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# The Farmer's Advocate

## and Home Magazine

"Persevere and Succeed."

Established 1866.

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LONDON, ONTARIO, JANUARY 17, 1907.

No. 747

### EDITORIAL.

#### Do Not Lose Faith in Fresh Air.

Not without some apprehension, we publish in this issue a review of the bulletin, "Stable Ventilation," by M. H. Reynolds and C. C. Lipp, of the Minnesota Experiment Station. The subject is so very important, and all information pertaining to it of such consequence in our present discussion of the stable question, that we decided to run the risk of printing it with this caution, lest some may misconstrue it.

The bulletin, which is the first of a series, adduces considerable scientific information bearing on the subject, and records the results of certain preliminary experimentation with a couple of steers, each of which was kept for irregular alternate periods in a "closed stall," where the ventilation was very bad; and in an open stall where it was pretty good. Various laboratory methods were used to determine the physiological effect of keeping the animals in the closed stall. So far the results have shown a surprisingly small effect of bad ventilation, and the opinion is ventured that in northern climates it may be possible to get along in winter with less ventilation than commonly advised by writers. The fact was brought out that the animal system is very adaptable, and when either of the steers was in the closed stall for a time he became accustomed to the conditions and evidenced no apparent discomfort.

While the investigators are to be congratulated upon having essayed this difficult task of deciding what may be accepted as a minimum standard of ventilation, it cannot be emphasized too strongly that the experimentation thus far reported on has been of such a nature that one would not be justified in drawing positive conclusions therefrom. Neither of the steers was in the closed stall for more than a few weeks at a time, hence there was no evidence to show what would be the ultimate effect of continued confinement in it. We have in mind instances where fattening steers have been kept in warm stables, and did well enough for a time, then stiffened up, and were only brought around by turning into an airy shed for a time and given exercise. There is the further effect, or assumed effect, to consider, viz., the influence of bad ventilation on the health and vigor of succeeding generations of stock. It is conceivable that a slight impairment of the stamina of one generation might prepare the seed-bed for tuberculosis in the next or perhaps a later one. The notable success attending the fresh-air treatment for consumptive humans indicates the extreme probability that it would be good as a preventive of a similar disease in the lower animals.

So, while we welcome the efforts of scientists, we are by no means inclined to formulate conclusions without practical feeding tests covering the lifetime of several animals, and, better still, a test extending to the second, third or fourth generation. Most people have a sort of intuitive faith in fresh air—though some do not manifest it in a very practical way—and we surmise the faith is well founded. At any rate, pending undeniable evidence to the contrary, let us not lose faith in fresh air, and when the scientists have got their bearings, we shall probably find we have not been far astray.

While the subject is being settled by scientists, what is the proper attitude for the stockman? Surely, to keep away from the danger-line. A gentleman hiring a coachman, asked the first of three applicants how near he could drive to the edge of a precipice and not go over. "One inch," was the reply. No. 2 ventures "Six inches," but the third man proclaimed his in-

attention to drive just as far from the edge as he possibly could, and he was at once entrusted with the position.

#### Ontario Wants Cheap Power.

At the municipal election in Toronto, on Wednesday, January 2nd, the ratepayers of the Queen City voted on a by-law to authorize the council to enter into negotiations with the Ontario Government's Hydro-electric Commission to secure cheap electric power from Niagara Falls, on a plan provided by an act at the last session of the Provincial Legislature. The by-law carried by an overwhelming majority. On Tuesday, January 7th, over a dozen other important cities and towns in the western portion of the Province took plebiscites on similar by-laws, and, without a solitary exception, the issue resulted in a sweeping victory for the desired measure.

The by-law so emphatically endorsed does not bind any municipality in any way. It simply authorizes the local councils to go ahead in negotiations which, it is hoped, may lead to the submission at a later date of a definite business proposition. The fact that the by-laws do not tie the municipalities up to any particular scheme, doubtless accounted in some measure for the ease with which they passed.

Yet, the magnificence of the majorities throughout the whole "Niagara zone" means something. What it means is partly deducible from the circumstances. It is a notorious fact that the promoters of the electric-power enterprises at Niagara Falls poured out their money lavishly in effort to hoodwink the people. The effrontery of their methods, and the shallow transparency of their arguments, or rather pretences, were an insult to the intelligence of the Ontario public. The Ontario public resented it. It was not convinced by anonymous articles, paid for by the Pellatt-Nicholls syndicate, to inform (?) the electorate concerning the points at issue. The Ontario public wilfully declined to be enlightened regarding the immense economy of power at \$35 per horse-power (which is what the power syndicates, in their beneficence, would charge us) over the same kind of energy at \$15 to \$20, which is about what we may expect to get it at through the instrumentality of the Hydro-electric Power Commission. The Ontario public went perversely ahead and held up both hands for its own interests, deaf to the representations of syndicates which need the money to make up dividends on millions of watered stock.

The people of Ontario seem pretty thoroughly convinced that if they want electric energy at a price that will make it more economical than coal, they must see to it themselves. The development of electric energy requires so much capital, and the water-power franchises are so easily cornered, that to leave it for competition among capitalists to fix prices of power, would simply be to put ourselves in the grip of an inexorable monopoly that would maintain the price of electric power at the standard fixed by coal and destroy the scenic beauty of our splendid waterfalls, with but the merest incidental benefits to the people as a whole.

The power by-law majorities are a significant sign of the times—a sign of the irresistible tide of public opinion, which is asserting the rights of the masses, as opposed to the privileges of the few, and demanding that where private control fails to insure public services at reasonable cost, public control must supersede to either own and operate, or, as in case of the present movement, to regulate. Public operation of public utilities is a way beset with many dangers and disadvantages. It is a way at which the average man inclines to look askance. But a rapidly-increas-

ing number of people are coming to regard it as being, in certain cases, the lesser of two evils, and it will pay the beneficiaries of public franchises to pursue a policy of more intelligent selfishness, and seek to promote their interests by consulting earnestly the welfare of the public which is constrained to use the services they provide. Government ownership of railways and telephones, and the municipalization of waterworks, lighting plants and street-car services are encouraging developments of the age, but overshadowing all in immediate importance is the manifest determination to bring power companies to time.

#### In Search of Facts About Stable Construction.

Three weeks ago two members of our editorial staff journeyed forth from London into the southeastern corner of the County of Middlesex, not with lanterns in search of an honest man—though let us hope we encountered many—but with eyes open and ears pricked, on the qui vive for ideas in barns.

The quest for a complete and satisfactory ventilation system was not entirely successful, some of the stables having nothing but windows and chinks for admission of fresh air, and feed chutes for outlets. The best intake system was that in the MacVicar barn, a plan of which appeared in "The Farmer's Advocate" of February 15th, 1906. The air is admitted from a revolving cowl on the roof through a 30-inch galvanized-iron pipe down into a cement air cistern in one end of the barn. Thence tile lead underneath the floor, being doubled back and forth under the alleyways, so as to make the air traverse as much distance as possible before being admitted into the stable. This warms the fresh air many degrees before diffusing it. But an outlet system is necessary before this ventilation is as thorough as it should be. The owners are well satisfied with what they have done, and are considering such at present.

In this connection it may not be amiss to note that many of the stables our recent correspondents have been writing about have no special system of ventilation, but still are fairly well supplied with fresh air, owing to numerous doors, windows, feed chutes and other openings. A more systematic provision for admission of fresh air is, however, generally conceded, and a consideration of the MacVicar system is earnestly advised.

One of the good ideas we found generally adopted in the determination to simplify things was the plan of having no front to the mangers except a drop of from two to ten inches from the raised cement floor of the feed passage. One man thought he could feed thirty cattle with this manger as easily as twenty with the old lumber contrivances. As no partition divides one cow's portion of the trough from her neighbors, his long mangers are easily swept clean. The backs of the mangers in most cases consisted of a six or eight-inch plank on edge, into which swinging stanchions were fastened. In other cases, where chain ties were used, a horizontal bar served to keep the cattle back into place.

A feature in several stables was the pens at one side where young cattle were running loose, six or eight together. There were stanchions along the feed passage to fasten the cattle while feeding. The general verdict was that this system requires a great quantity of bedding, if the cattle are to be kept reasonably clean, but it makes a large amount of manure, the straw soaking up the urine, and the tramping of the stock preventing any great deal of fermentation between times of cleaning out, which is done in

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most cases once a month or thereabouts, the manure being loaded direct on wagon or sleigh and drawn to the fields. Most of the men who are trying it incline to endorse the opinion that young cattle will make better gains loose than tied.

A most noticeable and encouraging feature in the barns visited was the scrupulous regard for light, as evidenced by numerous large windows along the tops of walls. In many cases these were hinged so that they might be swung back when desired to air the stable.

Another noteworthy idea seen in nearly every stable was a manure gutter, fashioned by having a straight drop from the platform and a plain, gently-graded slope of two or three inches to the passageway behind. This is easier to clean than the old-fashioned square gutter, and no trouble with slipping is experienced. The plain-slope gutter has been recommended for years in "The Farmer's Advocate," but we were surprised to note how completely it had superseded the other in the district visited.

All kinds of wall material—wood, cement-concrete, stone, and large hollow brick, or combination thereof—were in evidence. Those using the large bricks, well plastered on the inside, spoke very highly of them from the standpoint of dryness. One man expressed the opinion, in which he is doubtless correct, that concrete blocks, laid with cement mortar, would make a stronger wall than brick. Whether it would prove as good a non-conductor of heat, is open to question, though it would doubtless be better than solid concrete.

Where the water supply has been introduced into the stables, individual drinking basins had the preference, but not a few of the men were of opinion that cattle were the better for getting out of doors for airing and exercise, instead of standing the whole winter indoors.

Everywhere we encountered a marked revival of interest in the subject of stable construction, the points uppermost in consideration being con-

venience of arrangement for feeding and general care, and ventilation, but much more definite results have been accomplished in the former direction. The need for the latter is admitted, particularly if dryness is to be secured, but how to secure it is the problem about which many are not yet clear. Details of our tour will be found in the Farm Department of this issue.

