cheyrien, St. Laurent, Man. Agent for Canada.

ON CROP PAYMENTS, 200 deep soil farms for sale on crop payments, these farms are ready for the breaker, and close to Yorkton, Salt-coats, Rokeby and Wallace, Saskatchewan, and Reston, Manitoba; first payment after you sell the first crop. Apply now, James Armstrong, 4 East Richmond street, Toronto.

RENT FOR TERM, option of purchase, 489 acres—about 200 cultivated, 100 meadow, rest bluff, and scrub. Creek through center. Brick veneered, twelve roomed house. Good buildings, etc., tennis lawn. Quarter section joining, with shack and stable, creek, 25 acres cultivated, rest meadow and pasture. One mile from Austin, C. P. R. Half mile from G. T. P. Apply, Vavasour, Austin, Manitoba.

FOR SALE—Good half section one mile from elevators and stores; about 90 acres ready for crops. Lots of good hay land and water. A snap for cash; or terms could be arranged for part. J. Millward, Mather, Man.

FOR SALE—One 10 inch Champion Feed Grinder, second hand, with new plates, re-babbitted throughout, \$25.00. Two Jacks, extra strong, for four horses, \$15.00 each. One Grindstone and frame, 18 inches diameter, 2 inches thick, \$6.00. The Manitoba Iron Works, Limited, Winnipeg, Man.

WANTED—Persons to grow mushrooms for us in their own homes. Waste space in cellar, garden or barn can be made earn \$15 to \$25 per week. Send stamp for illustrated booklet and full particulars. Montreal Supply Co., Montreal.

POULTRY and EGGS

Rates—Two cents per word each insertion. Cash with order. No advertisement taken under fifty cents.

J. R. McRAE, M.D., Neepawa, Man., breeder of Dunston strain White Wyandottes

C. W. TAYLOR, Dominion City—Barred Plymouth Rocks, Buff Cochins, Black-breasted Red Game, Eggs for setting.

FOR SALE—Choice Indian games, Golden Wyandottes, Buff Orpingtons, Plymouth Rocks. S. Ling, 122 River Ave., Winnipeg

AT MAW'S Poultry Farm, Parkdale Post Office near Winnipeg. Acclimatized utility breeds' turkeys, geese, ducks, chickens, incubators and poultry supplies. Large catalog mailed free.

ADDRESS YOUR CORRESPONDENCE to the Eden Rest Poultry Farms, P. O. Box 333, Lethbridge, Alberta, when you want eggs for hatching from pure bred, barred white and Buff Rocks White and Buff Wyandottes, S. C. White and Brown Leghorn and Buff Orpingtons. Eggs \$1.50 per setting. E. J. Cook, Mgr.

FOR SALE—Barred Plymouth Rock and Mammoth Pekin duck eggs for setting. T. E. Bowman, High River, Alta. Box 81.

WHITE WYANDOTTES—A few good cockerels on hand. Also eggs. M. T. Buchanan, St. Charles, Man.

H. E. HALL, Headingly, Man. Pure-bred Barred Rock Eggs for sale. \$1.50 for 15. Incubator lots, \$7.00 per 100 eggs.

BUFF WYANDOTTES—Best winter layers yet produced. That's what counts. Any hens lay in summer. Purebred eggs \$1.50 per fifteen. Jas. Sinclair, Box 130, Stonewall, Man.

PEARCE & BAGG, Wawanessa, Man.—Eggs for hatching from the finest layers, Rose Comb Rhode Island Reds and Single Comb White Leghorns, also Toulouse Geese and Mammoth Bronze Turkeys.

BUFF ORPINGTON Eggs a specialty \$1.50 per setting. McNaughton Bros., Didsbury, Alta.

INCUBATOR lots of eggs for sale at \$10.00 per 100. Barred and White Plymouth Rocks and Buff Orpingtons. All birds selected from trap nest record laying stock of A. W. Foley Dominion Government Poultry Breeding Station, Bowmanville, Ont. Eggs from choice stock, \$2.00 per setting. Address, Northern Nursery Co., Drawer L, Edmonton, Alta.

H. E. WABY, Riverside Poultry Farm, Holmfield, Man., breeder of imperial S. C. Brown Leghorns which have won more 1st, 2nd and 3rd prizes and specials at all the big shows than any other strain. Write for free egg circular and list of winnings of our heavy laying strains of Leghorns. Amber B. Orpingtons and Ringlet Barred Rocks also Red Polled Cattle.

BARRED AND WHITE ROCKS, White Wyandottes and Buff Orpingtons. Eggs \$2.00 per setting; am booking others now, catalog and prize list sent on application. Address: Old Chief Poultry Yards, Lethbridge, Alta.

JOHN STRACHAN, Crandall, Man., Silver Wyandottes, farm raised, only breed kept. Stock for sale. Eggs \$2.00 per setting.

PORTAGE POULTRY YARDS—Ringlet Barred Rocks and Single Comb Rhode Island Reds, Eggs \$2 per 15. Joseph Campbell, Portage la Prairie, Box 281.

WHITE WYANDOTTES, White Rocks, Black Minorcas. Eggs \$1.50 for 15. Mammoth Bronze Turkeys, great laying strain. Eggs \$2.00 for 10. J. B. Gamble, Lemberg, Sask.

EGGS FOR HATCHING—From two of the best American strains \$1.50 for 15, \$2.50 for 30, \$6.00 for 100. Mrs. J. T. McFee, Senior, Headingly, Man.

BARRED ROCKS exclusively. Eggs \$1.00 per thirteen, \$5.00 per hundred from utility stock, \$2 per thirteen; \$10 per hundred from fancy stock. All breeding stock selected for laying by Hogan system. Ship C. P. R. or C. N. R. Mrs. A. Cooper, Trebank, Man.

ELMER SELLER, proprietor Last Mountain Valley Poultry Farm, Strassburg, Sask.; Harry Latta, Manager. Breeders of Buff Orpingtons exclusively. Our pens contain some noted prize winners from Canada and the United States; eggs, \$2.00 per 13; \$8.00 per 100. Satisfaction guaranteed.

THOMAS COMMON, Hazel Cliffe, Sask.—Eggs for hatching from Prize Winning White Plymouth Rock. \$3 sitting Barred Rocks, \$2 general purpose, \$1 sitting, \$1.75 two, \$5 hundred eggs.

HATCHING EGGS—Buff Orpingtons, Barred P. Rocks. My pens contain A 1 imported stock and prize winners. Eggs \$2.00 per 13; \$12.00 per 100. S. A. Tucker, Pincher Creek Poultry Yards.

FOR SALE—Pekin Duck and Single Comb Brown eggs at \$1.00 per setting. Thos. Y. Hurton, Carman, Man.

FOR SALE—Eggs from a fine laying imported English strain of Buff Orpingtons, 13 eggs, \$1.75. 9 chicks guaranteed or replaced for 25 cents. Hugh Fraser, Miami, Man.

S. C. BUFF ORPINGTONS from Cooks' famous strain, Brown Leuhorns, Pekin Ducks, Eggs, two and three dollars per setting. R. Hall, Woodleigh, Wapella.

WHITE PLYMOUTH ROCKS—Fishels strain direct. A few cockerels for sale, price \$2.50. G. E. Cox, Manager Riberby Gardens, Box 113, Winnipeg.

W. F. SCARTH & SON'S S. C. Buff Orpingtons. Eggs from carefully selected hens mated with first prize cock, Manitoba Poultry Show, 1907, \$2.00 per 13. Box 706, Virden.

"PRIDE OF MANITOBA"—Rhode-Island Reds and Red Rocks. "Greatest laying combination on earth." "Bred for Western climate," Catalog free—Maple Leaf Yards, Oakville, Man.

EGGS FOR SALE from E. B. Thompson strain Barred Plymouth Rocks. Choice matings, \$1.50 per 15. Utility stock \$5.00 per 120. Mrs. Jas. McFee, Jr., Headingly, Manitoba. 22-5

Breeders' Directory

Breeders name, post-office address, class of stock kept, will be inserted under this heading at \$4.00 per line per year. Terms cash strictly in advance. No card to be less than two lines or more than three lines.

POPLAR GROVE HEREFORDS, A number young cows, heifers, and bulls now for sale from this famous herd at low prices. J. E. Marple, Delsau, Man.

A. & J. MORRISON, Glen Ross Farm, Homewood Man., Clydesdales and Shorthorns.

JAMES WILSON, Grand View Stock Farm Innisfail, Alta.—Breeder of Shorthorns.

H. H. KEYS, Pense, Sask.—Aberdeen Angus Cattle and Buff Orpington Chickens for sale.

GUS. WIGHT, Napinka, Man.—Clydesdales and Shorthorns for sale. Evergreen Stock Farm

WA-WA-DELL FARM.—Leicester sheep and Shorthorn Cattle. A. I. Mackay, Macdonald Man.

O. KING, Wawanessa, Man.—Breeder of Yorkshires, Barred and white Rock Fowl and Toulouse Geese.

MERRYFIELD FARM, Fairville, Thos. Brooks breeder of Clydesdales and Shorthorns. Box 13 Pense Sask.

CLYDESDALES, Shorthorns and Tamworths T. E. M. Banting & Sons, Banting, Man. Phone 25, Wawanessa.

STROBBA STOCK FARM—Well bred and carefully selected Shorthorns and Berkshires David Allison, Roland, Man.

W. HARDY, Fairview Farm, Roland Man breeder of high class Ayrshires, Yorkshires Black Minorcas and White Wyandotte poultry

SCOTLAND PONIES and Hereford Cattle, since in Canada. Write or come and see them J. E. Marple, Poplar Grove Farm, Delsau, Man.

JOHN GARDHOUSE & SONS, Highfield P. O. Ont.—Breeder of Scotch and Scotch-topped Shorthorns, Lincoln and Leicester sheep and Shire horses.

R. A. & J. A. WATT, Salem, Elora Station, G. and C. I. R. R.—Champion herd at Toronto and New York State fairs, 1905, also Grand Champion females, including both Senior and Junior Honors at both fairs. Write you wants.

BROWNE BROS., Ellisboro, Assa.—Breeders of Polled Angus cattle and Berkshire swine Stock of both for sale.

ASHCROFT, W. H. NESBITT, Roland, Man., Clyde and Hackney mares and Stallions, work horses in car lots, Ayrshires. Our motto, Live and let Live.

BERKSHIRES.—Gold Medal Herd, Neepawa Manitoba. Address, J. A. McGill.

WOODMERE FARM.—Clydesdales, Shorthorns and Yorkshires. Pigs at 8 weeks, f. o. b. Neepawa, \$8 apiece. S. Benson.

GEORGE LITTLE, Neepawa, Man.—Shorthorns of best Scotch type.

Lost, Strayed or Impounded

Below is to be found a list of impounded, lost and astray stock in Western Canada. In addition to the notices otherwise received, it includes the official list of such animals reported to the Manitoba, Saskatchewan and Alberta Governments. This department is for the benefit of paid-up subscribers to the FARMER'S ADVOCATE, each of whom is entitled to one free insertion of notice not exceeding five lines. Notices exceeding five lines will be charged two cents per word for each additional word, payable in advance.

SASKATCHEWAN LOST

LOST—Several head of about 5 years of age branded H 2 eye Mark Z 3 A G. Also a single ve Brown Hay.

GRASSES FOR PASTURES.

Which is the best grass to sow for a pasture? Will white or red clover do well in this country, and how much would you put to the acre?

W. E. MABBY. Ans.—The above question was received before the April 24th number had been mailed, but after reading "Various Opinions on Grass Seeding and Fertility" in that issue our correspondent should be able to form an opinion upon the question.

There is not much doubt but that brome makes the best pasture grass, but there are so many objections to it that one does not like to recommend it. It is hard to kill in soils that are rather moist and it soon becomes sod-bound. On soils that are heavy and dry out well in the late summer and fall it has been broken and killed quite easily. Its seed is also very light and if the pasture is allowed to grow up and seed, the seed often blows to other fields where it is not wanted. We think, however, on the open prairies farther west in Saskatchewan brome and rye grass would make a good pasture mixture, but in Manitoba and in districts where there is a natural growth of scrub, timothy, rye grass, red top and white clover would be better. In the latter class of soils red clover grows quite readily and even in some of the more upland soils it soon adapts itself if it is persistently sown and the plants that nature selects allowed to continue to grow and seed. The growing of grasses and clovers is just becoming a regular farm practice and many things remain to be learned about the adaptability of different soils for them. Experiences with these crops should be liberally provided for publication, so that each man may the more readily be helped to a solution of his own problems.

ENFORCING LIEN ON COLT.

If K buys a colt 11 months old at a public auction sale, can M seize colt or compel K to pay for service of horse? SASK. READER.

Ans.—The act says that if the stallion is purebred the owner may register a lien on his get within twelve months after the service of the mare (or before the colt is about a month old). This lien holds until the following first of January, after which the owner of the stallion may seize the colt.

In this case if the stallion were purebred and a lien registered within the time allotted, the owner of the stallion would have first claim, but if the colt were advertised to be sold in the regular way at auction sales and the lien were not enforced, we doubt if it could then be used. It should have been enforced when the colt was put up for sale.

DR. BARNADO'S HOME.

Could you kindly give me the address of a Canadian branch of Dr. Barnado's Home? SASK. E. C. S.

Ans.—Farley Ave., Toronto.

THIS OUGHT TO MAKE A FIELD FOR DISTILLERY PRODUCTS.

If he can steer a clear course between the W. C. T. U. and the Society for the Prevention of Cruelty to Animals, fancier, hopes to achieve a notable success by hatching chickens eggs under drunken turkey hens. Farmer Unrodosed two turkey hens with rye whiskey and under each hen placed twenty-five chicken eggs. The stupefied turkeys remained on the nests and under judiciously applied potatoes proved steady "setters." In due time forty-eight chicks were hatched. As the chicks hatched the "mothers" were allowed to "sober up," and, though seemingly puzzled over the development, devoted themselves to the care of their broods. —N. Y. Produce.

"And why didn't you keep your house-maid, Frau Roth?"

"Well, she arrived with a sewing machine, a typewriter, a camera, a portable dark-room, motor bicycle, gramophone, bath, and health exerciser, to say nothing of her trunks. That was too much for our small house."—Meggen-dorfer Blatter.