## HORSES.

### Live-stock Research.

#### THE WISCONSIN STALLION LAW.

In the midst of the discussion of the problems connected with our horse interests and of the proposed stallion license and inspection act, it may be opportune to consider what others are thinking and doing. In a bulletin, just to hand, on "The Horse-breeding Industry of Wisconsin," by A. S. Alexander, V. S., Agricultural College, Wisconsin, we have a candid resume of the present status of the horse-breeding industry in that State, a statement of the laws pertaining to horse-breeding in Wisconsin, an outline of the author's views of the effectiveness and utility of the existing legislation, and a suggestive discussion of propositions looking toward the improvement of the present law, and of ways and means for the improvement of the industry in general. Conditions in Ontario are not so dissimilar from those in Wisconsin but that we may receive assistance from a consideration of the proposals submitted. Dr. Alexander is one of the eminent veterinarians of the United States, and his opinions and conclusions are worthy of thoughtful study.

The Wisconsin law provides (1) that all stallions standing for service in the State must be enrolled in the State Department of Horse-breeding, and that certificates of such enrollment must be issued to the owners from said Department; (2) that, before obtaining such license certificates, the owners shall make oath that their stallions are free from hereditary or contagious unsoundness or disease, or present a certificate of soundness signed by a duly-qualified veterinarian, together with the pedigree or other necessary papers relating to breeding and ownership; (3) that the officers of the Department shall accept such animals as pure-bred whose pedigrees bear the signature of the president and secretary of a government-recognized and approved studbook; (4) that owners of stallions shall have placed in certain conspicuous places posters bearing copies of the certificate issued to them by the department; (5) that the license certificates shall be of a certain specified form for (a) pure-bred, (b) grade, (c) cross-bred stallions; (6) that a fee of \$2.00 shall be paid by the owner of the stallion to defray expenses of his enrollment, etc.; (7) that violation of the act shall be punished by a fine of not exceeding fifty dollars. Another subsection provides that the stallion owner shall have a lien on the colt to the amount of the service fee.

The author of the bulletin believes that the law has been of decided benefit to the horse-breeding industry of the State in that (1) it has aroused interest and stimulated discussion in the farming community in connection with the horse-breeding business; (2) it has assisted in the eradication of erroneous beliefs, and called attention to the importance and necessity of study; (3) it has drawn attention to the importance of soundness, not only in the sires, but in the brood mares as well; (4) it has led to a greater knowledge of the character of pedigree registry, and has assisted in establishing the correctness of pedigree certificates; (5) it has caused discussion relative to the value of pure blood, to the unwisdom of indiscriminate and mixed breeding, and to the fallacy of using horses of poor individual quality and merit; and (6) it has instituted a sure if slow educational mechanism, inevitably working toward the patronage of a better class of sires, thus driving the scrub stallions out of the country, and of the adoption of more intelligent methods and of a more discriminating system in breeding practice.

It was noted in the bulletin that the legislation had thus far been somewhat tentative in character, and had been of such a nature that attention would be drawn to certain facts of breeding, and that such information might be given to breeders through the issuing of the stallion certificates that they might more intelligently pick and choose in the choice of the sires they used. The bulletin itself contains a complete catalogue of the stallions, by counties, in the State, together with a statement of the owner, breed, age, etc., of each, and thus furnishes some valuable information to the horse owners of the country. The facts above noted are not without suggestion to all concerned in horse-breeding in our own Province.

BRUCE.

We think your Christmas Number this year is much superior to any of your former editions, though we enjoy them all. The copy of Paul Wickson's painting we think is fine.

Halton Co., Ont.

CHAS. W. BUTTS.

### Horse Notes.

In the course of a leaflet, recently issued by the Canadian Department of Agriculture, the following, among others, are emphasized as good points to look for in a horse:

If a horse is short-ribbed, he is light in his middle, and is nearly always a poor feeder. He has not the stomach to contain succulent food to serve him from one meal to another.

A light-centered horse seldom weighs well, and weight in a draft horse, if it comes from bone, sinew and muscle, goes a long way to determine his commercial value.

When a horse is well coupled together on top, and has a short back, he must have the length below from the point of the shoulder to the back of the thigh. When so built, he will stand the strain of drawing heavy loads much better than if he has a long, loose back.

The front feet and hocks are the parts of either a draft or a driving horse that come directly in contact with the hard work, and unless they are sound and good a horse's usefulness will be very much impaired, and his commercial value very much lessened.

Before using a stallion, get the groom to lead him away from you. Stand square behind him, and see that he picks up his feet and places them on the ground properly, travelling in both trot and walk clear and clean, not striking the ground first with the toe and then bringing down the heel.

The feet should be large and waxy in appearance. The sole of the hoof should be concave, the frog spongy, plump and elastic, because it acts as a buffer to take the concussion from acting too severely on the foot, pastern and fetlock. See that both sire and dam have sound feet, free from flatness, brittleness, and are not contracted.

A stallion whose feet are contracted and brittle, and whose hocks are puffy and fleshy-looking, should be avoided, as such hocks are generally associated with a coarseness throughout his whole conformation and a general lack of quality.

### New York Stallion Law.

On complying with the provisions of this article, the owner of a stallion "shall have a lien on each mare served, together with the foal of such mare from such service, for the amount agreed on at the time of service; or, if no agreement was made, for the amount specified in the statement hereinafter required to be filed, if within fifteen months after such service he files a notice of such lien in the same manner and place as chattel mortgages are required by law to be filed. Such notice of lien shall be in writing, specifying the person against whom the claim is made, the amount of the same and a description of the property on which the lien is claimed, and such lien shall terminate at the end of eighteen months from the date of service, unless within that time an action is commenced for the enforcement thereof, as provided in the code of civil procedure for the foreclosure of a lien on chattels.

A person having the custody or control of a stallion and charging a fee for his services, shall, before advertising or offering such services to the public, file with the clerk of the county in which he resides or in which such stallion is kept for service, a written statement giving the name, age, description and pedigree, if known, and if not, stating that the same is unknown, of such stallion, and the terms and conditions on which he will serve. On filing such statement, the county clerk shall record the same in a book provided for that purpose and issue a certificate to such person that such statement has been so filed and recorded. The person having the custody and control of such stallion shall post a written or printed copy of such statement and certificate in a conspicuous place in each locality in which said stallion is kept for service."

Neglect or refusal to file and post such statement as required in this article, or false statement of the pedigree of such stallion, forfeits all fees for the services of such stallion, and renders the delinquent liable to a person deceived or defrauded thereby for the damages sustained.

### Stallion Law of Montana.

Every owner or agent who may have the control of any stallion, who shall charge a fee for the service of such stallion, shall, before offering or advertising such services to the public for any fee, reward or compensation, file with the clerk of the county in which owner or owners or agents reside, or where such stallion shall be kept for service, a written statement, giving the name, age, pedigree and record if known, if not that the same is unknown, description, terms and conditions upon which such stallion will serve. Upon filing such statement, the county clerk shall issue a certificate or license to owner or owners or agents having custody and control of such stallion, that such a statement has been filed in his office; the owner or owners or agents of such stallion shall then post a written or printed notice of a copy of the statement so filed with the county clerk in a conspicuous place in each locality in which said stallion shall be kept for service.

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publish a false or fraudulent pedigree or record or statement of any kind regarding a stallion, or who shall neglect or refuse to comply with the above provisions, shall forfeit all fees for the services of such stallion, and the person or persons who may have been deceived or defrauded by such false or fraudulent pedigree or record or statement, may sue and recover in any court having jurisdiction, such damages as may be shown to have been sustained by reason of false representation and fraud.

Whenever the owner or agent of any stallion shall have complied with the foregoing provisions of this act, the services of such stallion shall become a lien on each mare served, together with a foal of such mare served from such service, in an amount agreed upon between the parties at the time of service; or, if agreement was entered into by them, in such amount as specified as service of stallion or stallions in the statement of the owner or agent filed with the county clerk, provided a notice of lien shall be filed within twelve months after such service. Such lien shall terminate at the end of the year from the date of filing notice thereof, unless within that time an action shall be commenced for the enforcement thereof.

**Care of Horses' Feet.**

It is scarcely a matter for wonder that so many horses go wrong in their feet, when the results of careless or incompetent shoeing and the amount of usage the hoofs experience are considered. Even horses which are driven slowly are subjected to almost as much risk from the effects of wear and tear as is the animal which moves faster; for, though the latter, and especially if he happens to be a high mover, places his feet down harder than the other, the slow mover puts them down considerably oftener. It has been calculated that a horse working at a slow pace will move his feet up and down over eleven million times in the course of a hard day, and about eight million times during a moderately hard one, whereas an animal worked at a trot puts down his feet some seven million times if he has a hard day out, and about half as many in the course of a moderately hard one. Assuming that these figures are worthy to be accepted—they are the work of an eminent veterinary authority—an idea will be derived from them of the risks of concussion to which horses are liable, with the possible result that some owners will devote more attention to the treatment of their animal's feet, especially if they work on hard ground. Unfortunately, however, many people are disposed to wait until trouble arises without adopting proper precautions for ensuring the proper preservation of the hoofs. It may be that the farrier is allowed to try on red-hot shoes or to rasp the outside walls of the hoof. The drawing-knife may be directed against soles, and little or no pains taken to insure a shoe of a proper design being fitted to the horse. Now and then, too, a horse is worked after it is known that his feet are beginning to require treatment, and then serious lameness may result, whereas a few days' rest and careful treatment would have put matters right. Such diseases, for instance, as thrush, which often does not cause lameness until it assumes a virulent form, will usually yield promptly to treatment, and yet many cases occur of their presence being ignored on the grounds that the horse is not lame, and therefore it is unnecessary to attend to the feet.