STURES.

s to sow for a red clover do d how much e? E. MABBY.

estion was 24th number after reading Mass Seeding ue our corres- to form an ubt but that asture grass, objections to o recommend soils that are becomes sod- e heavy and summer and and killed s also very is allowed to l often blows not wanted open prairies ewan brome ke a good lanitoba and is a natural r, rye grass, r would be ss of soils lily and even l soils it soon stently sown ture selects w and seed. id clovers is rm practice o be learned ifferent soils with these provided for i man may to a solution

COLT.

ths old at a d size colt ice of horse? READER. the stallion ay register lve months e (or before old). This ring first of wner of the

ere pure- within the the stallion if the colt he regular he lien were could then en enforced or sale.

OME.

the address Barnado's

E. C. S.

A FIELD DUCTS.

rse between Society for o Animals, a notable eggs under rmer Unr- ye whiskey twenty-five ed turkeys nder judic- ved steady forty-eight the chicks allowed to seemingly it, devoted cir broods.

keep your

a sewing era, a port- le, gramo- iser, to say it was too —Meggen-

Kettle Valley Irrigated Fruit Lands Company

have large acreage of subdivided fruit lands now for sale. Prices \$100 to \$150 per acre. Ample supply of water for which NO RENT is charged. Soil a rich sandy loam which produces the finest apples, small fruits and vegetables. Valuable local market in surrounding mining towns. Splendid climate and excellent railway facilities. Apply to

W. O. Wright, Managing Director
MIDWAY, B. C.

Monuments



FOR PRICES AND BEST WORK WRITE
SOMERVILLE STEAM MARBLE CO.,
BETWEEN 16th and 18th STREETS,
BRANDON, MAN.
AGENTS WANTED.

London and Lancashire Life

HEAD OFFICE FOR CANADA:
MONTREAL

This Company is paying on matured policies the full amount of estimated profits

Liberal Contracts to Suitable Representatives

B. HAL BROWN, Gen. Mr.
Montreal

W. R. ALLAN - - - - Agent
L. W. HICKS - Branch Manager
WINNIPEG

IF YOU want the FARMER'S ADVOCATE AND HOME JOURNAL **FREE** for one year get two new subscriptions at \$1.50 each. Tell your friends and neighbors about it.

GOSSIP

WHEN SPRING OPENED IN FORMER YEARS.

In 1884 the break-up came April 12, plowing began April 17, seeding April 25, trees in leaf May 10.
In 1885, seeding started on April 14, wheat showing green May 10, trees in leaf May 18.
In 1886, seeding started April 8, wheat was showing green April 18.
In 1887, seeding began April 4, wheat was showing green May 1.
In 1888, seeding began May 1.
In 1889, seeding began March 25, trees began to leaf April 18.
In 1890, seeding began April 4.
In 1891, seeding began April 8, wheat quite green on summer-fallow April 24.
In 1892, started plowing April 18, began seeding April 20, a great snow storm April 28, seeding delayed for a week, trees in full leaf June 4.
In 1893, a big blizzard came on April 12, which left drifts of snow many feet deep in places, seeding began May 1, trees in leaf May 24.
In 1894, seeding began April 30.
It will be noticed that seeding was late in 1884, 1888, 1893 and 1894. In these years harvesting began on August 22, August 16, August 11 and August 16.

THE MOSSOM BOYD SALE OF PURE-BRED CATTLE AT CALGARY.

We especially urge those of our readers who are interested in Hereford and Polled Angus Cattle not to overlook the large auction sale of these breeds to be held at the Alberta Stock Yards, Calgary, on May the ninth. We have received from Mossom Boyd Company, Bobcaygeon, Ontario, a catalog of their consignment to this sale, including thirty bulls and a number of young cows. If the cattle are equal to their breeding (and we are assured that they are) this is an exceptionally choice offering, and no one need go abroad to import herd headers when such rich blood can be purchased right here in our own province.

The first bull in the catalog is the three-year-old March On 73rd 169208, by the great March On 76035 and out of W. S. Van Natta's fine cow Clare 79353. The three top sires of this pedigree are March On 76035, Eureka 58549 and Fowler 12899. Noted sires appearing at the tops of other pedigrees in this catalog are Valentine 40544, Garfield 4th 32195, Earl of Shadeland 41st 33378, Cherry Boy 26495, Anxiety 3rd 4406, Klondyke 79197, Beau Donald 4th 86141, Actor 45608, Kansas Lad 36932, The Grove 3rd 2490, Lord Wilton 4057, Christopher 69172, etc., etc. All these great sires appear directly in the three top crosses of the dams and are not brought in by the new method of tabulating. There are of bulls in all two three-year-olds, twelve two-year-olds and sixteen yearlings. These bulls should be as good as their breeding calls for, seeing that they are the selected best out of 75 bulls and come from a herd containing over 400 head of the choicest Herefords to be found in America. The cows are mostly young carrying their second or third calves. The Polled Angus offering includes all of the herd of C. D. Jermyn, of Cold Banks, Alberta.

A most successful sale of Shorthorns was held on April 8th at Minneapolis, when H. F. Brown of Browndale disposed of 38 head, 31 females and seven bulls, for an average of \$317.70. The top price of the sale was made by Lady Winifred 3rd with bull calf at foot by Whitehall count, being \$1,025.

American breeders loyally patronized the sale held at Waukesha, Wis., by F. W. Harding on April 10th. Prices for females were most encouraging and Whitehall Sultan bulls were in good demand. Several females by Marquis of Zenda, bred at Senator Edward's farm, Rockland, Ont., were in the sale and brought big averages. 40 females averaged \$364, the top being \$1075 for Lucy of Pine Grove, by Missie Champion.

The Importance of Regular Habits

The welfare of the body depends upon how regularly the stomach, liver, kidneys and bowels perform their respective duties. Carelessness or delay in attending to Nature's demands, brings on disorders which, sooner or later, have a bad effect on the general health.

Sluggish bowels, inactive liver, retarded digestion are important matters calling for immediate attention.

BEECHAM'S PILLS

are a proven remedy. They possess corrective properties which act favorably upon the several organs and induce free and regular movements, so very essential to the bodily health. Do not fail to give instant attention to the calls of Nature. Neglect invites disease. Beecham's Pills are the old and reliable safeguard of health and can always be depended upon to

Keep Stomach, Liver and Bowels in Good order

Boxes 25c, with full directions.

GRAIN CONSIGNMENTS

Wheat Oats Barley Flax

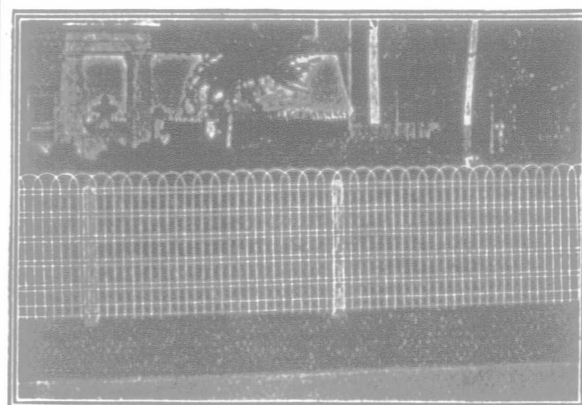
GRAIN GROWERS' INTERESTS—OUR INTERESTS.

BEING STRICTLY COMMISSION MEN

Secure for you best prices — **ALWAYS**
Mark your shipping bills — **ADVISE**

SIMPSON-HEPWORTH CO. LTD.

LARGE ADVANCES. Box 470 520 ASHDOWN BLOCK, WINNIPEG



PAGE ACME White Fences

Any height to 8 ft. Any length you say. From 16 cents a foot. Gates to match, from \$2.25. Last longer. Easy to put up. Get booklet.

PAGE WIRE FENCE CO., Limited
Walkerville - Toronto - Montreal
St. John - Winnipeg

TRADE MARK **B&K** REGISTERED

YEAR OUT, YEAR IN

The "B & K" Brand of Cereal Foods

Maintains its standard of excellence.

This year better than ever and always the best.

TRADE MARK **B&K** REGISTERED

THE BRACKMAN-KER MILLING CO.

CALGARY, ALBERTA.

TRADE MARK **B&K** REGISTERED



Amatite ROOFING

WATERPROOF AND REPAIRPROOF

As a practicable, durable, economical and labor-saving roof, Amatite tops them all.

Let us look into the subject more fully.

With any other roof there is the necessary preparation before you can begin the work.

With shingles—the slow, laborious work of nailing each shingle separately, matching and chalk-lining each row.

With Tin—matching, soldering, painting—then the everlasting keeping it painted, year after year, so it won't leak.

With ordinary ready roofings—paint! paint! paint!

With Amatite—you can nail it down yourself, over your new roof or your old shingled or tin roof, and there you are.

No worry, no fuss, no expense.

Could you possibly find any other roofing to so completely meet every requirement?

And your expense ceases after you have purchased enough Amatite for the job. There need be no saving to repair the barn roof next spring. You will not need it.

Amatite doesn't need to be repaired every year or so; it requires no painting or coating of any kind to make it last from one season to another. Amatite is waterproof, weatherproof and repairproof.

Free Samples

Write for a free sample and examine it. That will tell its own story.

Barrett Manufacturing Co.
New York Chicago Cleveland Allegheny Kansas City
St. Louis Boston Minneapolis Philadelphia
New Orleans Cincinnati London, Eng.

Paterson Manufacturing Co. Ltd., Canadian Agents.
Toronto and Montreal.

How the U. S. CREAM SEPARATOR Starts Itself

At the right is an exact copy of a photograph of a number 7 U. S. Cream Separator. Someone raised the crank to the height shown and had just let go as the photograph was taken. Now if another photograph had been taken about a minute later the crank would have been in the position shown by the dotted lines. In other words, the slight weight of the crank is enough to start the gears and bowl of the U. S. Separator turning. If the crank was raised enough times and allowed to lower itself each time it would get the gears and bowl going very fast. This would take some time so it is not practical, but it gives you an idea of how lightly and easily the U. S. Separator runs.

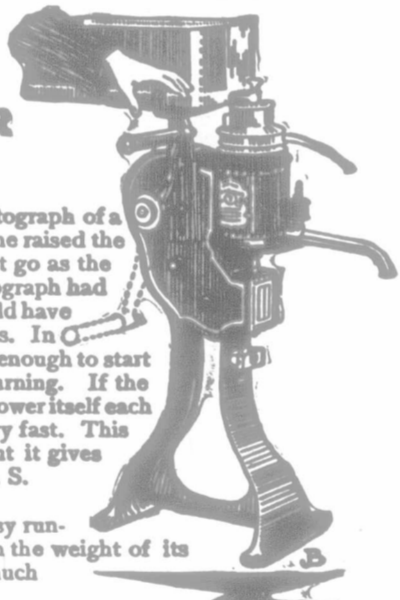
Other separators are advertised as "easy running" but the U. S. is easy running. When the weight of its crank will run a U. S. it certainly can't take much power on the part of the operator to do it.

We haven't room here to tell you more about the U. S. Separator, but if you want we'll be glad to mail you free a copy of our big, interesting, new separator catalogue. It tells all about the U. S. Just say, "Send catalogue number C 110". Write it on a postal if it's handiest, and address

VERMONT FARM MACHINE CO., Bellows Falls, Vt.

Prompt deliveries of U. S. Separators from warehouses at Auburn, Me., Buffalo, N. Y., Toledo, O., Chicago, Ill., LaCrosse, Wis., Minneapolis, Minn., St. Louis, Mo., Kansas City, Mo., Omaha, Neb., San Francisco, Cal., Portland, Ore., Sherbrooke and Montreal, Que., Hamilton, Ont., Winnipeg, Man. and Calgary, Alta.

Address all letters to Bellows Falls, Vt. 441



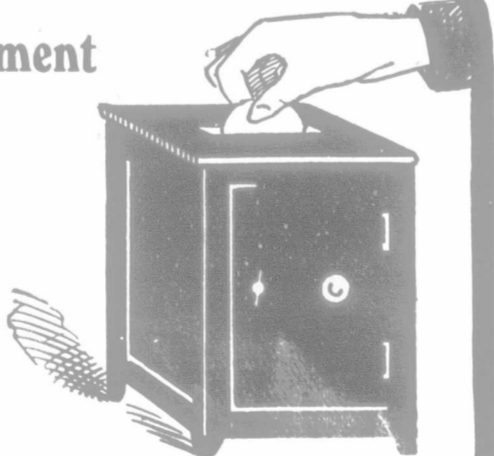
No Safer Investment

than

PAY ROLL

(Bright Plug)

Chewing Tobacco



HORSE BREEDING HINTS.

A reader requests that we republish the article which appeared in our columns about a year ago on the above subject:

FOALING.

First sign is waxing of teats two or three days before.

Udder becomes full and hard; position of foal alters.

Abdomen becomes more pendant, and points of hips fall.

Wax drops off and gives way to milk.

Mare looks anxious and moves around box.

Looks round at her flanks; gets up and down with care.

Breaks into perspiration; ultimately lies down when labor comes on.

In ordinary course foal is born in ten to fifteen minutes.

When mares foal standing there is great risk with the foal.

Mares are most anxious to foal alone.

If there is any difficulty, assistance must be given.

It must be carefully given, and force avoided.

First see the fore legs are straight and equal in the passage, with head between them.

When head and elbows have passed through, the rest of the body comes quickly.

When foal is born, remove envelope and nostrils.

The umbilical cord should be tied and cut two inches from belly of foal.

Tie with carbolyzed ligature and then cut, and apply diluted carbolic acid or other disinfectant to end of navel string.

When properly done there should never be an enlarged navel.

The mare sometimes licks it till it is severed; this, no doubt, is nature's way of doing it.

THE FOAL AFTER BIRTH.

Mare should be allowed to lie down until she gets up herself.

The foal should be taken round to her head, when she it will commence to lick it. This dries the foal and brings on circulation.

The foal then struggles to get up. This should not be interfered with unless in danger against wall, etc., as it expands the lungs and exercises the muscles.

The foal should not be litted to its legs.

It should not be forced to suck until it is able; it is well able to wait for an hour or so.

When able to stand it may be supported beside the mare, and its head directed, but never forced, to suck.

A little milk drawn into the hand, when nose is close to udder, will often induce it to suck.

It is most important the foal should get the first milk itself.

When teats are small and difficult for foal to get hold of, it should be carefully guided to udder.

When mares are irritable or vicious they should be held or tied up, fore foot held up, or even twitch put on, until foal has confidence and mare allows it to suck freely.

If foal's bowels do not act within an hour after birth, remove contents of rectum with the finger, on which a little oil or vaseline is smeared; rubbing with soap is also good.