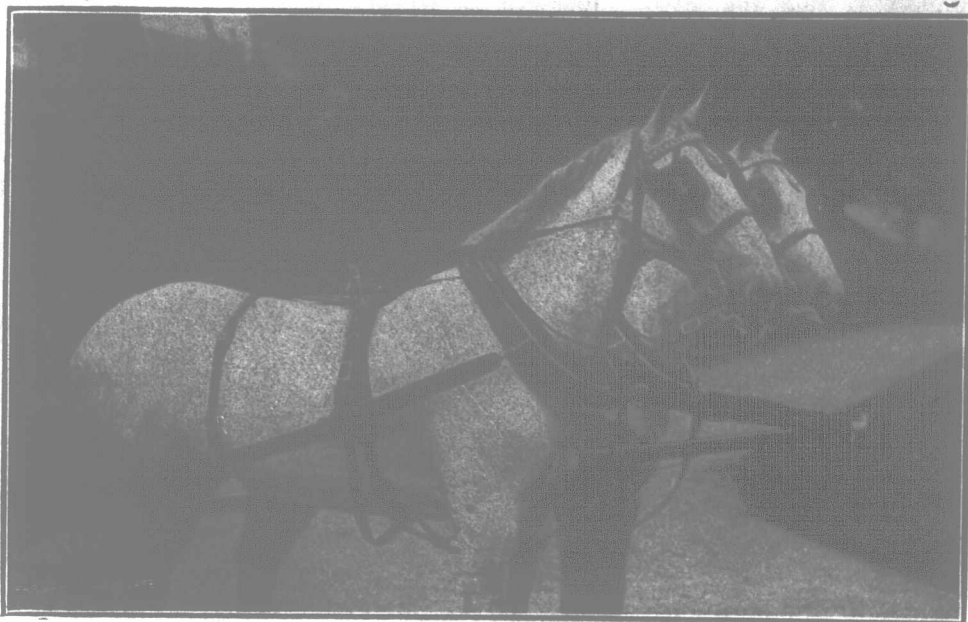
**Where Would the Line be Drawn?**

Editor "The Farmer's Advocate":  
I see a great deal written in "The Farmer's Advocate" about the proposed stallion-license act. For my part, I think we don't need anything of the kind. We always like to hear this fair Canada of ours called a free country. If it is, let us keep it free.  
If stallions are licensed, who is to pay the license? I think the man who patronizes them. One writer asks: "Are we prepared to discard all stallions not having a registered pedigree?" He thinks not. Well, if not, where will we draw the line? One man would think his horse as good as his neighbor's, and the inspectors might favor some men more than others in that case.  
If we ever get such a law, up goes the stallion fee, for stallioners would have things their own way. By putting their heads together, they could charge almost any fee they saw fit. I don't believe in that kind of thing. I think demand and supply should rule prices. To my mind, we have heard enough of unions and rings being formed, and what would this encourage but something of the same? There is a great deal said about scrub stallions, but what about scrub mares? There are ten of them to every scrub stallion. Would it not be just as fair to prevent the owners from using them, as well as the stallions? I think a good many owners of mares know about as well what kind of a stallion they want as some of the inspectors do. The argument has been made that the men who use the scrub horse lose by doing so. That only makes the colt from the good horse worth so much more; and yet

he is not asked to pay the loss to the man who sees fit to raise the inferior colt. I may say, in conclusion, I am not a stallioner, and am not likely to be, but I like to see fair play given to all. I have taken "The Farmer's Advocate" for years, and think it the best farm paper I have seen.  
Halton Co., Ont. GEORGE SIMPSON.

**Mare Counts as Well as Horse.**

Editor "The Farmer's Advocate":  
I am much interested in the discussion in your columns regarding the lien act and licensing of stallions in Ontario. Now, I, like a great many others, think such a law entirely uncalled for. Surely the farmers of Ontario, in the twentieth century, with our Institute meetings and free courses in stock-judging at our Agricultural College, are capable of selecting the sire they think fit to use, without having a Government inspector. What right has the Government to condemn inferior stallions any more than inferior sires of any other class of live stock. And if such a law were passed, what would become of all the stallions that would be condemned? What about the man who has bought the imported scrub at a long price, simply because he was imported? Must he lose all the money invested, and give some importer a chance to make another little haul out of him in replacing a sound horse? It looks as though that is what some are after. Now, I think the great trouble is, too many of our farmers have no ideal in mind of what they are trying to produce. They are continually using sires of different breeds on the same mare,



A Well-matched Carriage Team.

with the result that they find themselves with a poorer class of horses, after breeding for years, than when they started, and through no inferiority of the sires used. If farmers would keep their good young mares to breed and not let the horse-dealer get them, we would soon have a better class of horses. What is the sense of condemning blemished stallions, as long as the farmer is allowed to breed the blemished mare; the one is just as bad as the other. I will not particularize any breed for a farmer to raise; let every man decide for himself. But once you have decided, stay with the job, and don't be forever changing from one breed to another. We need all the different classes of horses, and a good horse of his class will always sell for a good price, no matter to which class he may belong. As for the lien act, I do not think such an act is needed. If stallion men would have one fee, and use everybody alike, I do not think there would be any trouble. The farmers in this district need no binding down, any way. Now, brother farmers, this is your time to speak, before it is too late. Are you going to let a Government official step in and look after your personal rights, or are you going to do it yourself?  
Wellington Co., Ont. R. DICKIESON, Jr.

A class for American Carriage horses has been provided in the prize-list of the Iowa State Fair. Specifications call for the exhibition of American trotting-bred horses of suitable size, conformation, style, quality and action for heavy-harness service. Size, 15 hands and over—15.1 to 15.3 preferred.

The State of Minnesota has no law relating to the licensing of stallions, or giving the stallion owner a lien on foals, but there is some agitation looking toward that end.

**A Law that Failed to Pass.**

If we may judge from the hot and voluminous correspondence running through "The Farmer's Advocate" for the past two months, our readers will be interested in the efforts of certain States south of the line to pass legislation relating to the horse business. In the State of Ohio an attempt was made last winter to have such a law placed upon the statute books, but the attempt ended in a failure to accomplish anything. Following is a draft of their proposed law, just to hand, by courtesy of State Veterinarian Paul Fischer:

**A BILL TO ENCOURAGE THE BETTER BREEDING OF HORSES IN OHIO.**

Be it enacted by the General Assembly of the State of Ohio:

Section 1. Before any stallion in the State of Ohio shall be used in public service, the owner or owners thereof shall procure a license permitting such use from the Secretary of the State Board of Live-stock Commissioners. Such license shall contain the name, description (breed, age, color, marks and height) and pedigree of the animal licensed, and be recorded in the books of the State Board of Live-stock Commissioners.

Section 2. Before any stallion shall be licensed for use in public service, the owner or owners thereof shall make written application to the Secretary of the State Board of Live-stock Commissioners for an inspection of such stallion. Applications for licenses shall be made by all owners of stallions sought to be placed in public service on forms provided by the Secretary of said Board, and a fee of twenty-five dollars (\$25.00) for each stallion to be inspected shall accompany such applications, to cover the expense of the Board in making official inspections. Upon receipt of proper application and legal fee, the said Board shall appoint a qualified inspector, or inspectors, to inspect said stallion or stallions and report to the Secretary of said Board as to age, health, soundness, height, weight and heart-girth of the animal or animals inspected.

Section 3. All stallions that have been duly certified by the authorized inspectors to be free from unsoundness or transmissible disease, and that were at least two years of age on the first day of June preceding the season in which they are intended to be used in public service, shall be licensed for such service. All licenses shall expire on the last day of February of the year following their date of issue.

Section 4. The licenses issued under this act shall be of two classes, viz.: Class A., including animals of pure blood, registered in studbooks recognized by the United States Department of Agriculture. The official certificates of studbook registration must accompany applications for licenses of this class. Class B., including cross-bred or grade animals, and such as are not registered in studbooks recognized by the United States Department of Agriculture.

Section 5. The owner or owners of each licensed stallion in public service shall post in a conspicuous place, clearly legible, printed copies of license of said stallion, not less than ten by sixteen inches in size, both within and without the main entrance or door leading into every stable or building where said stallion may be kept for service.

Section 6. Any stallion that is found, upon inspection, to be unsound or affected with transmissible disease, or of immature age, shall not be licensed for public service, but the owner or owners thereof shall be duly notified by the Secretary of the State Board of Live-stock Commissioners to withdraw such stallion from public service at once. A certified report of all inspections of licensed, as well as of rejected, stallions shall be kept on file in the office of the Secretary of said Board.

Section 7. Any person or persons, company or firm, who shall use, or permit to be used, any stallion in public service, without having complied with the requirements of this act, shall, upon conviction, be fined not more than fifty dollars for the first offense, and not more than two hundred dollars for each subsequent offense.

Section 8. All suits for the recovery of fines, under the provisions of this act, shall be brought by the Secretary of the State Board of Live-stock

Commissioners, in the name of the State of Ohio, the receipts to be credited to the agricultural fund of the State.

Section 9. The Secretary of the State Board of Live-stock Commissioners shall publish annually a report of all stallions inspected, whether licensed or rejected, specifying the class to which each stallion belongs, name of owner, location of service, condition of soundness, age, height, weight, heart-girth, color, marks, etc., together with a statement of all moneys received on account of license fees, and all expenditures made in connection with carrying out the provisions of this act, and any surplus shall be placed to the credit of the agricultural fund.

## LIVE STOCK.

### Some Radical Conclusions About Ventilation.

"Stable Ventilation" is the title of a recent bulletin by M. H. Reynolds and C. C. Lipp, of the Minnesota Agricultural Experiment Station. It is announced as the preliminary one of a series of bulletins giving the results of a study of certain important and perplexing problems in connection with the wide subject of stable ventilation. The author is to be congratulated for having hit upon an important line of work and prosecuted it in an original manner.

The real problem at issue is, "How little air is compatible with normal health and comfort of live stock, and with economic feeding, in northern climates during midwinter? The question of stable ventilation during the summer season requires little consideration." Readers of the bulletin are warned not to take it as an argument against the wholesomeness of fresh air. The aim simply is to ascertain how much fresh air is actually needed, and what, if any, are the effects of comparatively foul air. The results of the whole consideration seem to indicate that light is more important than abundance of fresh air; that the bad effects commonly ascribed to bad ventilation may be due, in part, to influences commonly associated with but not necessarily attending bad ventilation; that the animal system has a wonderful power of adaptability to conditions, and can thrive fairly well in an atmosphere containing much greater quantities of carbon dioxide and other products of respiration than admitted by most writers on the subject.

In carrying on this work, two specially-prepared stalls were utilized, so that ventilation could be controlled and known within very close limits. The stalls used had cement flooring on concrete, with sewer connections, hard brick walls, and board ceiling covered with heavy muslin, the walls and ceilings being painted. There was one closed stall, 9 ft. by 16 ft. 8 in. on the floor, and 8 ft. 2 in. high, containing 784 cubic feet of air. It had one window 22 in. wide by 44 in. high, and facing south, the door fitting very tight. Arrangements for feeding and watering were such that not very much air could enter. So complete was the provision for keeping the stalls close, that the percentage of carbon dioxide ran up as high as 2.67, which is very much greater than found even in badly-ventilated stables. The air was saturated with moisture, which gathered freely on ceilings and walls, and even ran down here and there in tiny streams.