THE MARE AFTER FOALING.

Give mare a nice warm mash of bran, or a warm drink, but avoid flour drinks.

The afterbirth usually comes away in half an hour to two hours; when mares foal before their time it is longer.

It should not be forced or pulled away unless it remains too long; then a veterinary surgeon should be employed.

Mares should be kept in at least three days after foaling.

Should not be let out when grass is wet, as foal may lie down and get a cold.

A mare when let out with foal frequently gallops about until foal is heated; it then lies down exhausted and gets a chill, which turns to inflammation of the lungs or joints. This should be watched and prevented.

When there is too much milk for foal, and udder becomes full and hard, mare should be milked twice a day.



DAINTY

bedrooms are the result of using Alabastine—the walls actually breathe and keep the air sweet and fresh while you sleep.

Send 10c for a copy of "Homes, Healthful and Beautiful," with many dainty, new ideas for the decoration of your home.

Alabastine is sold by hardware and paint dealers everywhere—a 5 pound package for 50 cents.

Ask your dealer for tint card.

NEVER SOLD IN BULK.

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175 WILLOW STREET, PARIS, ONE

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Why Not Buy the Best?

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Is the Cream of the

KOOTENAY

ROBSON is one of the very few districts in the Kootenay where you have Rail and Steamer transportation, Telephone and Telegraph, Post Office, with daily mail service. Saw Mill and Brick yard. Plans are now under way for the erection of a church and school house.

Have you see our new Robson map showing sub-division of 3500 acres? Let us send you a copy of it with our illustrated booklet. They are free.

McDermid & McHardy

NELSON, B.C.

ED. H. DAWSON
Notary Public, Accountant
DAYSLAND, ALTA.

LANDS FOR SALE

IF WOMEN ONLY KNEW

Thousands of women suffer untold misery every day with aching backs that really have no business to ache. A woman's back wasn't made to ache. Under ordinary conditions, she ought to be strong and ready to help her bear the burdens of life.

It is hard to do housework with an aching back. Hours of misery at leisure or at work. If women only knew the cause. Backache comes from sick kidneys, and what a lot of trouble sick kidneys cause in the world.

But they can't help it. If more work is put on them than they can stand it's not to be wondered that they get out of order. Backache is simply their cry for help.

DOAN'S KIDNEY PILLS

will help you. They're helping sick, overworked kidneys—all over the world—making them strong, healthy and vigorous. Mrs. P. Ryan, Douglas, Ont., writes: "For over five months I was troubled with lame back and was unable to move without help. I tried all kinds of plasters and liniments but they were no use. At last I heard tell of Doan's Kidney Pills and after I had used three-quarters of the box my back was as strong and well as ever."

Price 50 cents per box or three boxes for \$1.25, all dealers or The Doan Kidney Pill Co., Toronto, Ont.

The health of the Country depends upon the purity of food and drink.

COWAN'S Perfection COCOA

is guaranteed absolutely pure and is recommended by the best medical authority.

The Cowan Co. Ltd., Toronto

SEE ANNABLE

If you want to invest in a

FRUIT RANCH

In British Columbia

200 different lots, from 5 to 200 acres, for sale on Kootenay Lake, Kootenay River and Arrow Lakes—the finest fruit district in British Columbia. BUY NOW when you can get on the ground floor. Prices range from

\$15 to \$100 per acre

Your Money will Double in Two Years
Write for Particulars

J. E. ANNABLE, Nelson, B.C.

thrice a day until foal is able to take it all.

SERVICE AFTER FOALING.

The ninth day is the usual time. This, however, varies—sometimes it is the eighth, while others go to the tenth or eleventh day.

If not in use, horse should not be forced on her simply because it is the ninth day.

If horse is not taken then, she will run to the twenty-first day. Many never get in foal till the twenty-first day.

If forced on the ninth day they often prove barren.

The fifteenth day is not of much consequence—it is often the ninth day not passed off.

The twenty-first day is the most important day, both as a trial day and as a service day.

Mares in good health, having had an easy foaling, if served on the ninth day, may be considered in foal if they successfully pass the twenty-first day.

With delicate mares, or those which have had severe or difficult foaling, the twenty-first day is the proper one, as the generative organs have had time to recover tone.

Mares not stinted on the ninth day usually come well in season on the twenty-first day, and stand to their service.

It is important to try young mares on their twenty-fifth days.

The thirty-fifth is the next important day on which mares should always be tried. If the mare passes the thirty-first day it is a strong indication that she is in foal.

She should however, be tried again on the forty-second day. If a mare passes this successfully she may be considered safe in foal.

Many mares break at sixty days, in which case the first service has generally been cast.

To summarize, the chief days for service after foaling are the ninth, twenty-first, twenty-fifth, thirty-first, forty-second and sixtieth.

TIME MARE IS IN USE.

The natural period is four days, but many not so much. Some only remain in season one day, and should be closely watched.

It is a great mistake to send mares a long way to the horse, especially in May or June, when days are hot, and then another long journey home.

If driven off heated and excited, when in relaxed condition, the service probably passes away and the mare is barren.

Absolute quietness after mares are covered is most essential to allow the parts to restore themselves and assist in the due closing of the uterus and its appendages.

The sober, steady horse is the most successful sire.

Twitching should be done as little as possible. It is not reasonable that service should stand when mares are suffering such pain as severe twitching must produce.

Lastly, all mares should be properly hobbled.—Dr. Pallin's prize essay on horse breeding.

A FEATHERED PROPHECY.

"Women that whistle, hens that crow"—the good people of Devon are not inclined to treat with much deference. In fact the saying exhorts the listener to decapitate them at once and avoid disaster.

Mr. Smithurst, of Tennyson Road, now believes firmly in that saying and he attributes to his prompt action the fact that the greater evil did not befall him. He also considers that had he fulfilled the injunction more closely, he might have altogether averted the evil. All of which is anticipating.

Mr. Smithurst keeps hens. He has a number of them. Plain, ordinary, "garden" fowl, content to take life's routine calmly and discharge their duties with faithfulness and dispatch, they did not meddle with the future. But every Eden has its apple tree and hens as well as humans will boldly rush into calamity. From a batch of chickens hatched some months ago came the interloper.

Perhaps a trace of that prescience which characterized the sacred chickens from whose entrails the augurs

If you are Deaf--Read This

The Accidental Discovery of an Electrical Engineer, Which Restored His Lost Hearing.

That "Truth is stranger than fiction" is most forcibly illustrated in the case of Mr. Geo. P. Way, for many years the electrical engineer of the Detroit Y. M. C. A., in the accidental discovery he made of a scientific principle, through the application of which his lost hearing was completely restored.



Geo. P. Way, inventor

For 25 years Mr. Way was a deaf man unable to hear his wife's voice across the table, unable to enjoy an active part in social life. For him, as for every deaf person, life was a gloomy, individual matter. He was so deaf he could scarcely hear the roar of his engines and dynamos. For ten years he carried an ear trumpet, and had tried every device known; had almost constantly been under medical treatment in the vain effort to get back his hearing. To-day he hears perfectly, yet when he removes two tiny devices from his ears, he is quite as badly off as before—he is again deaf. The story of his discovery, which restored his hearing, is remarkable.

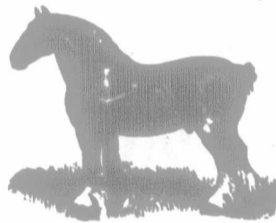
As Mr. Way tells it, he was at his post in the dynamo room one day, and as the buzzing in his ears bothered him more than usual, he placed a curiously shaped tuft of waste in his right ear. Immediately in the midst of the silence that is the misery of one shut off from the sounds of the busy world, there came a crashing sound,

and Mr. Way bounded across the room terror-stricken. Unconsciously he pulled the tuft of waste from his ear. Instantly he returned to the silence that had enveloped him for years. The sound of the machinery came to him as far away. Then he realized the truth—he had found a scientific principle which would give him back his hearing. For five years he experimented constantly to put his accidental discovery to practical use. He studied the construction of the human ear from every standpoint. At last complete success crowned his efforts. The Way Ear Drum was the result, and it restored his hearing. Others heard of the marvel and he was overwhelmed with requests for the little devices.

Wealthy business men in Detroit, who had known Mr. Way for years, and the marvelous results which his invention had brought, gave him full financial backing, to extend the blessings which his wonderful ear drums bring to those who suffer from impaired hearing and deafness. Thousands of the drums have been sold in every part of the world, as one pair of the drums in any locality produces many other sales. Nine persons out of every ten who have used the Way Ear Drums have benefited by them.

The Way Ear Drum is a thoroughly scientific device. It is of peculiar, sensitive material, shaped to exactly fit the opening of the inner ear. It is easily and quickly placed and removed; cannot collapse; is entirely unfelt and unseen; is very durable, and it does bring back the hearing. Don't judge the Way Ear Drum by any other ear device. It is distinctively different in principle. If you are deaf or "hard of hearing," if your hearing is becoming dull, if you have "noises in the head," write a plain letter telling your troubles to Mr. Way. He was deaf himself and knows. He will be honest and will tell you whether the Way Ear Drum will help you. It costs you nothing to find out. Write personally to-day to Geo. P. Way, 520 Majestic Bldg., Detroit, Mich., U. S. A.

My New Importation of CLYDESDALES & HACKNEYS



Has just arrived at my stables. I want to point out to the breeders of Manitoba, Saskatchewan, Alberta and British Columbia, that without doubt I have the best consignment of Clydesdales and Hackneys that I have ever handled. My Clydesdales consist of stallions aged 2, 3, 4 and 5 years. Fillies aged 1, 2 and 3 years. Hackneys are 2, 3, 4 and 5 years old. Many of them were prize-winners this year and last in some of the leading shows in Scotland and England. Parties wishing anything in my line will save money by seeing my stock and getting prices before buying elsewhere.

THOS. MERCER, Markdale, Ont.

The Bow River Horse Ranch has for Sale

Two and three-year-old Registered Clyde Stallions. Registered Clyde Mares, 1,600 and 1,700 lbs. heavy in foal. Grade Clyde Mares, 1,400 and 1,500 lbs., 4 and 5 years old, heavy in foal, sound and gentle, at \$500 per team. Grade Clyde Geldings, 3 and 4 years old, 1,200 to 1,300 lbs. Everything sound, halter broken and gentle, and the mares in foal to registered prize winners.

Two car-loads of well-bred 1,100 lbs. mares, mostly in foal to a French Coach stallion.

High-class drivers and saddle horses a specialty. Prices reasonable. Prospective buyers met at Cochrane.

G. E. GODDARD Cochrane, Alta.

CLYDESDALE STALLIONS and MARES



Out of a carefully bred and selected lot I am offering a five-year-old stallion, a three-year-old, a two-year-old, two yearlings, and several mares and fillies. Will sell quick before seeding. Farm (Meadow Lawn) convenient to Regina. Full details given on application. Address

J. D. TRAYNOR Condie P. O., Sask.

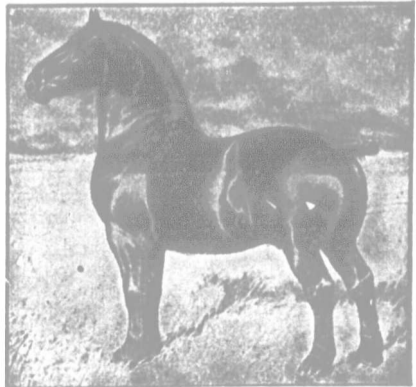
R. P. Stanley, Moosomin, Sask.

Breeder and Importer of Percheron and Hackney Horses

Percheron stud headed by Berenger, winner of first prize at three years old at Paris, France, in 1905.

My new importations are now in their new quarters on farm. They are a very choice lot and doing finely, and are all for sale at reasonable prices.

Every horse sold under a warranty. Terms easy. Correspondence solicited. Barns 1/2 mile of station.





MITHS' OVARY TONIC MAKES HENS LAY

Your hens will lay all the year round, if you will give them Smith's Ovary Tonic once a week.

One teaspoonful to four fowls keeps hens healthy—strengthens and invigorates the egg-producing organs—and renews wasted tissue due to prolific laying.

Only 25c. and 50c. a bottle. Sold by druggists, grocers, etc.

NATIONAL DRUG & CHEMICAL CO., LIMITED, MONTREAL.

THIRD ANNUAL BULL SALE

under the auspices
of the

CATTLE BREEDERS' ASSOCIATION OF MANITOBA

will be held at

BRANDON Thursday, May 30th, 1907

Catalogues ready May 1st

Animals delivered to purchaser's nearest station
in Manitoba for \$2.00 per head.

Cheap passenger rates on
certificate plan from all stations.

A. W. BELL

Secretary

1001 Union Bank Building
Winnipeg

FAIRVIEW SHORTHORNS

SIX YEARLING BULLS, fit to head herds. Sired by Nobleman, Meteor and Topman's Duke. Also some cracking BULL CALVES by Meteor. Some females (Cows and Heifers) in calf; just the stuff to lay the foundation of a herd with.

NOW IS THE TIME TO BUY

Cattle are going up in price. I shall not hold a sale this year, but parties will have abundant opportunities to buy by private treaty.

CARBERRY—C.P.R. and C.N.R.
FAIRVIEW—C.N.R.

JNO. G. BARRON

JOHN A. TURNER, BALCREGGAN STOCK FARM, CALGARY P. O. Box 472

Importer and Breeder of Clydesdales, Hackneys, Shorthorns and Shropshire Sheep.

New importation from Scotland has just arrived. *Scottish Farmer* reports—"Altogether this makes up one of the grandest shipments made this eventful year." A large number of excellent males of the above breeds to select from, both home bred and imported. Also a few stallions suitable for range purposes. Quality and breeding of the best. Prices defy competition. No agents or commission men—business conducted personally. Sales speak for themselves—35 stallions sold last season. Any one wishing a show stallion or hilly can have a greater choice here than in any other breeding establishment in Canada. Orders for stock carefully filled. Visitors all welcome.

warned their clients of the future, came down through the long ages to this hen. Or perhaps from its Cochin China stock it had derived something of the mysticism of the East and a consequent insight into events to come. Mr. Smithurst will not hazard a guess. But he will take his word on one thing. This hen crowed.

It happened when Mr. Smithurst was at breakfast. Calmly upon his ear impinged a clarion note worthy of any chanticleer. He looked out. Before his very eyes the hen lifted up its voice and crowed a second time.