The open stall was in the south-west corner of a building, and had two windows, which were kept open about 16 inches each.

Three animals were used, being kept in turns in the closed and the open stall, and the results studied at the end of periods varying from six hours to twenty-one days. The animals used were Yellow Jim, a grade Jersey steer, 12 months old when the experiments began, in April, 1904; Red Jim, a grade Shorthorn bull, 8 months old when the work began; and, later, a third animal, Brindle Jim, a grade Guernsey, was used when needed to vitiate the air of the closed stall before putting one of the other animals in. Just here it may be well to emphasize that not too much reliance should be placed upon the experiments summarized below, for the reason that neither of the animals was kept in the closed stall continuously for more than a few weeks at the outside. Subsequent and more complete research may lead to somewhat modified inferences. We append the author's summary:

The problem in this present study is: How little air is compatible with normal health and comfort of the stock and with economic feeding in northern climates during midwinter? The question of stable ventilation during the summer season requires very little consideration.

Stable air, according to various authorities, shows a variation of CO<sub>2</sub> between .057 per cent. and 1.07 per cent. It is difficult to estimate the value of these figures because of lack of important details. In our own work we had stable air containing as high as 2.67 per cent. CO<sub>2</sub>. Ordinarily, in this work, when closed-stall conditions were very bad, the per cent. would range between .52 and 1.09.

The CO<sub>2</sub> content of the air increased during varying periods up to a maximum, then did not increase further, but very frequently decreased without added ventilation.

Respiration, as related to ventilation—a physiology study, especially of the condition under which gases are taken from the air, held in the blood and released to the tissues, or to the air. This is mainly a question of chemical combinations, assisted or hindered by varying partial pressures and tensions.

Injurious effects of foul stable air.—A survey of the teachings on the subject gives a reasonable conclusion that the popular impression concerning the general harmfulness of foul stable air may be, in a general way, correct; but the explanations may be very gravely doubted.

A study of available evidence on this point shows that animals may utilize, to good advantage and frequently without harmful effects, atmospheres varying widely from the normal in either oxygen or CO<sub>2</sub>, and perhaps in both.

A report in the Yearbook of the Department of Agriculture for 1904 contains a report of work on the human by Dr. Atwater, on "The Respiration Calorimeter," which strongly supports this conclusion, and also corroborates our results in original work in progress at the Minnesota Experiment Station for several years.

Original Work.—It seemed necessary, first of all, to define the injurious effects of ordinary chemically-foul stable air, and to establish, if possible, some standard or method of measuring such physiological effect. We wish to establish, also, if possible, a range of permissible impurity above which contaminations become distinctly harmful; also to establish a standard of normal health for purposes of comparison; and to de-

and there were no variations from the normal that could be detected by laboratory and clinical methods used.

Suggestions in the nature of preliminary conclusions.—Normal health is defined:

1. Historical statements concerning the unwholesomeness of badly-crowded and unventilated stables are conceded to be, in the main, correct as to actual facts, but the accepted explanations may be seriously questioned.

2. That when animals confined in unventilated stables are injuriously affected, it is so because of other conditions and causes than those usually accepted.

3. That the amount of CO<sub>2</sub> present in any ordinary stable, or any probable lack of oxygen, is not seriously important.

4. That the amount of CO<sub>2</sub> present in the atmosphere is a very unreliable guide as to hygienic conditions.

5. That the mysterious and oft-quoted "ganic matter," if harmful, may be so because it furnishes favorable conditions for disease-producing bacteria.

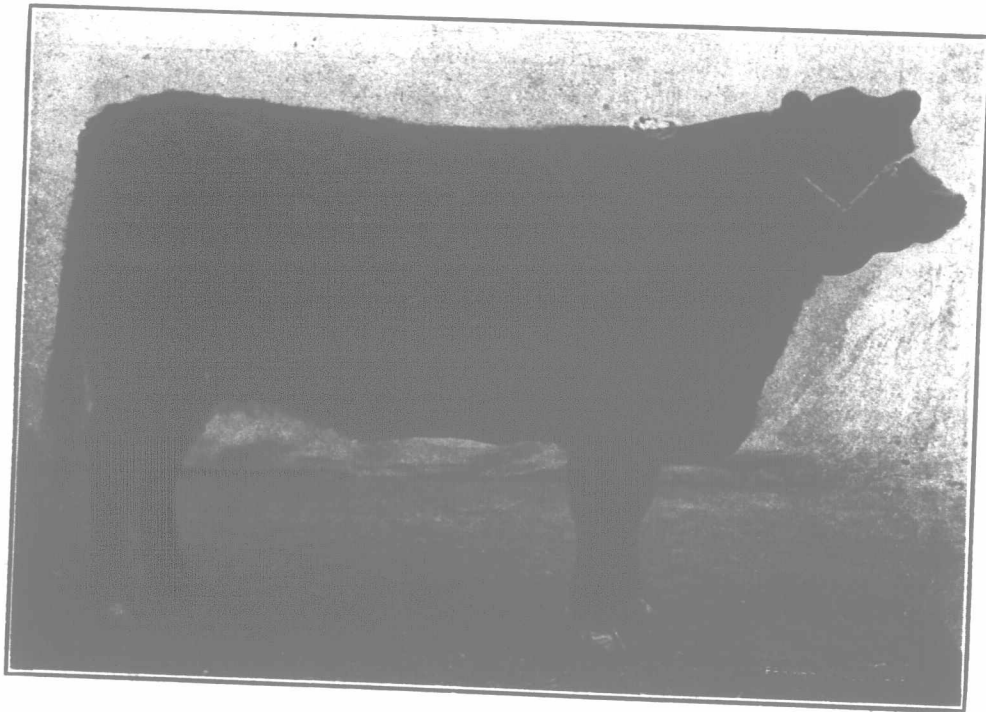
6. That a well-lighted stable with poor ventilation is superior, from a sanitary standpoint, to a well-ventilated but poorly-lighted one, since the injury, if any there be, apparently comes from disease-producing bacteria and various other causes, rather than from harmful gases.

7. That the ventilation plans for a stable need not be made with any special consideration for CO<sub>2</sub>.

### Sheep on the Farm.

The value of sheep on the farm is certainly, by many, not properly understood or appreciated, in these days of high prices and scarcity of labor.

To stock a farm with sheep requires no large outlay of money, and the risk is small, for sheep, if well managed and cared for, are not more likely to die in their owner's hands than other stock, and, if occasionally one dies, the loss is not a heavy item. The land is made more productive and profitable, with less labor and expenditure, by the use of sheep than with any other of the domesticated animals. If rape is sown on a field or two, instead of having the old-fashioned summer-fallow, two objects will be accomplished, viz., the ridding of the land of noxious weeds, and the enrichment of the soil. Besides, there are many hills in a bare and unproductive condition



Nelly 5th of Hensol.

Two-year-old champion Galloway at Smithfield, 1906. Owned by T. Biggar & Sons.

termine the least amount of air compatible with normal health, comfort and profit.

Method of Work.—Certain specially-prepared stalls were utilized so that ventilation could be controlled and known within very close limits. Laboratory data with blood and urine taken at certain intervals, and results carefully tabulated for comparison. This feature is to be published in subsequent bulletin.

Work with the blood included counting the red and white cells, estimating hemoglobin, period of coagulation, and specific gravity of the blood. In later work urine was taken up, making analyses and comparisons under similar conditions as for blood, and still later intravenous urine injections for rabbits. This laboratory work, together with tables and conclusions, will appear in the next bulletin on this subject.

The only records materially varying in a long series of averages, as between open and closed stall conditions, as stated for the closed stall, were: Pulse slightly increased, respiration slightly increased, average period for blood-clotting materially increased. Changes in the red and white blood-cell counts were not uniform, and the results are given no special significance.

Our results show that the adaptability of the animal organism is very great, corroborating statements of Claude Bernard and others. When animals were confined in a slowly-contaminated atmosphere there was no appreciable effect, even though the atmosphere varied very widely from a normal air, and contained large proportions of substances which have been supposed to be actively injurious.

One steer was confined in the closed stall for 37 consecutive days, and seemed to be in perfect comfort, showing every symptom of being at ease,

that may be utilized as sheep pastures by seeding down to grass. The droppings of sheep during the grazing season are more evenly distributed over the land than those of any other farm animal, and, by keeping the sheds and yards well littered, a large quantity of the best fertilizing material is obtained. Sheep are known to be excellent weed exterminators, eating with a relish many varieties of weeds that other animals will not touch. Some one may ask which is the most profitable breed of sheep to keep. If properly cared for, there is money in any breed. After having made your mind a standard of excellence—make it high—and endeavor to bring each individual of the flock up to that standard. Great care and judgment should be used in the selection of a ram, as much of the future character of the flock will depend on the impression he leaves. An inferior ram is dear at any price. Much improvement in the breed can be brought about by skillful and liberal feeding of the lambs until they are one year old. No flock owner can afford to unduly economize in the food of his lambs. Trying to save the necessary feed from the lambs is unprofitable. The per cent. of gain for food consumed by lambs is perhaps higher than in the case of any other animal kept on the farm. I would not advise a farmer keeping sheep, to the exclusion of all other stock, but the sheep industry of Ontario can easily be doubled without seriously interfering in the production of other stock on the farm.

Grey Co., Ont. HERBERT NICHOLSON.

If it is a question of the survival of the fittest, one would expect that farmers would vote for the protection of sheep from destruction by dogs.

**Dual-purpose Shorthorns.**

Editor "The Farmer's Advocate":

I was greatly pleased with the copy of "The Farmer's Advocate" for December 20th, being especially interested in the article, "The Cow of the Future: What Shall She Be?" We have been breeding for a dual-purpose type here in New England for a number of years, and some of us have been very successful. Most of the Short-horn breeders here are still using Scotch bulls, and the result is not hard to see. After establishing some fine milking herds of this breed on Bates-blood foundation, a number of breeders used some of the best Scotch blood on the continent, coming through Gay Monarch, St. Valentine, Warfield blood, Lord Banff, Young Marshal, Spartan Royal and other noted sires, with a deterioration in size and milking characteristics as a result. Realizing what others following the same course have yet failed to see, these gentlemen quietly investigated the merits of the various herds of the country advertised as dual-purpose, and, to their surprise and gratification, located a small herd of pure Bates cattle that retained all the splendid characteristics imparted by this master workman of cattle-breeding. The majority of breeders to-day hold the mistaken idea that cattle of pure Bates breeding have lost in constitution and dairy qualities, something very far from the truth, if one can judge anything from the cattle brought into New England. As herd bulls, they purchased the Rose of Sharon bull, Bonny Baron 4th, an animal of wonderful constitution, with lots of the style and carriage so marked in the Kirklevington strains. Bonny Baron 4th's first crop of calves, just arrived, are a splendid lot, inheriting, as they do, their sire's great vigor and dual-purpose capacity. Assisting Bonny Baron 4th is Royal Earl 3rd, a pure Duchess, from deep-milking stock. Since these herds are made up of cows having records of 12 to 18 pounds of butter in seven days, 30-day records of upwards of 60 pounds of butter, and yearly records ranging from 800 to 350 pounds for two-year-olds, up to 531 pounds for mature cows, and these same animals are fine feeders, weighing 1,400 to 1,700 pounds in milking condition, there seems to be a fine prospect for perpetuating the dual-purpose type. I believe we must look to the descendants of the old Bates and Princess strains, and to the milking Shorthorn of England for our dual-purpose cattle. There seems to be a need for the dual-purpose type in Canada. Vermont, U. S. W. ARTHUR SIMPSON.

**Care of Brood Sows.**

The unusual mortality of pigs last spring soon after being born, should lead farmers to seek for knowledge of the cause and the best methods of care and treatment of the sows, calculated to prevent a recurrence of such a result. The loss of a litter in these times of good prices is a serious matter, especially in the case of the average farmer who depends upon one or two sows for his supply of porkers. It has been noticed that sows farrowing in the summer and fall months, after having ample exercise, and access to grass and the earth, seldom fail to produce strong, healthy litters, able at once to help themselves to nourishment, and which thrive from the day of their birth, while spring litters, in very many cases, come weak and flabby, unable to take nourishment, and die in a few hours or days at most. A solution of the problem of this difference in results would appear to lie in the different conditions of the sows in the two seasons, with respect to exercise and the food available. While it is not practicable, in winter, to give them all the conditions of the summer season, it would appear to be wise to get as near to these conditions as the circumstances will permit. Supplying the sows with succulent food of some sort, such as mangels or turnips, should meet the want to some degree; but this may be overdone, especially if roots are pulped and mixed with meal so as to be taken in excess. Giving a whole mangel or turnip to scoop would seem to be the wiser way, as it will be taken in smaller quantity and more fully masticated and mixed with saliva, and hence made more digestible. The same may be said of grain feeding. The mixing of meal in cold water, fed in a slushy condition, prevents proper mastication, is liable to cause indigestion in the sow and injury to the pigs in utero, owing to the excess of cold liquids in the stomach of the dam. To avoid this difficulty, some successful pig-raisers feed their sows little or no sloppy food, but scatter corn or peas on the frozen ground or on a plank or board platform. Others have had good success by feeding pulped roots mixed with clover leaves or chaffed clover hay, a little chopped grain or shorts being added to make the mixture palatable and nutritious, water or swill being given in a separate trough. Wood ashes or charcoal, or both, kept where they may partake at will, is also believed to be conducive to the health of the brood sow, as it is to that of all swine. That it is well worth while to give such attention to the treatment of the sows as will avoid the possible loss of litters experienced last year, goes without saying, and every effort should be used to prevent such loss. In this

connection, "The Farmer's Advocate" will gladly publish the experience of farmers who have been successful in saving spring litters, if they will favor us with a statement of their methods.

**The Golden-hoofs.**

At the recent Ontario Winter Fair there was a series of addresses one forenoon in which four practical men dealt in turn with four of the common objections urged against sheep-raising. The first speaker was Robt. Miller, of Stouffville, who dealt with the alleged argument "that sheep are not so profitable as other classes of live stock." His remarks were, in part, as follows:

I believe there are not many reasons why sheep are not more generally kept by the farmers of this country, and why they are thought not to be so profitable as other breeds of stock. I believe the general reason is that too many men think that sheep are too small a thing for them to waste their time upon. When times are good, the farmers will buy horses in preference to almost anything else, and we have more so-called breeds of horses than any other class of live stock; but, at the same time, there are very few genuine breeders of horses in the country. The moment times begin to get hard, and we begin to feel that financial pinch that comes to us in every cycle of years, then you see the farmer go back to the sheep. This is always the case; whenever cattle are high in price sheep are sure to be low in price, and whenever cattle and horses get low in price, then sheep begin to be appreciated, and they become valuable.

It is most difficult for me to give evidence as to why sheep are not profitable, because in the experience I have had, and the experience of the men I have known, they have been successful with sheep. It is over 70 years since my father founded the flock we have at home, and I have heard him say many times that he never knew a year in his experience when his sheep did not pay

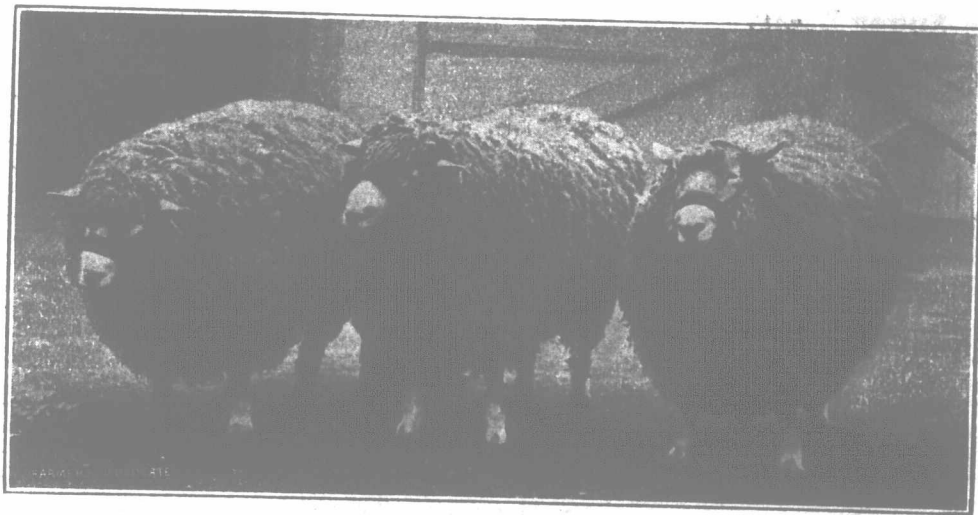
will find plenty of customers amongst our neighbors from over the other side of the line.

The men in the United States that have money keep jumping from one class of stock to another. They haven't the stability that we in this country have. When cattle become dear, every man in the United States must have cattle the next day, or there is going to be trouble. When horses become high, every man is bound to have horses. When horses and cattle go down and sheep are selling pretty well, then every man makes a desperate effort to get sheep. It has been so this year. Although horses have been selling for a big price, cattle haven't been selling so well, and at the shows men were almost fighting to buy old ewes, in order to take them into their breeding pens to lay the foundation of a flock of sheep.

**SHEEP NEVER ARE LOSERS.**

Sheep, like anything else, pay better when times are good, but they will make a profit even when times are bad. I might cite you a few cases to prove that sheep are a paying commodity. There are no men who have lived a more careless life in business than the sheepmen of Australia, and there is no class of men on the face of the earth that have had more profit for the time they have spent in the business. Great fortunes have been made there. They have had great drouths, but nearly all the sheepmen in that country have laid up so much wealth from the breeding of sheep—and not very good sheep—that nearly every one of them has a very large bank account, and they can stand the losses they have suffered in poor years. And it is the same with the sheepmen of Africa. I know one man, a maker of sheep-dip, who got an order of £850,000 (about \$1,750,000) at one time for sheep-dip, to be sent to South Africa. Then, look at England: You will see men living well in that country on land for which they are paying a high rent and they are able, with the profit from their sheep, to pay their rent and taxes, when others were not able to pay the rent the landlord exacted from them. The sheep-breeders have always been prosperous, and they are, perhaps, the most prosperous body of farmers that are in existence in any place in the world. There is no country in the world where they have more bleak land than in some parts of Scotland, but even on that poor land sheep-breeders have become well off, and they make a splendid living under their hard circumstances. They have sheep adapted to their own particular needs.

As far as this country is concerned, I do not think it is necessary to have any particular breed of the heavier breeds will do better than others. I believe the best practice is to have a few sheep on almost every farm, because they will largely find their own living, and what they eat will never be missed. They will clean up weeds in the lanes and fence corners, and live largely on what other stock would reject. I think it is of more importance to be careful not to overstock a farm than it is that you keep any particular breed. I have never known a man who is a sheep farmer to fail in business.



**Yearling Lincoln Wethers.**

Champion pen of the breed and reserve for grand championship, Smithfield Show, 1906. Average weight, 380 lbs. Exhibited by Messrs. S. E. Dean & Sons.

him a profit. There has never been a year in all that time that our sheep have not made a return on the proper side of the bank account.

There have been years when we could not make our cattle pay, and there have been far more years when we could not make our horses pay. There is nothing that will lose a man so much money in bad times as high-class horses. We can feed five sheep for what it costs to feed one horse or cow. If you will sit down and carefully figure it out, you will find that five good sheep will make more profit than the average cow that is kept on the farm, or the average horse, and one man can take care of 100 sheep much more easily than he can of twenty cattle or horses.

Some people seem to think that if they spend any time attending to their own business that time is lost. They seem to be always wanting to look after other people's business. I think it is a good plan to look after your own business, even if it is sheep you are looking after on your farm. Some people have the mistaken idea that sheep do not require attention; they will be better for a little kindly attention, even if they are out on pasture. They do not need as much attention as other stock, but they do need some attention, and they will repay you for any you give them.

With regard to variety of sheep a man should keep. I do not believe there is very much difference. I have some radical notions of my own, and, though a good many call me a Conservative, you will find that we all have our troubles. I believe there is not much difference in the breeds of sheep. I believe the most important thing is to have good representatives of the breed, and then pay that attention to them that they require, in order to make them thrive well; and, if we do that, there is no question but that we

of sheep, but there are some districts where some of the heavier breeds will do better than others. I believe the best practice is to have a few sheep on almost every farm, because they will largely find their own living, and what they eat will never be missed. They will clean up weeds in the lanes and fence corners, and live largely on what other stock would reject. I think it is of more importance to be careful not to overstock a farm than it is that you keep any particular breed. I have never known a man who is a sheep farmer to fail in business.