With Mr. Smithurst to see and hear was to act. He seized his rifle from its roost, and aiming at the wanton pullet, he fired. The bullet, however, was one of those homeless waifs akin to the leaden missiles which Mr. Winkle sent wandering abroad to the alarm of his immortal chief. He fired again. Again he missed. A third shot was more effective. Taking effect, the rash bird's destiny was achieved.

The alarming phenomenon troubled Mr. Smithurst, however, and he waited with apprehension the fulfilment of the prophecy. Sure enough, the next morning came tidings that the morning before, just after the bird had given its message, his wife, then visiting in Metchoshin, had been thrown from a hired rig. While with her friend, she escaped injury, over \$100 worth of damage was done to the conveyance.

Few will be rash enough to sneer at the sayings of Devon. When you hear a hen crow, chop.—*Ex.*

THE SOUNDNESS OF HACKNEYS.

The exceptional soundness of the breed may be judged by the following table. At the London Hackney Shows from 1890 to 1906 inclusive, 5,827 stallions, mares and geldings have been thoroughly examined by the veterinary inspectors; and of this number 5,542 have been passed as sound, only 285 being rejected, the larger proportion of these being horses entered in the half-bred and harness classes. The examination is a most stringent one, and the inspectors appointed are the most capable in the profession. It should be mentioned that since the 1896 show every animal present in the show has been submitted to the vets.

Year.	Examined.	Passed.	Rejected.
1890	170	161	9
1891	116	112	4
1892	186	179	7
1893	249	241	8
1894	217	204	13
1895	223	219	4
1896	396	379	17
1897	438	415	23
1898	436	415	21
1899	437	407	30
1900	400	379	21
1901	406	382	24
1902	434	418	16
1903	422	401	21
1904	416	392	24
1905	408	385	23
1906	473	453	20
	5,827	5,542	285

THE SPRAYING OF MUSTARD IN GRAIN FIELDS.

Professor Winter, of the University College of North Wales, has sent out a bulletin providing particulars of the results of experiments in the spraying of mustard in North Wales. These experiments, he remarks, are productive of good results, although the rate of progress is slow. Each succeeding year witnesses more spraying, and he hopes in time to see the practice become general in mustard-infested land in North Wales. Farmers, he thinks, are not likely to buy large machines for the purpose, the cost of which ranges from £5 to £8 each (£25 to \$40), but as one machine is sufficient for a considerable area of mustard-infested land, the outlay is small commensurate with the benefit derived. On smaller farms the "Knapsack" machine, which costs about 30s. (£7.50) will cover a considerable area. Moreover, with farmers' cooperative societies becoming more popular, a system of cooperative purchase can easily be arranged. The solution of sulphate of copper was applied in three different quantities.

The Bear Objects!



It takes two to make a bear hunt—and one is the bear. The hunter wants to feel that his Ammunition is at right.

Dominion Cartridges

are made for all the popular rifles, Winchester, Marlin, Savage, etc., in various Calibres and can be absolutely depended upon at all times. No miss fires or hang fires—and absolute evenness.

The lower price is simply the absence of duty. Dominion Cartridges are made in Canada.

This trademark guarantees quality. 2-07

Dominion Cartridge Co. Ltd., Montreal.

Lost Strayed or Stolen—One Cow

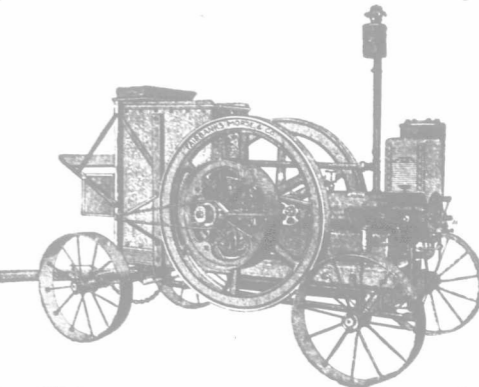
That is about what happens each year for the man who owns five cows and does not use a Tubular cream separator. He loses in cream more than the price of a good cow. The more cows he owns the greater the loss. This is a fact on which Agricultural Colleges, Dairy Experts and the best Dairy men all agree, and so do you if you use a Tubular. If not, it's high time you



did. You can't afford to lose the price of one or more cows each year—there's no reason why you should. Get a Tubular and get more and better cream out of the milk; save time and labor and have warm sweet skimmed milk for the calves. Don't buy some cheap rattle-trap thing called a separator; that won't do any good. You need a real skimmer that does perfect work, skims clean, thick or thin, hot or cold; runs easy; simple in construction; easily understood. That's the Tubular and there is but one Tubular, the Sharples Tubular. Don't you want our little book "Business Dairymen," and our Catalog A. 186 both free? A postal will bring them.

The Sharples Separator Co.
West Chester, Pa.
Toronto, Can. Chicago, Ill.

Fairbanks-Morse Portable GASOLINE ENGINES



The
Canadian Fairbanks Co.

Limited

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Bone Spavin

No matter how old the blemish, how lame the horse, or how many doctors have tried and failed, use

Fleming's Spavin and Ringbone Paste

Use it under our guarantee—your money refunded if it doesn't make the horse go sound. Most cases cured by a single 5-minute application—occasionally two required. Cures Bone Spavin, Ringbone and Sidebone, new and old cases alike. Write for detailed information and a free copy of

Fleming's Vest-Pocket Veterinary Adviser

Ninety-six pages, durably bound, indexed and illustrated. Covers over one hundred veterinary subjects. Read this book before you treat any kind of lameness in horses.

45 Church Street, Toronto, Ontario

namely, 3, 4, and 5 per cent. solutions, or 15 lbs., 20 lbs., and 25 lbs. of sulphate of copper respectively to 50 gallons of water. The trials last year were carried out in nine different centers, in four different counties. The practical destruction of the weed was accomplished in many cases, and in others 70, 80, and 90 per cent. was destroyed, and in other cases where the grain was tined, it made a complete recovery. On one farm in Flintshire, June spraying killed about half the plants to three-quarters; the remainder were greatly checked, but looked like recovery. Accordingly the July spraying with a 4 per cent. solution was tried, the mustard then getting past the flowering stage, and most of the seed-pods formed. A week later every mustard plant was found to be dead and even the oldest seed-pods shrivelled up and killed. The grain was slightly brown, but speedily recovered, while the clover and grass seeds were not damaged at all. Summarising the results of the trials, Professor Winter remarks that they confirm in the main those of previous years. The 3 per cent. solution gave rather better results than usual, owing to the hot, dry season. Having regard to the moist climate of Wales, however, probably a 4 per cent. or 5 per cent. solution will be more effective. Of these experiments, the application of the solution on the young plants was not so effective as when spraying was conducted when the plants were quite matured.

An Ideal Stock Farm For Sale

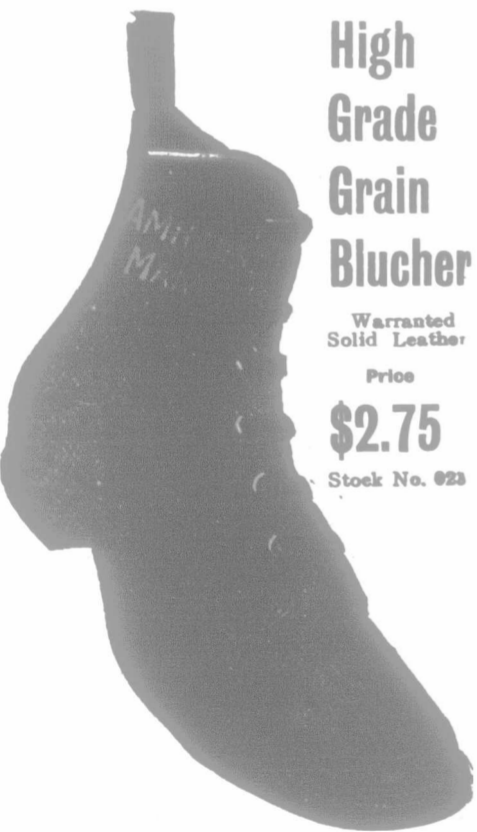
960 acres in Block. 7 1/2 miles from town; all fenced. Running Water and Springs. Good House and Barns. Write for full particulars. This is one of our many good buys.

CANADIAN AMERICAN REAL ESTATE CO. Ltd. LACOMBE, Alberta

Kootenay Fruit Lands

For Sale 160 acres in Slocan Valley, no waste land; no stone; all level; soil first class, 2 nice streams. Close to school, P.O., Ry Siding, 7 acres cleared 400 fruit trees, some are bearing. Good log buildings. \$4000.00 Cash.

Geo. G. McLAREN, Box 654, NELSON, B.C.



High Grade Grain Blucher

Warranted Solid Leather Price \$2.75 Stock No. 923

Save Your Repairing Bill. Buy the Best. If Amherst make is not sold in your town write E. J. BLAQUIER, Box 683, Brandon, Man. n. If sent by parcel post 50c. extra.

Imperial Bank of Canada

HEAD OFFICE: TORONTO Capital (Paid-up) \$4,700,000 Reserve Fund \$4,700,000 D. R. WILKIE, President and Gen'l Manager. HON. ROBT. JAFFRAY, Vice-President. AGENTS GREAT BRITAIN—Lloyds Bank, Limited, Head Office, Lombard Street, London. BRANCHES in Manitoba, Saskatchewan, Alberta, British Columbia, Quebec, and Ontario. WINNIPEG BRANCHES North End—Corner Main street and Selkirk avenue F. P. JARVIS, Mgr. Main Office—Cor. McDermott Avenue and Albert Street. N. G. LESLIE, Mgr.

HOW SHIRES STOOD UP UNDER VETERINARY INSPECTION.

At the London Shire Show there were 313 animals submitted to inspection and the following is the list of rejections and the causes for the same:

Whistling	3
Stringhalt	1
Spavin	4
Shivering	2
Roaring	7
Ringbone	1
Sidebone	6
Wrong height	6
Cataract	2
Lameness	1
Total	33

EDUCATION, CULTURAL AND VOCATIONAL.

Principal Robertson of the Macdonald Agricultural College, near Montreal, addressed the Toronto Canadian Club recently on the value of education for culture as contrasted with education for a vocation. All thoughtful teachers will agree with him in the opinion that progress from the humanitarian standpoint, is more important than progress from the materialistic standpoint, and that increased satisfaction in living is more than increased wealth in land and buildings and manufactures. Unfortunately it is not easy to induce people to accept this view and act on it in practice. They persist in asking with regard to each subject of the school course of study what it is good for, and if there is no revenue to be obtained by its application to some industrial pursuit they have no more use or toleration for it.

This is, of course, in strict keeping with the general tendency of the times. To make money is apparently the first duty of man, and the second is to make as much display with it as possible. Materialism brings its own penalty in the form of vulgarization. The man who thinks of nothing but making money will ultimately find himself unable to give attention to or take pleasure in any other occupation. Rational recreation becomes for him an impossibility, because, being no longer able to take interest in anything except what costs or produces money, he is compelled by necessity to think only of that. Even the too ardent and persistent pursuit of science, as such, tends to crush and starve the emotional side of human nature. Charles Darwin says he was fond of literature in his youth, but he lost all liking for it as he grew older, and would at last take no interest in anything but physical science.

In education the term "culture" is used of both the intellect and the emo-

Gombault's Caustic Balsam

The Worlds Greatest and Surest

Veterinary Remedy

HAS IMITATORS BUT NO COMPETITORS!

SAFE, SPEEDY AND POSITIVE.

Supersedes All Cautery or Firing. Invaluable as a CURE for

- FOUNDER,
- WIND PUFFS,
- THRUSH,
- DIPHTHERIA,
- SKIN DISEASES,
- RINGBONE,
- PINK EYE,
- SWEENEY,
- BONY TUMORS,
- LAMENESS FROM SPAVIN,
- QUARTER CRACKS,
- SCRATCHES,
- POLL EVIL,
- PARASITES.

REMOVES BUNCHES or BLEMISHES, SPLINTS, CAPPED HOCK, STRAINED TENDONS.

SAFE FOR ANYONE TO USE.

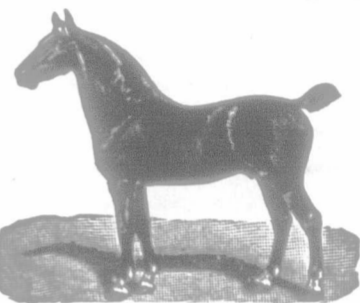
THE BEST FOR BLISTERING.

I have used GOMBAULT'S CAUSTIC BALSAM quite a good deal, and for a blister it's the best I ever used. I wish your remedy every success. CHAS. MOTT, Manager, Mayfield Stud Farm, Leesburg, Va.

We guarantee that one tablespoonful of Caustic Balsam will produce more actual results than a whole bottle of any liniment or spavin mixture ever made. Every bottle sold is warranted to give satisfaction. Write for testimonials showing what the most prominent horsemen say of it. Price, \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use.

The Accepted Standard VETERINARY REMEDY

Always Reliable. Sure In Results.



None genuine without the signature of The Lawrence-Williams Co. Sole Importers & Proprietors for the U.S. & CANADAS. CLEVELAND, O.

CURED CURB WITH TWO APPLICATIONS.

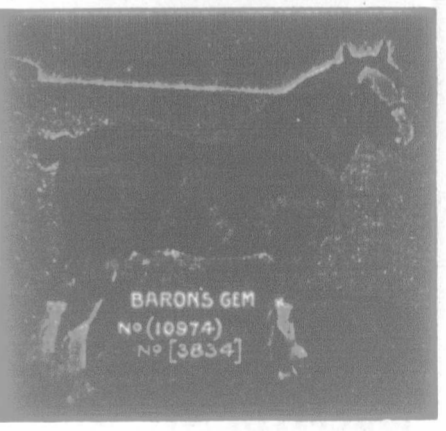
Have used your GOMBAULT'S CAUSTIC BALSAM to cure curb. I blistered it twice, and there is no sign of it any more. The horse is as good as ever.—DAN SCHWEBER, Evergreen, Ill.

Sole Agents for the United States and Canada. The Lawrence-Williams Co. TORONTO, ONT. CLEVELAND, OHIO.

A. & G. Mutch Craigie Mains LUMSDEN, SASK.

Importers and Breeders of Clydesdale Horses and Shorthorn Cattle. A new importation of young Clydesdale Stallions from Scotland now on the way; should land here about March 15th. This will be one of the best importations we have yet made, consisting of good, large, thick-quality horses. We buy and sell our own horses, by this means saving to our customers all high commissions and expenses. They will also be sold on a small margin above cost.