**DISCUSSION.**

- Q.—Have you had any trouble with maggot in the head?
- A.—No, I believe the fly is becoming extinct in our district. I believe that draining the swamp land has caused the fly that lays the eggs in the nostril of the sheep to become extinct. I have not seen a case of dizzy-head in our district for over 25 years.
- Q.—What about tapeworm?
- A.—We never have it in our district.
- Q.—Did you ever have sheep with scab?
- A.—Yes, I have had that; we are not supposed to keep them. I buy a great many sheep, and if they come from a district where there is likely to be scab, I quarantine them. I never had but one case, and we noticed it while it was in quarantine.
- Q.—Do you dip your lambs?
- A.—Yes, we dip every sheep we have twice a year. We have an ordinary dipping vat, and everything goes through the vat.
- Q.—What time of the year do you dip them?
- A.—When they go out in the spring, and before we put them in the pen in the fall.
- Q.—Don't you think the keeping of sheep on

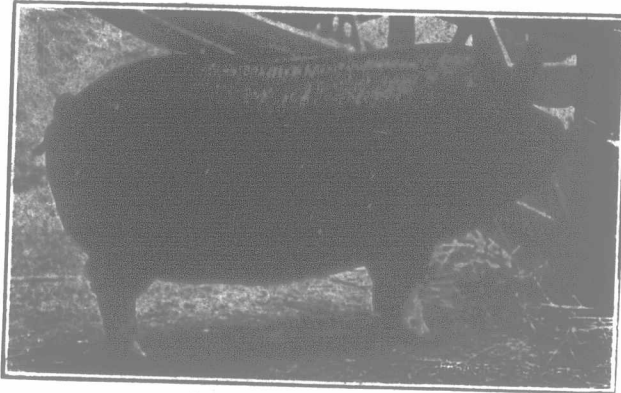
## THE FARM.

## Economics of the Wood-lot Discussed.

Editor "The Farmer's Advocate":

A comparatively wet fall has thus far given place to a mild winter. The runners have been used and laid away again. We have had no very heavy frost as yet. The crops were all safely gathered, and the plowing pretty well done up. A sign of the good times is the appearance of many new poultry and hog houses, the laying of cement floors in the stables, and a general "tidying up" of the surroundings. To the credit of the farmer, it can be said that in times of prosperity he lays up capital in the shape of substantial improvements.

With a few the taste seems to run in the direction of tree-planting, but very seldom do we find a place where much attention is given to any arrangement with a view to protection and ornament. In no case do we know of any particular attention being given to the care of the wood-lot. On the contrary, the timber is being slowly



Champion Single Pig.

Over all breeds and crosses at the Smithfield Show, 1906. Exhibited by J. A. Fricker, Burton Mere, Wilts.

but surely worked off, and herein lies, we think, the road to wisdom. The price of wood products is not rising nearly as fast as the price of the products resulting directly from the cultivation of the soil, and the annual growth of an acre of average bush is not equal to the revenue of the same acre in grass. Moreover, as the supply diminishes and the price rises, there eventually comes a time when the market for these products ceases, and the owner is farther behind than if he had sold while he had a fair market. It was thus with stove wood. When consumers changed their stoves and got into the habit of burning coal, they would not pay as much for wood; consequently the market became limited, and the price did not rise. Another instance: The cheese-box manufacturers are experiencing greater difficulty in securing large elm logs for making the sides of the boxes, and have been paying as high as \$14 per M. in the bush. One factory was burned, and, in rebuilding, the proprietor, of course, would not put in the machinery for working up the logs, preferring to buy the sides ready-made. This lessens competition, and it cannot be long till the others will follow suit, so that the man who has elm for sale will have to sell in a still more restricted market, which means less competition, and consequently lower prices. The very best price for elm logs for lumber delivered in the yard, anywhere less than ten miles in this neighborhood, is \$13 per M. In lumber it is \$18, but it is worth at least \$5 per M. to cut, cull and deliver, allowing the farmer next to nothing for teaming his logs and lumber.

As for protection to farm crops, the wood-lot is of very little value, and of no value for driving on the roads, unless it be situated alongside the

highway, which but very few are naturally, for which we should be thankful, for, besides its unsightliness and untidiness, it would afford a lurking place for tramps, wild animals, mischievous boys, drunks, etc., making it fearful and unsafe for women and children to go from one neighbor's house to another, especially at night. This is no mere bugbear; the writer has seen enough to convince him that this is a real danger. In our opinion, a better plan would be to plant hard maple, or perhaps basswood, along the line fences, and also the road fence, as far as possible from the roadway, keeping them well pruned so they would grow clean and tall for lumber, and not keep the road too damp. By nailing on a strip, they would also do for posts. For this purpose soft maple has been generally used, but its roots are too spreading and the tree itself subject to sun-crack. If there is any variety really better than hard maple or basswood, we would be pleased to know of it. The trees should be planted thickly, to admit of culling as they grow larger. They would help to hold the snow on the roads in winter, and render driving more pleasant by breaking the force of the wind. A shelter-belt of evergreens should also be provided for the north and west sides of the farm buildings and orchard. Further than this, we think tree-planting unnecessary and wasteful on our high-priced tillable land.

At the risk of being verbose, we would add that the result of the annual "school meeting" reveals more clearly than before the extent of dissatisfaction with the new law. The ratepayers resent the limiting of their local self-government, and the removal of it to the Provincial capital, and they consider the fixing of teachers' salaries on a par with the oil trust or the salary grab. South Perth, Ont. J. H. BURNS.

[Note.—Another disadvantage of maintaining a wood-lot would be the danger of trees falling on people passing through it!—Editor.]

## The Stone Basement for Dairy Cows.

Editor "The Farmer's Advocate":

Your editorial in the Nov. 29th issue, re the basement stable, has brought out considerable comment, and, at the risk of seeming tenacious of old ways, I would like to say a few words in favor of the stone-basement stable, especially for dairy cows.

A few years ago I found my old stables getting so badly out of repair and so unsuited to the dairy business (they did not lack ventilation) that I decided to build new stables, and I took every opportunity of inspecting all the good barns I could, and found, as you say, that most of the basement stables were dark and damp. I decided, however, to try to overcome these objections, and in 1904 erected a frame barn on a stone basement, and it has given us such good satisfaction that I feel like recommending it to the readers of "The Farmer's Advocate." I selected a site with a southern slope, and built with the end of the barn to the hill. Sixteen feet of the north end of the basement is used for a root cellar, and the remainder of the basement has about all the windows in it that could be put in, the top thirty inches being about half glass. This gives us the sun all day long, for the east, south and west sides all have plenty of windows, and I am satisfied that we have plenty of light. Now, for ventilation, we have four large ventilators, 32 inches square, leading from the basement to two large cupolas on the roof. These ventilators are also used as chutes for hay and straw. They are built of matched lumber, and the doors through which hay and straw is put into them are made to fit tight and kept shut.

We have never been troubled with frost gathering on the inside of the roof, as it does in so many basement stables, because the warm air from the stable is carried directly out through the cupola, and does not get into the upper part of the barn. Frost does not gather on the inside of the stable walls, for the wall was built as every stable wall should be—with very few stones running clear through the wall, using considerable small stones and mortar in the middle of the wall. Of course we have trapdoors or slides to shut the ventilators, so that one or all of them may be shut as the outside temperature changes.

I have seen some of the shed stables which some writers advocate, and they have the advantage of cheapness, and may be all right for steers or beef cattle, but for dairy cows, especially where roots are fed, I would not like to be without the basement stable. Cumberland Co., N. S. C. H. BLACK.

## Best in America.

I have been taking your priceless paper for a number of years, and am learning to appreciate it more each year. I am of the opinion it is the best agricultural paper published on the continent of America. Your Christmas number is a beautiful production, and does credit to your worthy staff. Middlesex Co., Ont. W. C. HULL.

the same pasture year after year has something to do with their health?

A.—Yes, if you keep sheep on the same pasture every year, you should not have very many, because they are bound to develop disease. If the sheep eat all the weed seeds on your farm, you can be sure they will not grow again; and, while the sheep kill your enemies, the weeds, they do not kill their own enemies. I plow all my land. I do not think any land should be kept in grass more than two years.

Q.—How many sheep can you keep on a 100-acre farm?

A.—That depends on the class of your land. I believe if you have a gravel subsoil, so that everything will drain through the ground, and there is no danger of water standing on the land, you can keep a lot of sheep on it—all the sheep that it will feed—and it will never become foul or poisoned. On the other hand, if you have a close soil that is difficult to drain—a heavy clay—then I think you ought to keep very few sheep. You should not keep more than 20 or 25 sheep on 100 acres of clay land; but if you have 100 acres well under drainage, then I think you can keep 100 sheep to good advantage.

Q.—What will keep dogs away?

A.—That is something that our Legislature ought to be bold enough and honest enough to deal with.

Q.—Suppose the ewe dies and leaves the lamb, what is the best way to give it to another mother?

A.—The best way is to make that ewe think it is her lamb. I remember one case where a valuable ewe had two lambs, and she died. I went to a neighbor and paid a good price for a ewe, and I covered these lambs so that she could not smell whether they were her lambs or not, and she took to them kindly. That is a matter that needs care. If it is a strong lamb it will look after itself, if the ewe is tied up for a few days.