Shorthorns, Young Bulls, Cows and Heifers from the best families



10,000 Well-Bred Cattle For Sale

Owing to the curtailment of their range by settlement, the New Walrond Rancho Company, Livingston, Alberta, intends to offer during the coming summer their entire herd of Shorthorn, Hereford and Galloway Cattle for sale.

Owing to the winter feeding and careful handling these cattle are semi-domestic, the young heifers are easily made gentle. For settlers they are the most desirable imaginable, being absolutely free from tuberculosis and other diseases common among dairy breeds, and while they are high-class beef cattle, they yield a large quantity of very rich milk.

When necessary to car them, neighbors should combine so as to purchase a train-load, say 300 to 400, smaller numbers cannot be handled profitably.

Bulls will also be disposed of.

For particulars apply to

THE LOCAL MANAGER NEW WALROND RANCHE CO. LTD. Livingston P. O., Alberta

Percherons and Shires

Do you want to improve your stock of horses?
Then buy a first-class Stallion. We have them.

Don't take my word for it but look up my prize record



At Brandon winter fair I took 1st, 2nd and Championship. At Neepawa a horse sold from my barn took first. At Winnipeg Industrial I took 5 firsts on individuals; I also won the 3 gold medals offered by the Percheron Society of America, on my group of stallions, the Championship mare and 3-year-old stallion. These are for sale and at reasonable prices. Write or call on
JOHN H. STOUT, Westbourne, Man.



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BRANDON, MAN.

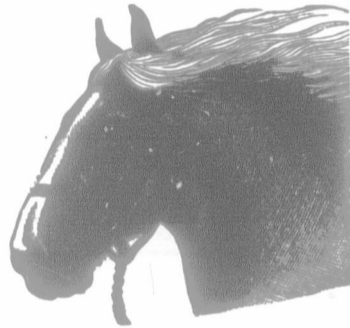
ARE OFFERING

CLYDESDALE STALLIONS and MARES

of the highest merit and choicest breeding
at lower prices than all competitors.

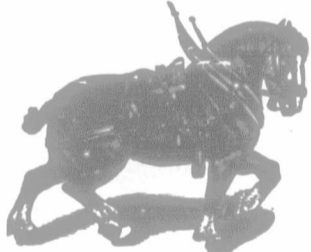
New Shipment just arrived
containing several sons of the noted
Baron's Pride.

A few choice Suffolks, Percherons and Hackneys on hand
EVERY ANIMAL GUARANTEED. WRITE FOR PARTICULARS.
26 YEARS in the front rank of importers.



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LOOK OUT! STILL AT THE TOP



CLUB STABLES,
12th Street,
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BRANDON.

MacMILLAN, COLQUHOUN & BEATTIE

IMPORTERS AND BREEDERS OF

Clydesdale, Percheron and Hackney Stallions

THE MOST FASHIONABLE STRAINS OF BREEDING ALWAYS ON HAND

At Brandon Fair, 1906, we had three Stallions, sold by this firm, in the Aged Class. Cairnhill, the Champion, was 1st and Champion.

We also won 1st in the Three Year Old Class. The following list of prizes will speak for themselves:

1906—1st and Champion, Aged Class, Brandon.....	"CAIRNHILL" (11292)
1906—1st, 3-year-old Class, Brandon	"TOPPER" (Imp.)
1906—1st in Aged Class, Brandon Winter Fair.....	"CAIRNHILL" (11292)
1905—1st and Champion, Brandon	"PLEASANT PRINCE"
1904—1st and Diploma at Brandon.....	"ST. CHRISTOPHER," who won 1st at Chicago International Stock Show in class of 10, in 1900
1901—1st at Winnipeg	"PILGRIM"
1st and Cup at Brandon.....	"BURNBRAE," who won 1st at Pan-American
1900—1st and Cup at Winnipeg	"BURNBRAE"
1899—1st and Sweepstakes at Winnipeg and Brandon	
1898—1st and Sweepstakes at Winnipeg and Brandon	

And Numerous Other Prizes.

We sell foal-getters as our record proves.
We do not re-sell stallions we know are no good as foal-getters: hence our success.
We have just put in a car of Imported Clydesdale mares.
We have a number of Imported and Canadian bred Clydesdale mares, in foal, also Hackney mares for sale.

Clydesdale, Percheron and Hackney Stallions always for sale.
Prices right. Terms easy.

Our guarantee will bear the closest inspection.

Our Motto is—"Nothing but the best."

Inspection invited. Correspondence solicited.

tions, and in each connection it is worthy of the educationist's most careful attention. Intellectual culture is much more dependent on the method of dealing with a subject than on the nature of the subject itself. Fortunately it matters comparatively little, so far as discipline of the mind is concerned, whether one is learning a language or becoming acquainted with a science, provided he deals with each in the way of discovery through research. The habit of observation lays the ground-work of all intellectual culture worthy of the name, and it matters very little whether the observed facts are linguistic or physical; either sort lend themselves to analysis, comparison, and generalization, the processes which enable us from observed facts to arrive at sound conclusions.

Equally important is the culture of the emotional nature by the use of literature or art, but especially by the former. People will read after they leave school, and it would be of great advantage to them to acquire the habit of selecting the best literature and of making the most out of it by appropriate methods of study. Education which aims merely at storing the mind with useful knowledge will do little in the way of preparing a man to spend his leisure time profitably, when he has any to spend in recreation. In the words of Mr. Robertson, "the ideals of school training should broaden out to include all the energies and faculties of the boy." Clean living, self-sacrifice, good citizenship, are subjects that need a larger place in school curriculum.—*Globe.*

THE ATTEMPT TO CONTROL MARKET PRICES.

The exemplification of this idea is the basis of the Society of Equity, and is a subject on which all men do not agree. Equity enthusiasts question the wisdom of aiding farmers to produce larger crops without devising means to improve prices; in fact have complained that agricultural papers do not tell the farmers how to market their stuff to make a living profit. One of these men taxed that well known Iowa agricultural authority, Uncle Henry Wallace, and got the following reply:

"It is true that the marketing of crops is quite as important as the growing of them; for the farmer is not working for bushels of grain or pounds of meat, but for dollars. That man never lived, however, who is competent to say to farmers definitely just when and how to market their crops. That is a question which each farmer must determine for himself, and on account of the different circumstances under which the farmer is placed and the difference in the capacity of different farmers, the answer must be different under these different conditions.

"The situation is this: The farmers of the West are a long distance from the primary markets for their grains and live stock. They are therefore dependent on transportation; and in studying the question, apart from the world's supply and demand, which can never be accurately known by the individual farmer, there are three facts which stare him in the face:

"First—All crops, whether of grain or of live stock, cannot be marketed at the same time. The railroads cannot furnish the cars; and if they could, the bottom would drop out of the market. Hence no man can advise farmers in general as to the best time for marketing their crops. We get the year's supply of grain during the summer season. Somebody must hold that grain until the consumptive demand, which is from hand to mouth, requires it.

"Second—But a small percentage of the grain and forage crops of the West can be marketed in the crude form. Less than twenty per cent. of the corn crop of Iowa moves across county lines. Very little of the hay crop which is about half the value of the corn crop and equal to the value of the wheat and oats crop combined, can be sold off the farm. Therefore, it must be marketed not as grain and forage, but as live stock. If it could be marketed as grain, the cry of diminished fertility would be heard from

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Infalible guide to horse health
100 page book, free. Symptoms
of all diseases and treatment
by eminent veterinary, com
pounder of

TUTTLE'S ELIXIR.

Sure cure for curb, colic, splint, recent shoe boils
most horse ailments. \$100. reward for failure where
we say it will cure.
Tuttle's American Worm Powders never fail. Tuttle's
Family Elixire, greatest of all household liniments. Write for
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TUTTLE'S ELIXIR CO.,
66 Beverly Street, Boston, Mass.
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CLYDESDALES

Catalog on application
W. H. BRYCE
Doune Lodge Stock Farm
Arcola, Sask.

Wanted

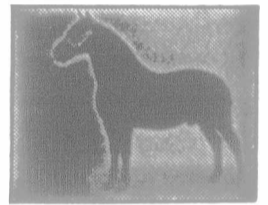
1000 farmers who wish to put their
horses in good condition also 10,000
dairymen who are interested in increas-
ing the quantity and quality of the milk
received from their herd, to write for a
special offer of Peel's Stock Food (the
old reliable), Peel's Gall Cure, 'cel's
White Liniment, Peel's Worm Powder.

IT WILL PAY YOU.

The Peel Richards Co.,
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FOR SALE

The Imported Suffolk Stallion



DEPUTY (3203)

Using three years old. Sire, Warrior 3rd (2845)
Dam, Depper (4695) A handsome, whole
colored, dark chestnut with heavy bone, grand
set, strong joints, good action. The acme of
strength and quality combined. Sound and al-
right and price right. Correspondence solicited

Mossom Boyd Co. Bobcaygeon, Ont.

VIRDEN NURSERIES



200,000

Trees and cuttings, small fruits, shrubs, creepers,
spruce, apples and crabs.

I have by far the largest stock in the West of
these hardy, fast growing Russian poplars and
willows; I send everything by express, prepaid,
so as to arrive in good order. Trees may be
returned at my expense if not satisfactory. No
agents, no commissions, selling cheap. A postal
card will bring you my price list and printed
directions.

JOHN CALDWELL, Virden Nurseries
VIRDEN, MAN.



COCKSHUTT PLOW CO., Agents Western Canada

Experience

to horse health, free, symptoms and treatment, veterinary, com

TLE'S XIR.

cent shoe bolts for failure where never fail. Tuttle's

CO., Boston, Mass. Montreal, Quebec.

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See that Lock

It is the perfect fitting, patented side lock on

EASTLAKE METALLIC SHINGLES

no other shingles have it. This famous device makes Eastlake Shingles the easiest and quickest laid—and also insures the roof being absolutely leak proof. Eastlake Shingles are fire, lightning and rust proof.

OUR GUARANTEE—We guarantee Eastlake Metallic Shingles to be made of better material, more scientifically and accurately constructed, more easily applied and will last longer than any other. Eastlake Shingles have been made since 1855.

Our cheapest grade will last longer and cost less than the best wooden shingles. Our best Metallic Shingles should not be mentioned in the same breath with any other roof covering, shingles, slate or tin. Write us for reasons.

The Metallic Roofing Co., Limited,
Manufacturers, Toronto and Winnipeg

LIVER COMPLAINT.

The liver is the largest gland in the body; its office is to take from the blood the properties which form bile. When the liver is torpid and inflamed it cannot furnish bile to the bowels causing them to become bound and costive. The symptoms are a feeling of fullness or weight in the right side, and shooting pains in the same region, pains between the shoulders, yellowness of the skin and eyes, bowels irregular, coated tongue, bad taste in the morning, etc.

MILBURN'S LAXA-LIVER PILLS

are pleasant and easy to take, do not grip. weaken or sicken, never fail in their effects, and are by far the safest and quickest remedy for all diseases or disorders of the liver.

Price 25 cents, or 5 bottles for \$1.00, all dealers or mailed direct on receipt of price by The T. Milburn Co., Limited, Toronto, Ont.

HEREFORD

blood in them, I can supply you with the best, for sale.

Shetlands and White Leghorns

JAS. BRAY, Portage la Prairie

NEEPAWA STOCK FARM FOR SALE

Shorthorns, combining milk and beef, and prize winning Tamworths, pigs of both sexes. Write me,

A. W. Caswell, Neepawa, Man.

Select Farms IN LOWER FRASER VALLEY

I publish a real-estate bulletin giving description and price of some of the best farms in the Valley. Send for one (it will be of value to anyone interested in this country or looking for a chance to better their present conditions)

T. R. PEARSON
NEW WESTMINSTER, BRITISH COLUMBIA

every state in the West, and in twenty-five years the agriculture of the West would be ruined.

"Third—Poor stuff, whether grain or forage or live stock, cannot be marketed at a profit at any time. It is usually only stuff of good quality that brings any profit to the farmer.

"Under these conditions what must the farmer do? He seldom makes a profit on a crop that is small in quantity, no matter how good the quality. Therefore, we have been advising farmers not to grow the greatest possible crop that can be grown upon an acre of land, but the crop that can be grown at the greatest profit, and this is always the crop above the average. Merely average crops do not pay much more than the cost of production. The profit is in the big crop of good quality.

"No man need expect to make a profit on grain, for example, if he is forced to sell at any particular time. There will always be enough men in some part of the country who must sell their crops directly after harvest, and this usually means a price low enough to justify the speculator or investor in holding the crop until it is required for consumption. It is for this reason that we have urged farmers to stack their grain, and thresh and market it when convenient. In this way they have less loss from weather, have a better quality of grain, and can hold it in the cheapest place that it can be held—on the farm.

"Taking all things into consideration, the best market for grain is in live stock. Yet there are some years when the best market is in crude grain sold to the feeder, but this is always at the expense of the fertility of the land, and therefore of future crops and future profits. It is not, however, every man who is competent to market his crops in the way of live stock; for here, again, as in the case of grain, the better class only gives a profitable price.

"We believe that the man who is competent to do it, and who will do it intelligently, can make more money by marketing his grain in the shape of butter than in any other way. A large number of men can market their crops through hogs more profitably than in any other way; others through horses; others, again, through sheep. As the stars differ from one another in glory, so farmers differ from one another in capacity. They always have done and always will.

"All this, however, is no reason why farmers should not work together for the purpose of finding better markets for their products. They can do this in various ways: By co-operation in establishing creameries to furnish a market for their cream; by co-operation in the breeding of live stock, in ways that we have heretofore pointed out; by co-operation with their fellow citizens in the different states in securing more just and equitable rates of transportation; by co-operation in selling their live stock at the stock-yards; by availing themselves of every scrap of knowledge obtainable with reference to the supply and demand.

"In short, there is no patent way of marketing crops either in the crude form or condensed. The way that suits one man does not suit another, and every man must work out the best way for himself under his conditions and circumstances.

"Farmers are getting better control of the transportation system through their state legislatures. They are gradually working out methods of co-operation in the sale of their live stock in the great markets. They are learning how to produce a better quality of grain, and they are getting more forehanded, so as to be able to hold it in the cheapest way possible.

"Any man-wise enough to advise farmers of the particular time and the particular method of profitably disposing of their crops could be rich beyond the dreams of avarice in three or four years, not by advising them, but by speculating for himself. To qualify him for this he must have an accurate knowledge of the crop production of the entire civilized world, of the consumptive capacity, of the drift of speculation, and of political movements present and future. He would have to be an encyclopedia of universal

THE ALBERTA-CANADIAN INSURANCE CO.

AUTHORIZED CAPITAL \$500,000.00
FULL GOVERNMENT DEPOSIT

HEAD OFFICE: EDMONTON, ALTA
HEDLEY C. TAYLOR, President JOSEPH H. GARISPY, Vice-President
EDGAR A. BROWN, Secretary

Agents Wanted in Unrepresented Districts

Scarcliffe Herefords

Do you want to grow CATTLE that go to market early, that make the BEST use of the feed, and so leave the largest PROFIT to the feeder? Then use Hereford Blood. Useful young stock offered the trade. Herd headed by Simpson 1st. Get my quotations.

H. M. BING, GLENELLA, Man.

PREVENT BLACKLEG
BLACKLEG VACCINE FREE

Introduce, we will send one 10-dose package (value \$1.00) of

OUTTER'S BLACKLEG PILLS
"CALIFORNIA STOCKMEN'S FAVORITE"

and our booklet on Blackleg and Anthrax FREE to each stockman who sends the names and addresses of 20 cattle-raisers. If you do not want Vaccine, send us your name and address on a post card, and we will promptly send the booklet. It is up-to-date, valuable and interesting. Mention this paper. Address

THE OUTTER LABORATORY
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Saskatchewan Valley Stock Farm.

Largest Herd of Pure Bred SHORTHORNS in northern Saskatchewan. Winners of Imperial Bank Cup. Best herd any breed 1904, 1905 and 1906.

Stock for Sale Farm adjoins city.

R. S. COOK, Prince Albert, Proprietor.

Sittyton Shorthorns

The Champion Herd at Regina and Calgary, 1906. At present all my bulls are sold but I can supply a number of first-class females of all ages and of most approved breeding. My old stock bull, Sittyton Hero 7th, has left a good mark. Get my prices for females before closing elsewhere.

GEO. KINNON, COTTONWOOD, Sask.
Lumsden or Pense stations.

Lump Jaw

The first remedy to cure Lump Jaw was

Fleming's Lump Jaw Cure

and it remains today the standard treatment, with years of success back of it, known to be a cure and guaranteed to cure. Don't experiment with substitutes or imitations. Use it, no matter how old or bad the case or what else you may have tried—your money back if Fleming's Lump Jaw Cure ever fails. Our fair plan of selling, together with exhaustive information on Lump Jaw and its treatment, is given in

Fleming's Vest-Pocket Veterinary Adviser

Most complete veterinary book ever printed to be given away. Durable bound, indexed and illustrated. Write us for a free copy.

FLEMING BROS., Chemists,
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The Regina Veterinary Stock Food

A scientific Stock Food prepared by leading Veterinarians. Prevents Contagious Abortion, Swamp Fever, Equine Typhoid, Pink Eye, Strangles Indigestion, Hidebound and all blood and skin diseases of Live Stock.

Endorsed by prominent stock men.
Manufactured by THE REGINA VETERINARY STOCK FOOD COMPANY, Box 547 Regina, Sask.

B. P. RICHARDSON
BARRISTER, SOLICITOR
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Solicitor for the FARMER'S ADVOCATE for Alberta and Saskatchewan.

GRENFELL, SASK.

LANDS FOR SALE

ISLAND PARK HEREFORDS

The Champion Herd at Winnipeg and Brandon for three years. This year won nine first prizes out of ten competed for. At Winnipeg, three champion ships and one grand championship. A few good young females for sale.

Address: **J. A. CHAPMAN, ISLAND PARK FARM, BERESFORD MAN.**

At MAPLE SHADE

JOHN DRYDEN & SON
Stations: Brooklin, G.T.R. Myrtle, C.P.R.

Sold Out, But Still In The Business

We have no more Yorkshires or Berkshires for sale until the Spring litters come in. Send in your order now and avoid disappointment. We expect a grand lot of young stuff from Imported and Prizewinning sires.

Several excellent Shorthorn Bulls and Heifers for sale. Some of these are extra quality.

WALTER JAMES & SONS Rosser, Man.

WESTERN SEED POTATOES

Grown from selected seed.
Yielded 200-420 bush. per acre last year.

ENGLISH BERKSHIRES
12 Sows due to farrow in April and May.

Barred Plymouth Rock and Mammoth Pekin Duck Eggs for Hatching

Write for what you want and get my prices before buying elsewhere.

T. E. BOWMAN High River, Alta.

GLENDENING BROS.
Harding, Man.

RED POLLED CATTLE
The Grain Grower's Cow

YORKSHIRE HOGS

Spring Pigs \$10 apiece when weaned. You can save money both on price and freight by ordering now. Remember, we raise the big litters.

Shorthorn Bulls, Heifers and Heifer Calves for Sale.

I've got a Sir Colin Campbell (Imp)—sired and General—sired—Cows all ages, in calf, calf at foot. Seventy head to choose from. Young Stallions for sale, two and three years old. Also mares and silvers Leicester Sheep, both sexes. Stock always on hand.

Geo. Rankin & Sons, Hamlet, Man.

SHORTHORNS

Ranchers and farmers need the reds, whites and roans, if you wish to breed the best and most profitable cattle. Can supply you with tip-top stuff. Am offering two-year-old Bull—hard header—and 14 yearling Bulls; also Cows and Heifers.

JOHN RAMSAY, Priddis, Alta.

Forest Home Farm

FOR SALE two right good Clydesdale Stallions, rising two years Shorthorn Bulls and Heifers, one and two years old, Yorkshire Pigs (fall and spring litters), and a grand lot of Barred Rock Cockerels.

All at moderate prices.

ANDREW GRAMAM Pomeroy P.O.
Carman or Roland Stations, C.P.R., C.N.R. or G.N.R.

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.

Our young bulls are the best that our herd has ever produced. We can furnish Crickshank bulls of high quality to head the best herds some that will produce prime steers. We have a bull catalog—send for one.

Brooklin Ont.

Why Paroid Roofing Costs You Less!

IT'S a simple proposition.

Paroid Roofing costs you less per year because it lasts longer than any other kind of ready roofing.

It lasts longer because it is better made and is made of better materials.

You can see and feel the difference.

We can prove to you the difference.

It will pay you to get the proofs—because it means a saving of dollars to you.

Here are some of the reasons:

The felt that is the foundation of Paroid is made in our own mills, and is stronger, tougher, more durable than any other.

We are in position to know that it is right. You cannot afford to buy a roofing made from a cheap felt or from a manufacturer who does not make his own felt.

Paroid has a thicker, smoother, more pliable and more durable coating than any other.

Just compare samples and see for yourself.

Paroid is the only roofing laid with square, rust-

proof caps, which have the largest and strongest binding surface and cannot leak, work loose and cause leaks.

At every point, and in every way, Paroid is a superior roofing of proved and tested quality. You don't have to take our word for it. Read our offer.

Paroid has stood the test of time at the hands of the United States Government, of leading manufacturers and railways, of farmers, dairymen and poultrymen everywhere at home and abroad.

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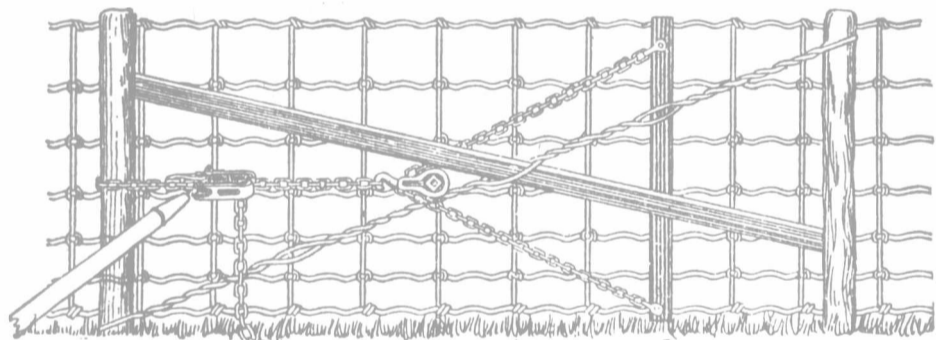
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Our new folder on "Erecting Fences" will tell you and if you will follow the instructions carefully when you are through you will have a good job.

It's full of valuable and interesting information on fence building and tells how to erect woven wire fencing in the quickest and most substantial manner.

No farmer, fence man or any one interested in fence construction should fail to write for a copy. It gives all the information required for building fences and we send it

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In addition there is also a complete and very interesting description of the manufacture of fence wire. Persons who have never had the privilege of visiting a wire mill will find this article of especial interest.

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52 acres of splendid fruit land only 20 minutes from the centre of the City of Nelson. First-class wagon road through property.

5 acres under the very best of cultivation and 13 acres almost ready for planting.

1/2 of an acre bearing strawberries.

500 raspberry bushes. 150 apple trees. 50 cherry trees. All the very best varieties.

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Small frame house and good frame barn.

\$100 per acre on easy terms.

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knowledge. He would need an integrity which has been sought in vain among mortals since Jesus of Nazareth walked among men.

THE RATION OF THE HORSE.

When a horse weighing 1,000 lbs., of good working age, and performing a moderate labor, is fed upon a ration prepared in accordance with scientific teaching, it is supposed to require for one day, 20 lbs. of food—10 lbs. being hay and 10 lbs. grain. Unless the oats are exceptional, 11 lbs. to 12 lbs. are sometimes recommended; or, if corn and barley is used in conjunction with oats, 10 lbs. will be found sufficient. Without doubt the best hay and the best oats form the best and safest ration, although for slow work corn may be added to oats with advantage when the price makes it economical. There are, however, many forms of food which are used in compiling rations, such as bran, brewers' grain, and barley, to which beans are occasionally added during severe work, and on the farm an occasional mangel, or a pound or two of crushed linseed cake, or even linseed meal.

The quantity of food supplied is not only based upon the weight of the animal, but upon the work it performs. With the increase in exertion, there is an increase in the consumption of energy, for a horse trotting 25 miles will require more sustaining than if he walked the same distance. According to the German investigations, an animal doing a moderate day's work and weighing 1,000 lbs., requires 11 1/2 lbs. of digestible nutritious matter in his ration. If this work is increased to an average day's labor, he requires 2 lbs. more, whereas if the work is heavy it is increased to 16 1/2 lbs. But as the digestive apparatus of the horse, unlike that of the cow, is not adapted for bulky food, the increase in a horse's ration is mainly, and sometimes entirely provided from grain alone, 10 lbs. of hay or chaff being estimated as sufficient for an animal of the size mentioned. Many attempts have been made to ascertain the exact waste or consumption of food in the process of labor by the horse, but without any very accurate results. When at work a horse not only draws his load, but moves himself, and in moving himself alone energy is consumed.

It has been noticed, and the fact should be well studied by agriculturists, that although a given quantity of hay contains as much nutritious digestible matter as a given quantity of grain, yet the grain is much more beneficial than the hay, and this is another reason why the hay rations should not be increased. Suppose it becomes necessary for a horse to consume sufficient food for a hard day's labor, on the German theory he would require 16 1/2 lbs. of digestible nutritious matter. He would obtain this in slightly more than 37 lbs. of hay, if hay alone were supplied; but the simplest wagoner, carter, or horse keeper, to use the various terms employed on the farm, is aware that such feeding would be most inadequate and improper. Contrary to somewhat general belief, a hard-working horse needs more starchy matter and fat than albuminoids; hence the value of heavy oats, and indeed of corn, when this food is added to a sound oat and hay ration.—*British Exchange.*

EGG NOG FOR ORPHANED LAMBS.

A woman who has had success raising orphan lambs writes in the *Sheep Breeder*:

"I prepare the milk, feeding them regularly every two hours, until about two weeks old, and then not quite so often, finally feeding only three times a day. Now, in regard to the milk, I take milk fresh from the cow, heating it on the stove until it reaches the boiling point; then set it aside to cool until about milk warm. For one quart of milk I beat one egg lightly and stir into the milk after it is cool. Do not have the milk hot enough to cook the egg, as it is the raw egg that benefits the lamb. I have tried many different things, but find this most successful. I have raised as many as ten lambs in one summer, and without the least trouble or loss."

Questions and Answers

POULTRY QUERIES.

1. What is the best food to feed chickens on that have been hatched by an incubator, whilst in the brooder?
 2. What is the best method for pickling eggs for winter use or sale?
 3. Can you recommend a good book on poultry raising by incubator?

S. S. S.
 Ans.—1. See our April 17th issue.
 2. The best method for preserving eggs for winter is by the use of water-glass (sodium silicate), which can be got from druggists in a form resembling thick syrup (home-made). Take one part (say quarts or gallons) of water-glass, twenty parts of boiling water, and allow the water to cool; place the water-glass and water in a vessel, and stir well together. Put the eggs to be preserved into a tub or vat constructed for the purpose, and pour the solution over them until the topmost layer is completely covered. The water is boiled to destroy any germs that may be present in it. Before boiling eggs that have been kept in this solution, the shell should be punctured with a needle; otherwise the egg shell will crack as soon as placed in hot water. Eggs can be kept for long periods in water-glass solution.
 3. "Poultry Craft" is a book that deals authoritatively with this subject and others pertaining to poultry, which we recommend to all our readers interested in poultry raising. Price \$2.00, through this office.

CUCUMBERS: CABBAGE WORMS.

Each year my cucumber bed looks fine, the vines grow and bloom, but seldom bare any fruit. How should I treat them?

What is the best treatment for green grub on cabbage, and how should it be applied?

J. B.
 Ans.—1. The cucumber is one of those plants that produce two classes of flowers; namely, staminate and pistillate. Before fruit can be borne the pollen which is produced on the stamens of the staminate flowers must be transferred to the pistil of the pistillate flower to ensure fertilization. This fertilization process is usually effected by bees flying about from flower to flower. If there are no bees the fertilization process may be carried on by some artificial means.

The best method is to collect in a saucer a quantity of pollen from the staminate flowers, and by the aid of a feather dust it on to the pistils of the pistillate flowers. The pistil is the spike in the center of the flower.

The pistillate flowers may be distinguished from the staminate flowers by the enlargement on the stem which later develops into fruit.