## Raises Hogs on Sugar Beets.

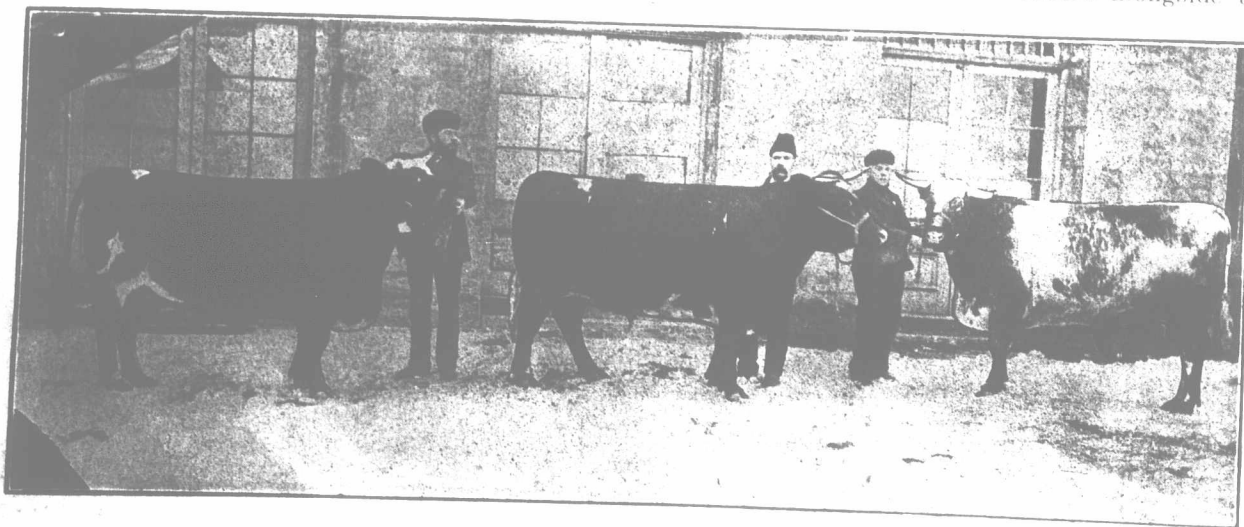
Editor "The Farmer's Advocate":

I have been much interested in your article re "Cost of Raising Hogs," and I would like to give you my method of winter feeding, which is very simple. I grow sugar beets, and pulp them and feed the pigs all they will eat up clean, without any grain of any description—nothing but sugar beets, except the swill from the house, and I can show you pigs to-day that have never tasted anything else except their mother's milk that no man need to be ashamed of. I have also two young sows that I am breeding which never got anything but their mother's milk and grass until six weeks ago; since that time they have had all the sugar beets they can eat, and they are fit for the butcher any time. We cannot afford to feed grain to hogs; there is no profit left, or at least so little that it is not worth while. Perhaps our friends at the experimental stations will tell us that sugar beets are 90 per cent. water; all I can say is, try the beets for yourselves. I do not mean what some term sugar mangels, but real sugar beets. York Co., Ont. WM. LINTON.

## Returns from a Lot of 12 Steers.

Editor "The Farmer's Advocate":

I received your note asking me to let you know how the 12 steers did that were mentioned in my letter published in your issue of January 3rd. I bought them about August 20th, and they went away December 28th. They gained 195 pounds each, and made me \$18 a head, allowing \$1 per month for pasturage on grass and \$2 per month on rape. I made \$7 per month in the stable. Wellington Co., Ont. J. P. HENDERSON.



Two-year-old Grade Shorthorn Steers.

First, second and third at Ontario Winter Fair, Guelph, 1906. Bred, fed and exhibited by James Leask, Greenbank, Ont.

### A Question of Ventilation.

Editor "The Farmer's Advocate":

I have been an interesting reader of your editorials and of the contributions on stable walls and moisture and ventilation which have appeared in late numbers of "The Farmer's Advocate." I am specially interested, perhaps because I have just finished building a barn having a basement stable with concrete walls underneath. The tone of the bulk of the letters so far, but especially of your editorials, is such as would startle, if not alarm, anyone who contemplates building a barn the coming summer with a stone, brick or concrete foundation the full height of stable.

I might say I see no reason yet for regretting building the popular concrete walls for the stable and foundation of barn, nor do I regret building the stable under the barn instead of putting up a separate building for a stable annexed to main barn. The convenience in feeding in the two styles of stables is not to be compared, and a basement can surely be lighted to better advantage having four sides exposed to the air than

can any style of annex of the same dimensions, which, of course, cannot have more than three sides exposed.

The question of ventilation and moisture is a very important one. One naturally thinks of the "Black Hole" in Calcutta in which those British soldiers were penned, a very small number of whom came out alive. It will be evident to anyone who gives the subject any thought that in a stable hermetically sealed the results would be very harmful, if not fatal, in a short time to all stock placed there. Would wall built of boards and paper, on a low concrete or stone foundation, have better results as to ventilation and moisture than if built of concrete, providing the board walls were equally close or air-tight? Manifestly not. Why were the old-fashioned board and batted stables perfectly dry and well ventilated? Simply because every crack and crevice acted as a ventilator, either letting in or letting out the air, and along with the air the moisture, according to the direction of the wind. But the modern stable is built with the view of keeping out as much of the air—and with the air, the cold—as possible, and rightly so. Everyone likes to have his stock as comfortable as possible, and no one likes to have water pipes frozen up. But the greatest mis-

take is made, not so much in making the stable too close in very severe, windy weather, but in depending on the same number and size of openings in all kinds and conditions of weather. No system of ventilation that was every devised will work automatically. Openings that would be quite sufficient in very severe weather, will be utterly inadequate in mild, calm weather, such as we have had lately. No system of ventilation which depends on an upward draught will be of any use in a mild, calm spell. Doors or windows will need to be opened to suit the needs of the case.

A stone or concrete foundation full height is surely more substantial than if the superstructure were supported on posts, no matter how well braced.

There is no doubt that frost or moisture will form on a stone or concrete wall more than on one built of boards, especially if the latter were built hollow. But what of that? Frost or moisture on the walls is not the cause but the indication of dampness in the stable, and there is no way or removing it but by letting in fresh air and letting out the foul moist air, which has been made so by the cattle breathing it.

Middlesex Co., Ont.

ADAM BATY.

## A Barn-inspection Tour re Ventilation, etc.

In view of the lively discussion in "The Farmer's Advocate" on the basement-stable question, two of the editors recently took a south-easterly drive through Middlesex County, in the neighborhood of London, to inspect a number of barns and pick up ideas about ventilation, sanitation, watering systems, mangers and general plans. From the fact that thirty-five miles were covered in a day, and about a dozen barns visited, it will be plain that little time was spent discussing weather or crops.

good care and comfortable quarters, with a chance for exercise, will do.

A 44 x 66-foot wooden-basement barn was seen on David Beattie's farm. It has a 9-foot ceiling, and apparently gives good satisfaction, although Mr. Beattie is planning to put a concrete wall under a straw shed which he is going to raise, preferring concrete on the score of durability and strength. One drawback of a wooden basement was found to be that, unless well supported by posts, it yielded under extra weight—for instance, under the granary—causing some of the boarding to bulge and loosen. Mr. Beattie, by the way, has a nice-looking herd of dual-purpose grade Shorthorns, and the cows are kept exceptionally clean, standing in rigid stanchions on a platform with an 8-inch drop behind.

Something pretty nice in the way of a concrete basement was the new one built by W. S. Laidlaw. It is planned for cattle only. A raised feed alley runs through the center, opening into a silo chute at the east end. On one side of the feed alley is a row of cow stalls, with swinging stanchions. On the other side is a row of pens for young cattle loose, with rigid stanchions to fix them when feeding. The partitions are so arranged as to permit driving through to haul out manure. Mr. Laidlaw's cow mangers are typical of the most up-to-date pattern we saw. The stanchions are set into a scantling on edge, which forms the back of the manger, the front consisting of a plain drop of a few inches from the concrete platform of the feed alley. The stable is well lighted, and has a patent watering system, one basin for each pair of cows. For ventilation, there are a number of tile through the walls near the top. Then, for outlets, are six shafts, some of them feed chutes and some especially for ventilation. The ventilators stop a few feet short of the roof, so as not to interfere with hay-fork track, etc. As a consequence, the foul air does not find its way to the apertures in the roof, but diffuses under the gable, where the condensation of its moisture causes an objectionable dampness. To remedy this, some means of connecting the shafts with the roof must be devised. Somewhat to our surprise, Mr. Laidlaw, though he has just built a concrete basement, is not altogether enamored of it. He believes basement barns are expensive to build and difficult to ventilate. Nor does he make much of having water always before his stock. He believes if they can be turned out once or twice a day to drink in a comfortable place, it is all the better for their health, insuring them exercise. His present advice to anyone working over an old barn as he did, would be to use it as a feed barn, and build a wooden stable at right angles to it. By placing the silo judiciously, he thinks one could thus make a cheaper, more sanitary and not inconvenient stable.

An attractive and substantial, though somewhat expensive barn is that of Adam Govenlock. It is 44 x 84 feet in dimensions, and is in use now for the second winter. It is covered with galvanized roofing, which is tight and satisfactory in all respects, except that moisture rising from the stable condenses under it very readily. Ventilators are yet to be erected on the roof-ridge, and will carry off the moist warm air which rises from the stable. The mangers are of the same general style described in the preceding barn. The cow-stable floor is well-nigh a model. The manger is an inch higher than the platform on which the cows stand; the platform slopes 1 1/2 inches to a 6-inch drop, and the gutter slopes gently up to a walk behind. This walk or drive-

way is lower than the platform on which the cattle stand, showing them off larger and to much better advantage than where they stand lower than the visitor. As yet Mr. Govenlock has no system of ventilation, although one patterned on the Usher principle is contemplated. Under the approach, but extending beyond it, is a concrete-arch root-house 13 x 33 x 10 feet, holding about eighty 40-bushel loads of turnips. It is provided with ventilators, and lined with galvanized-iron siding. It keeps the roots well, but must have taken a pile of cement to build.

One of the driest basements seen in ye editorial tour was in a barn belonging to David Carrothers. It was constructed of large hollow brick, something like concrete blocks. Each brick has three hollows, side by side, and the full length of the brick. A vertical cross-section of the wall would show nearly half as much air-space as solid brick. These bricks are made in East Middlesex, and many barns in that neighborhood are built of them. They make a dry wall, but unless carefully laid are not as strong as concrete. All that we saw were laid up from a low concrete foundation. Mr. Carrothers has his wall plastered with cement mortar inside, and likes it very well. He says that frost congeals on the wooden door and on the concrete foundation, but never on the plastered-brick portion of the wall. Others gave the same testimony.

Another plastered brick wall giving entire satisfaction was seen in the 86 x 50-foot basement of Benj. Holtby, who has a grand herd of profitable dairy cows. Here are two rows of stalls, one on each side of the main passage. Next to the wall on one side is a root-house, also feed-mixing room, etc. The manure passageway is of solid cement, but the platform on which the cows stand is of cobblestone, laid in courses. The owner finds this floor keeps the cows from slipping. A little distance from the barn is a round, cement water tank, on a raised mound, supplied by a windmill, and connecting with the barn by a 1 1/2-inch pipe. It is 12 feet across and 2 1/2 feet deep. The cistern wall was built up 5 feet from the ground, and afterwards filled in so as to raise the bottom 2 1/2 feet, giving a fall to the stable. It is banked up about three feet outside, and though covered only by loose boards, we were assured it gives no trouble from freezing.