2. The cabbage worm is the larval form of the cabbage butterfly. It obtains its food by eating the leaves of the plant on which it is feeding, and may easily be destroyed by the application of a solution containing some form of stomach poison. A solution of 1 oz. of pure Paris green to 10 gallons of water, or a solution of 1 oz. hellebore to 3 gallons of water, applied in the form of a spray or shaken on the plant with an old broom, will be effective in destroying this insect.

Care should be exercised in the use of these poisons if the cabbages are intended for immediate use as food.

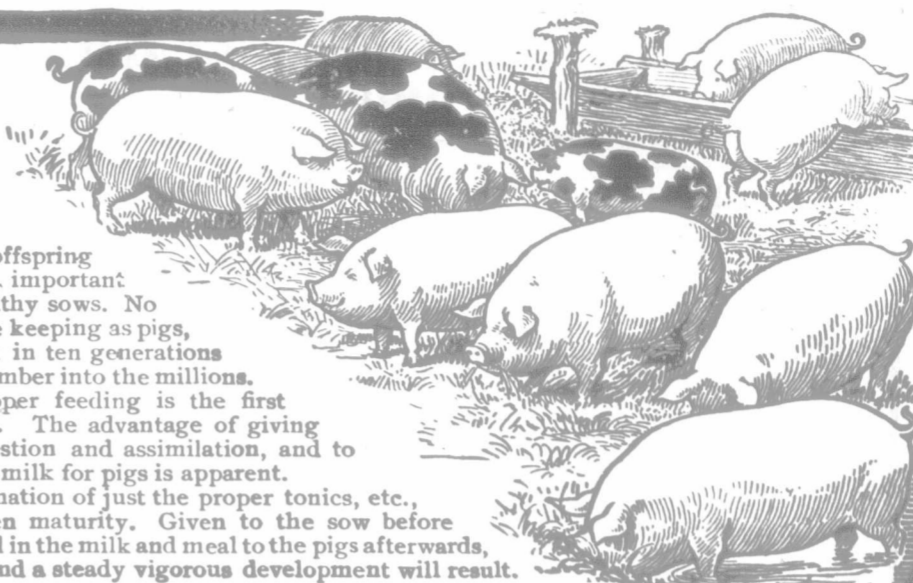
F. W. BRODRICK,
 Prof. of Horticulture, M. A. C.

CARING FOR SICK NEIGHBOR.

I have been appointed to look after a neighbor who has scarlet fever and would like to know how much I am entitled to a day. Does each council set its own price?

R. P.
 Ans.—The amount per day would depend upon the contract existing between you and the municipal council. In case the contract is silent as to terms, the provincial board of health here is of the opinion that \$5.00 per day would not be an excessive charge, though you might make some other arrangement with your neighbor.

Vigorous Pigs



The sow is supposed to impart to her offspring her own constitution. It is, therefore, important that we raise pigs from vigorous, healthy sows. No stock will give as much return for the keeping as pigs, if properly cared for. It is said that in ten generations the progeny from a single sow will number into the millions. But disease must be avoided. Proper feeding is the first necessity and cleanliness the second. The advantage of giving a sow a tonic to insure proper digestion and assimilation, and to increase both quantity and quality of milk for pigs is apparent.

Dr. Hess Stock Food is the combination of just the proper tonics, etc., to produce perfect health, and hasten maturity. Given to the sow before farrowing, and up to weaning time, and in the milk and meal to the pigs afterwards, there will be no loss from disease, and a steady vigorous development will result.

DR HESS STOCK FOOD A TONIC

In the prescription of Dr. Hess (M.D., D.V.S.) and costs but 8c per month for the average hog of 135 pounds. It is especially intended to make market stock grow faster, cows give more milk and horses do more work. Besides this, it gives stock that sleek, healthy appearance that commands the fancy price. As proof that Dr. Hess Stock Food will produce the results we claim, we quote Professors Winslow, Finlay Dun and Quidman—the most noted of all medical writers—who tell us that bitter tonics improve digestion, that iron makes blood and nitrates of soda and potash assist nature in throwing off the waste material from the system. These are the ingredients contained in Dr. Hess Stock Food, and besides it is

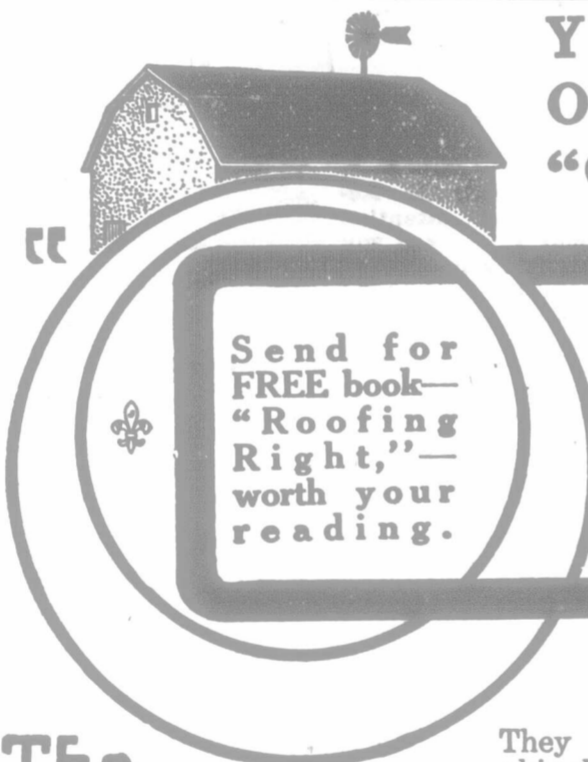
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 100 lbs. \$7.00. 25 lb. pail \$2.00
 Smaller quantities at a slight advance. Duty paid.

Where Dr. Hess Stock Food differs in particular is in the dose—it's small and fed but twice a day, which proves it has the most digestive strength to the pound. Our Government recognizes Dr. Hess Stock Food as a medicinal tonic and this paper is back of the guarantee. Free from the 1st to the 10th of each month—Dr. Hess (M.D., D.V.S.) will prescribe for your ailing animals. You can have his 66 page Veterinary Book any time for the asking. Mention this paper.

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 Instant Louse Killer—Kills Lice.

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make roofs water-tight, wind-proof, weather-proof, rust-proof, fire-proof for a century,—our plain guarantee keeps it so for 25 years without a cent of cost to the man who buys it.

Made in ONE QUALITY ONLY,—of 28-gauge, semi-hardened STEEL double-galvanized

They lock on all FOUR sides—the ONLY METAL shingle that need NO CLEATS. Easy to put on—a hammer and a snips (tinners' shears) are tools enough. Cost LESS and last longer than any other roof. Tell us the surface area of any roof on your place and we will tell you exactly what it will cost to roof it right.

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The Pedlar People of Oshawa

Get the facts before you roof a thing.

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are CURED—leaving the horse sound as a dollar—by

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No matter what you have tried—nor how many veterinaries have failed—get KENDALL'S SPAVIN CURE, use it as directed and it will give perfect results.

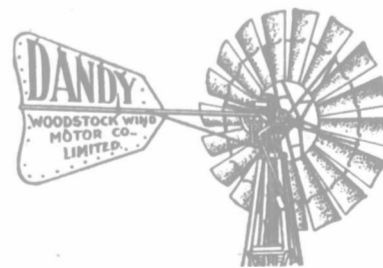
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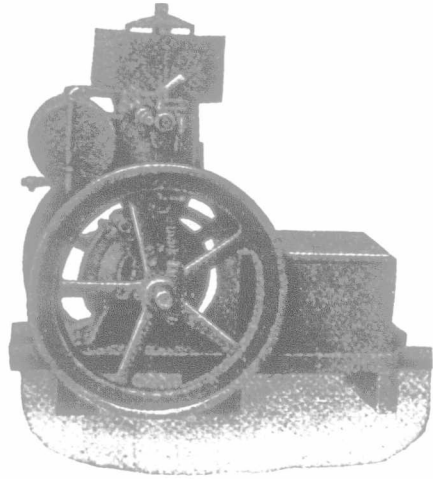
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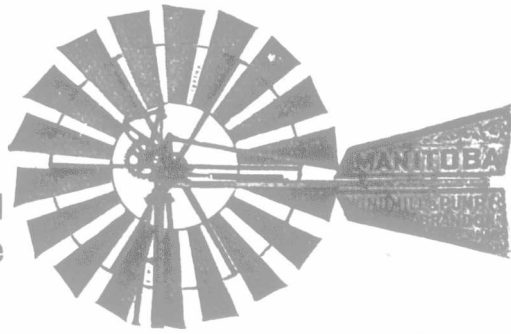
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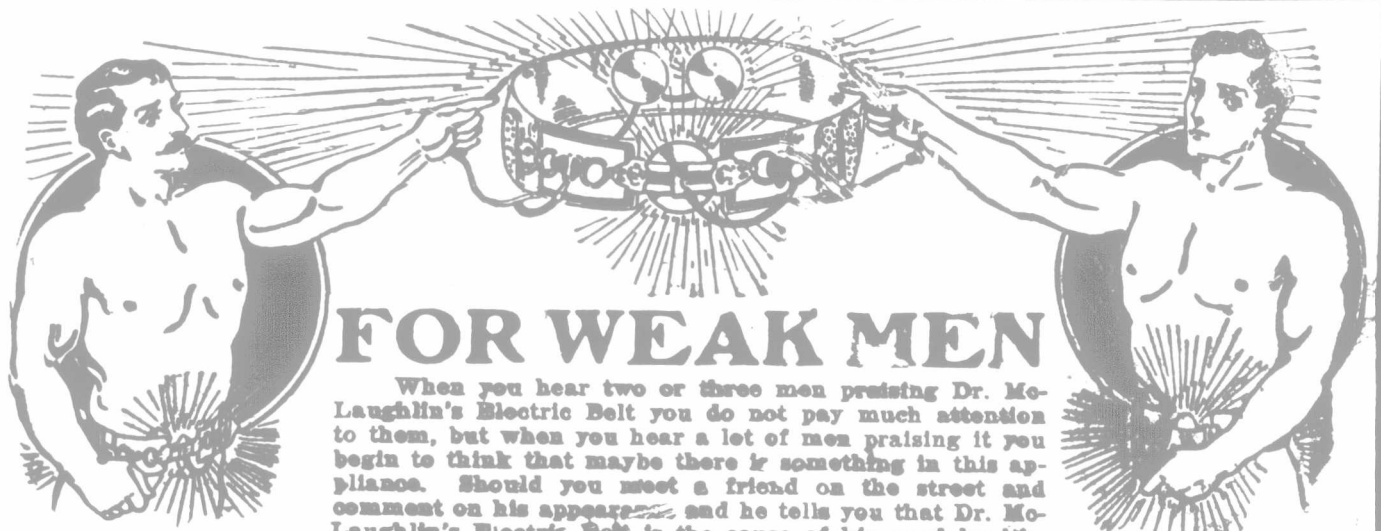
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FOR WEAK MEN

When you hear two or three men praising Dr. McLaughlin's Electric Belt you do not pay much attention to them, but when you hear a lot of men praising it you begin to think that maybe there is something in this appliance. Should you meet a friend on the street and comment on his appearance, and he tells you that Dr. McLaughlin's Electric Belt is the cause of his good health, even though you do not believe in electric belts yourself still you can't help being glad that your friend imagines that it cured him. You are but one out of hundreds who at first were skeptical, but these same men are to-day praising it as only men can who have been cured of their aches and pains by its use.

DR. McLAUGHLIN'S ELECTRIC BELT

is a wonderful renewer of the vigor of men. Its touch is the touch of magnetism. It fills the nerves with snap. It charges the body with a grand force of vitalizing energy, and turns back the hand of time for men who have begun to feel old, broken down and feeble; men who are weak and puny, and who have lost the force of vitality, who feel gloomy, despondent and unable to battle with the affairs of life; who have Rheumatism, Back Pains, Weak Stomach and Kidneys, and feel generally as if they needed to be made over.

If you have been paying money to doctors, and taking nasty drugs for years, and after getting no benefit from it all, you find a new lease of life after using Dr. McLaughlin's Electric Belt for a month, you will be enthusiastic. You will want to go out on the highways and shout, and you won't care who knows that you were once a weakling, because now you are cured. Our Belt is easy to use; put it on when you go to bed; you feel the glowing heat from it (no sting or burn as in old-style belts, and you feel the nerves tingle with the new life flowing into them. You get up in the morning feeling like a two-year-old.

Dear Sir—I was greatly troubled with backache, so much so that I had to quit work several times but after I bought your Belt I wore it for forty days and it did wonders for me. Now I can do any kind of work and never feel a pain in my back. It has completely cured me. Hoping others will do as you advise, I remain, —Hormidas Lamoureux, Alta.

Dear Sir—The Belt which I purchased from you nearly three years ago was all that I could expect, as my back never bothers me at all now except when I get a cold; then I wear the Belt a few nights, perhaps two or three, and I am all right again. Thanking you for the goodness of the Belt and the benefits I have received, I am —O. Stockford, Altamont, Mich.

Dear Sir—I regret very much in keeping you waiting for the recommendation you so richly deserve in praise of your Belt. I must say that it is a God send to anybody in need of it. It will cure anything as regards Physical Weakness, and is far ahead of drugs. Anything I can do in the way of recommending your Belt I will do to the best of my ability. You can refer anybody to me that may be in doubt about your Belt. —Thomas Murray, 148 Gladstone Ave., Winnipeg, Man.

I HAVE AN ELECTRIC BELT THAT DOES CURE, and I am offering it to you in such a way that you take no chances whatever. Give me your name and address, with a statement of your case, and I will at once arrange a Belt suitable for your case, and

WHEN YOU ARE CURED, PAY ME

All I ask is reasonable security for my Belt while you are wearing it.

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NAME _____

ADDRESS _____

Please return this coupon to 6 p.m., Wed. _____

SCRATCHES.

Can you recommend a good remedy for scratches in horses?

G. T.

Ans.—Prevention consists in being careful not to overfeed with grain, and giving exercise when not at regular work. Keep the parts dry and clean, and avoid washing with warm water unless carefully dried and bandaged immediately after. To cure a case first give a purgative ball of 6 to 10 drams aloes and 2 drams ginger, according to size. Feed bran till purgation ceases, and very little grain till he is put to work. If the case is chronic, follow up with 3 drams nitrate of potash twice daily for a week or ten days, or with one to one and a half ounces Fowler's Solution of Arsenic, twice daily for a week. Local treatment depends upon the weather. Lotions, oils or ointment are generally used, lotions in warm weather, or when the patient is used on dusty roads or fields, but oils or ointments are preferable in cold weather. Sometimes they are used alternately. A favorite lotion is made of 1 ounce each of sulphate of zinc and acetate of lead, 1/2 ounce of carbolic acid, and a pint of water. Perhaps the best ointment is one dram oxide of zinc to six drams lard, run once a day. Before applying either lotion or ointment, poultice, every six or seven hours for a couple of days and nights, with poultices of warm linseed meal and a little powdered charcoal; then use the ointment or lotion two or three times daily. If the legs get wet rub them dry; if muddy allow them to dry, and then brush. Do not wash.

BLIND COW.

I have a cow which I noticed was almost blind last fall. She ran out with calf sucking her. Sometimes there would be four and five calves sucking her. I took the calves off early. She appeared better through winter, but is almost blind again. There does not appear to be any scum over her eye. Is there any cure for her or anything that will help her? Her eyes look quite natural.

Sask.

F. S.

Ans.—If there is any sign of inflammation in the eyes a line of treatment might be indicated to relieve the condition; such as the application of saturated solutions of boracic acid. There is a form of contagious eye disease in cattle, but it generally runs its course in a shorter time than you have mentioned, and is quite amenable to any mild treatment; such as the use of a lotion made from sulphate of zinc, five grains; clean soft water, one ounce, or atropia sulphate, five grains, to one ounce of water.

PAYMENT FOR GOODS.

A bought goods from B and promised to pay for them in a week or two. The time has elapsed. Can B go and take goods back?

Sask.

J. W. S.

Ans.—Yes; or bring suit to recover payment.

HOMESTEAD FOR DEBTS.

Is there any law in Manitoba that could force a homesteader to sell his place on account of debts?

Man.

A. D.

Ans.—A homestead is exempt from debt, together with a certain supply of implements, stock and furniture.

MANGE ON COW.

I have a cow 2 years old, which has a kind of dandruff all over her and scratches herself with her horns till the skin is sore. Could you tell me what is the matter and what to use to cure it? There is no sign of lice and otherwise the cow is healthy and gives a good flow of milk.

Alta.

W. A. S.

Ans.—The cow appears to have mange. Clip the hair if it is long or cut it any way along the neck. Rub soft soap over the body and then take a brush and warm water and give her a good scrubbing. Dry her off and rub with the following: Creolin, one ounce; water, one pint; or a decoction of a pound of chewing tobacco in a quart of hot water. Rub.

good remedy

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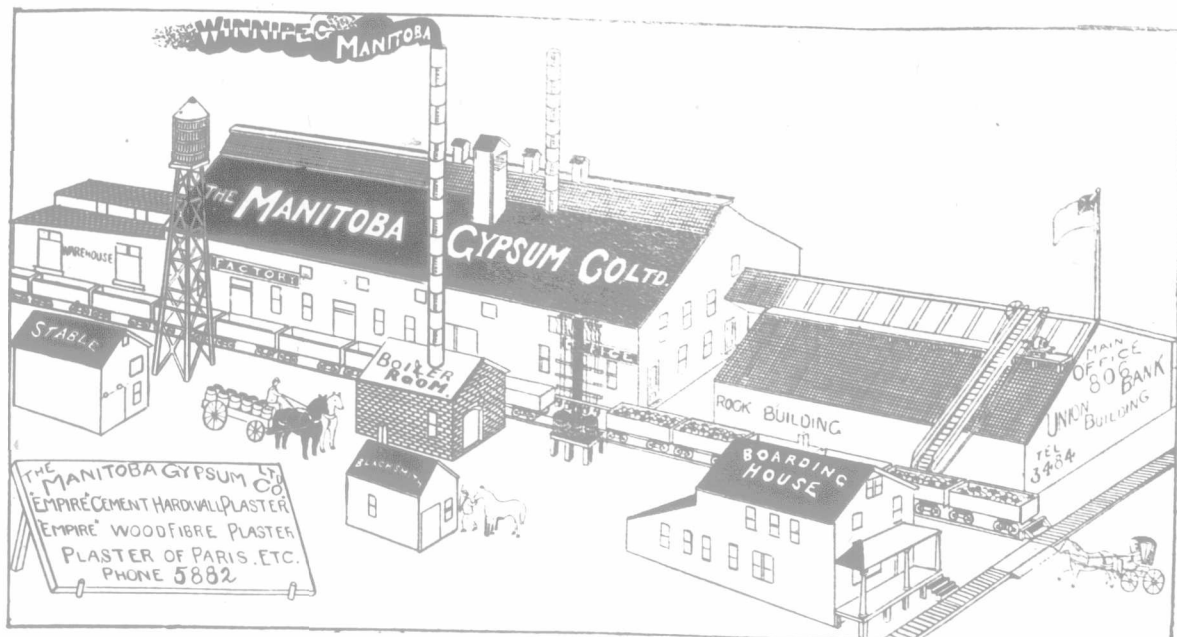
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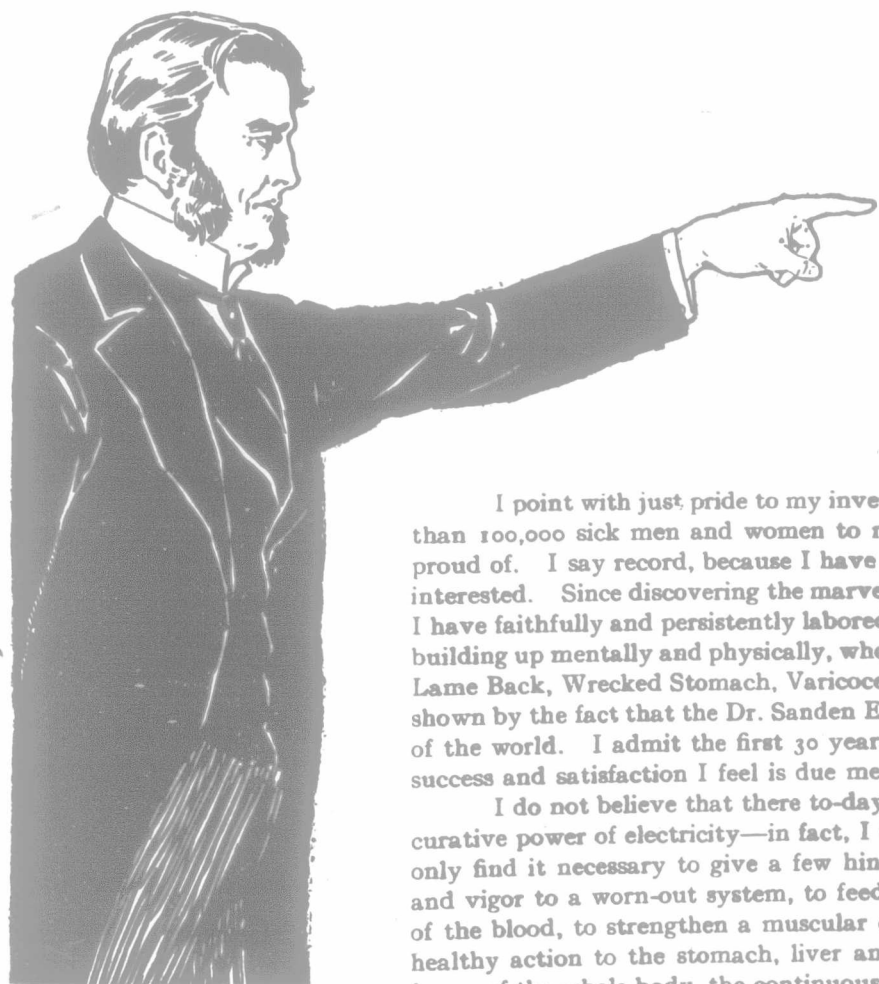
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Pay me when Cured

My World-famed Remedy Given on Free Trial Until Cured.



I point with just pride to my invention, which during 40 years has enabled more than 100,000 sick men and women to regain their health and vigor—a record to be proud of. I say record, because I have the proof always open to inspection for those interested. Since discovering the marvellous curing powers of electricity 40 years ago, I have faithfully and persistently labored to bring it to the notice of sufferers who need building up mentally and physically, who are troubled with Nervousness, Rheumatism, Lame Back, Wrecked Stomach, Varicocoe, etc., and how well I have succeeded is best shown by the fact that the Dr. Sanden Electric Herculex is now standard in every part of the world. I admit the first 30 years was hard work, but I am now enjoying the success and satisfaction I feel is due me.

I do not believe that there to-day is a grown person who doubts the wonderful curative power of electricity—in fact, I take it for granted there is not. I, therefore, only find it necessary to give a few hints as to its application. To restore strength and vigor to a worn-out system, to feed the brain and nerves, to drive uric acid out of the blood, to strengthen a muscular center, as in lame back, to give renewed and healthy action to the stomach, liver and kidneys—in short, to really renew the life forces of the whole body, the continuous galvanic current must be used and applied in

a mild, prolonged manner, to allow the system to absorb it. The strong, harsh current applied from the ordinary battery is mostly wasted, as the system only accepts a small portion of it, just as the sudden heavy shower mostly runs off, while a gentle, prolonged rain is thoroughly absorbed. My invention does exactly as explained above. You put it on when going to bed and take it off on arising in the morning. It gives a soothing, exhilarating current you instantly feel, but not sufficient to in the least disturb you. It fills you with new life, and electrifies every nerve and drop of blood in your body. As weakness and disease is a LACK of electricity, how can you wear my Electric Herculex without receiving benefit? I know you cannot, therefore I invite you to send for it on absolute free trial.

Not a Cent to be Paid Until Cured

The price is as low as \$5.00 in many cases, and you get a discount for cash if you prefer to deal that way. As the founder of the Electric Body-Battery system of treatment, my success is the envy of many, and my Herculex is, of course, imitated (what good thing is not?), but my great knowledge to advise and direct my patients is mine alone and cannot be imitated. I give it free to all who use my invention until the cure is complete—My Herculex is guaranteed to give a current for at least one year. Call or send for my Electric Herculex to-day, or if you want to look into the matter further, I have two of the best little books ever written on electricity and its medical uses, which I send free, sealed, upon request.

DR. C. F. SANDEN, 140 Yonge St., Toronto, Ont.

ROBERT LOUIS STEVENSON'S PRAYERS.

A Morning Prayer.—The day returns and brings us the petty round of irritating concerns and duties. Help us to play the man, help us to perform them with laughter and kind faces; let cheerfulness abound with industry. Give us to go blithely on our business all this day, bring us to our resting beds weary and content and undishonored, and grant us in the end the gift of sleep.

An Evening Prayer.—Look down upon ourselves and upon our absent dear ones. Help us and them; prolong our days in peace and honor. Give us health, food, bright weather and light hearts. In what we meditate, of evil, frustrate our will; in what of good, further our endeavors. Cause injuries to be forgotten and benefits to be remembered. Let us lie down without fear and awake and arise with exaltation, for His sake in Whose words we now conclude.

A Prayer for Friends.—For our absent loved ones we implore Thy loving kindness. Keep them in life, keep them in growing honor; and for us, grant that we remain worthy of their love. For Christ's sake, let not our beloved blush for us, nor we for them. Grant us but that, and grant us courage to endure lesser ills unshaken, and to accept death, loss and disappointment, as it were straws upon the tide of life.

A Parting Prayer.—To-day we go forth separate, some of us to pleasure, some of us to worship, some to duty. Go with us, our guide and angel, hold Thou before us in our deviated paths the mark of our low calling, still to be true to what small best we can attain to. Help us in that, our Maker, the dispenser of events—Thou of the vast designs, in which we blindly labor, suffer us to be so far constant to ourselves and our beloved.

Humorous.

An engineer from Sunderland was spending a few days in London with a friend, and after a busy morning sight-seeing the Londoner chose a large restaurant for luncheon, thinking it would be a novel experience for the man from the north. The visitor appeared to enjoy his luncheon, but kept looking in the direction of the door. "What are you watching?" asked his friend, rather annoyed.

"Well," was the quiet reply, "A's keepin' an eye on me topcoat."

"Oh, don't bother about that," said the other, "you don't see me watching mine."

"No," observed the guileless engineer, "thee has no call to—it's ten minutes sin' thine went."

Umpire (to part of "Skeleton" Army)—"What do you represent?"

Private—"I dunno, sir. I'm carrying this 'ere flag."

Umpire—"Well, you ought to know, you represent a company in extended order. Understand?"

Private (after deep cogitation)—"And do I draw the beer for a company when I get back to camp?"

Teacher—"Johnny, can you tell me what a hypocrite is?"

Johnny—"Yes, ma'am. It's a boy what comes to school with a smile on his face."

"Shure and you have turned very industrious lately, Mr. Finnigan," said Mr. Flaherty.

"That I have," replied Mr. Finnigan. "I was up before the magistrate last week for assaulting Cassidy, and the magistrate said that if I came back on the same charge he would fine me \$10."

"Did he, though?" said Mr. Flaherty. "And so your'e working hard so as to keep your hands off Cassidy?"

"No, bedad, I'm not," said Finnigan. "I'm working hard to make up the \$10 for the fine."—*Tattler.*

Agent—"This is the automobile you want. You never have a breakdown it to fix it."

Sparker—"You do."

Agent—"No. If the slightest thing goes wrong with the mechanism it instantly turns bottom side up."



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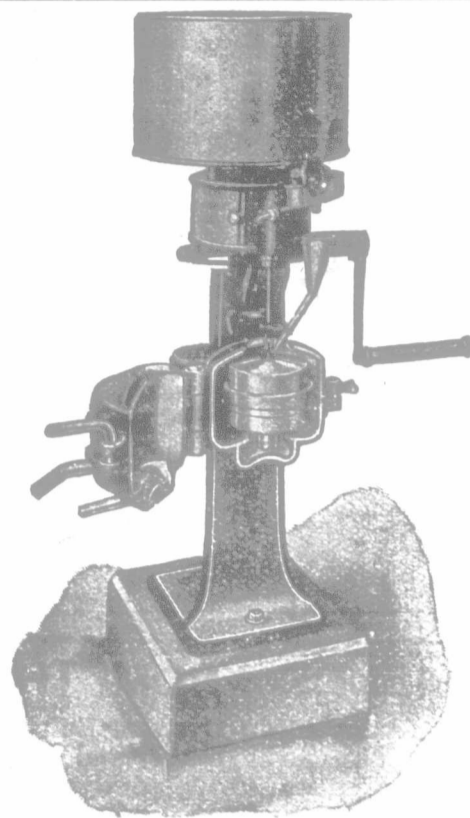
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