After a hurried call at the MacVicar place, mentioned in our editorial comment elsewhere, we reached the mammoth new barn of Fred Yorke. Like many others, this consists partly of old barns rearranged, and it so happens that the stabling has walls of stone, concrete and brick under its several portions. The wall under the old barn was stone. Under the new part brick was used, except along the approaches, where it was expected earth would be piled against the wall, and concrete was accordingly preferred, as being stronger. The main part of this barn is 44 x 136 feet, with a 44 x 48-foot ell running out from the north side of one end. On the south side are two approaches. These, as well as the intervening space, are covered by a lean-to 12 by 72 feet. The wall on the south side of the barn follows around the outside of the lean-to, thus causing a break of 72 feet in the main wall. Under the lean-to is to be a root-house, divided off from the stable, not by a wall, but by a wooden partition. Thus, the only extra walls occasioned by the root-house are the two 12-foot ends. This makes a far cheaper root-storage as satisfactory. Overhead, between the drive-ways, is one-half the granary, the other half extending under the main roof. In this basement

The first halt was at the new 44 x 85-foot concrete-basement barn on the farm of Adam Baty. This barn is divided by a central feed passage, on one side of which is a row of cattle stalls and on the other a row of horse stalls extending part of the length, beyond that a row of loose boxes for steers. The stable is exceptionally well lighted, having 21 swinging windows, each of six 10 x 12 panes. A novel idea was the ventilation system, not yet complete, but modelled after one in an old barn where Mr. Baty found it worked satisfactorily. For intake, an ordinary wooden box runs over the feed alley from one end of the stable to the other, opening at each end of the barn. The box is to be tight near each end, but throughout the rest of its length will have cracks through which the fresh air will enter the stable. A damper at each end will regulate the draft. For outlet, a feed chute opening through the center of the ceiling is depended on. A movable slide between the joists makes it possible to open or close the chute at will.

Water is forced by a windmill, at an adjacent lake, into a galvanized-iron tank overhead in the stable, in which is an automatic float controlling the mill. From the tank, the water runs into a box in which is a float regulating the flow of water into the V-shaped trough before the cattle. For watering the horses, there is a cement tank about 3 1/2 feet high, the bottom of this being on a level with the floor of the stable. Since the cement has hardened there has been no trouble from seepage. The root-house is under the approach, the ceiling being flat cement, 9 inches thick, reinforced with two steel rails, and supported by two pairs of wooden posts under the rails. A threshing machine standing over it last fall, failed to show evidence of strain.

A somewhat old-fashioned barn, which, however, illustrates admirably the utility of wood for stable walls, is on the farm occupied by Mr. Arthur Baty. It is a sort of wooden basement, the stable walls being made of a couple ply of boards, with paper between. Mr. Baty says it seldom freezes here, and the atmosphere on the day of our visit was dry and warm. For three years seed corn has been hung all winter over the feed alley between the rows of cattle, and none of it has even moulded or had its germinating quality perceptibly injured, which is good proof of the dryness of the stable atmosphere.

A barn that has been made over to pretty fair advantage is that of Jas. Murray, whose buildings are so grouped as to afford that now rare boon of a comfortable barnyard, open towards the south. Entering the horse stable, we noticed a first-class cement floor, neatly blocked off by shallow grooves. Though some years old, there was no sign of wear. The main barn has a lean-to, in which straw is kept, being filled from ground to roof. Under one end of the barn is a place where young cattle run loose, being fenced off from the straw bay of the lean-to. A bunch of thrifty young cattle were enjoying themselves in the dry, comfortable atmosphere of this pen, and we were surprised to learn that so far this winter they had been subsisting entirely on straw. It shows that

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are 62 stanchions, 11 horse stalls and 6 box stalls. The total area of floor space in the stable is 7,000 square feet.

The combination cattle and horse barn on the farm occupied by J. W. Johnson is an exceedingly well-finished structure, particularly the stable, and illustrates the superiority of the ell shape over the oblong barn in providing a convenient driving shed in which to unhitch and to store light rigs. It was an old barn, 30 x 75, with a new wing, 40 x 50, forming the lower part of the ell, and all placed upon a wall of large brick, plastered inside, and resting on a concrete base. The stable was splendidly lighted with 17 windows of nine large lights each, the upper three being in one sash hinged at bottom so as to be opened back from top in warm weather. Two large feed chutes constituted the ventilating outfit.

Genesis of Our Basement Barns.

Editor "The Farmer's Advocate":

I am pleased to see a number of farmers are responding to your question, "Is the Basement Barn (or, rather, the basement stable) a Success?" I would answer, in the first place, certainly, in so far as labor-saving and general comfort to both man and beast is concerned, and likewise to the present-day requirements of improved farming, and it certainly would be a profitable thing for farmers generally if a plan of barn with basement stable could be fixed upon having all the present conveniences and none of the objections in regard to dampness and ventilation.

Now, Mr. Editor, ignoring egotism, will you be kind enough to allow space for the experience of an octogenarian whose whole life has been spent on a farm in this Province (Ontario)? The basement barn, or bank barn, is an offspring of the old Dutch barn, common sixty years ago in the Counties of York and Waterloo. The original plan no doubt came from Holland with the Menonites to Pennsylvania and the Dutch pioneers of New York State. Its prototype is to be seen today in the northern Provinces of Holland. In the Townships of Markham and Vaughn they were called bank barns, as the back was built up to a bank, thus lowering the approach of the driveway. The horse stable was at one end, and the cattle at the other end. In the matter of arranging the conveniences of the basement, there was no fixed rule, but, if possible, there was a decided preference to have front to the south, and the barn proper to extend six or eight feet beyond the basement, forming a shelter when letting in cows or horses; and as there were no eave-spouts in early days, the eave drops were thus carried away from the doors.

The style of basement described was always stone, stone being far more abundant in the County of York than in Middlesex. The basement was lower than made at present—about 7 feet in the clear. They were very imperfectly lighted; taken altogether, they were not a first-class stable, ventilation having no part in the architecture of the structure.

Where no bank favored a site, a basement of hewed logs was built on the level, and the barn part of the building continued upward. The objection to this was the long and rather steep approach. These barns were all too small; very few of them would hold hay and all the grain grown on an average hundred-acre farm.

Barns have changed fashion very much in the last twenty years, and, although retaining some affinity to the style of the old Dutch bank barn, the evolution has been to eliminate many of the old ideas concerning the desideratum of the whole structure.

Necessity is a factor that has wrought many reforms in farming implements since I was a boy, as well as in barns and dwelling houses. A number of the old barns are still extant here and there through the country, having much need of renovation, or being pulled down, and what timber is sound and available utilized in a new one. One of the difficulties I encountered in attempting to adapt my old barn to possess the conveniences now required in a dairy barn, was its size. It was only 53 x 34, 16-ft. posts, set on cedar posts. It was not much over half the size required to have cattle and horses all stabled therein, and all provender necessary stowed away for their keep during winter. An old shed was metamorphosed into a cow byre and horse stable; a loft above held a few tons of hay. Excepting hay and some oat straw, all the fodder went out on the stack. It had to be cut from the stack and carried into the stables for bedding or fodder, and on a stormy day it was blown to and fro. It was next to impossible to get a stack built that was not wet in some places from top to bottom, and frozen as hard as frost could make it; cut with an axe and pried off with a lever. This labor and many other troubles and inconveniences I suffered for many years, but a time came at last that something had to be done. The roofs were gone. It was do, or let the rope and bucket go together.

Visiting a number of barns—stone, concrete and brick (I mean the large hollow brick)—I learned that scarcely two owners had the same opinion, perhaps owing largely to expense in purchasing and teaming material. Then, in regard to shape, size and inside arrangements, I found advice was much like the story of the old man and his ass. Had I been as willing to change around as the old man, my new barn would doubtless have ended as he and his ass did. I, however, formulated a plan of my own, taking such suggestions as I deemed of importance, and built a barn 100 feet long and 44 feet wide, 18-ft. posts.

I learned, in my peregrinations around, that no basement was wholly free from hoarfrost forming on the walls and doors, especially on the nails. It is a question in natural philosophy. "Does the frost really penetrate through the walls from outside to inside, or is it that the stone and concrete, being a somewhat better conductor of cold than brick or wood, congeals the moisture in the basement, caused principally by the animals emitting moisture in breathing?" The dead-air space is certainly a preventive to some extent; the cold from outside stops at the air-space, consequently the wall to the inside does not become so cold. One fault of the brick wall was that, if the mortar between the ends of the brick was not particularly united with the brick, in the case of it shrinking a little there was an opening right through. To obviate this, brick walls in my neighborhood have been plastered inside with a cement plaster, wholly preventing wind coming through; but the plaster being just about as cold as the concrete, congeals the moisture and hoarfrost is formed on the walls.

In my barn there are six ventilators on each side, running up the side behind the cattle, with exit at the eaves. There are sixteen windows on each side, two in each end, and two in the gables near the peak—in all thirty-eight—with 18 x 12 glass, four panes in each window. The halves open upwards and downwards. Three chutes for putting down fodder, and the hatchway upstairs, give all the ventilation required. The practical part of ventilation does not always coincide with the theoretical. To strike a medium between the entrance of cold air and the exit of impure air, from breathing or any other cause of impurity, and keep the temperature normal, is easily accomplished in my barn.

The frame basement may be drier, and to some extent free from frost on the walls, but no warmer, and, in east Elgin and south-east Middlesex, very costly.

My story has become too long, and perhaps contains nothing but what farmers know. To those who have built new barns, or reconstructed old ones, it avails nothing; to those who have still to build or renovate, I would say consider well the expense. A barn in some localities, of the same size and material, may cost more than in another, owing to distance in teaming and price of material making the difference.

Middlesex Co., Ont. OCTOGENARIAN.

Experience with Water Tanks.

About eleven years ago we got a water tank, and had it placed in a building. Before putting it up we painted it both outside and inside. By experience, we found out that this was a mistake. We believe a tank is much better placed outside, and to be painted on the outside only. It seems, when painted both outside and inside, that the timber rots more and faster on account of the moisture being retained in the plank and kept in by the paint on each side. I have found out that there are many who have done just as I did, and painted both sides, but it is a mistake. I asked a tankmaker of great experience what his advice would be in regard to painting tanks, and he said, "I would put all the paint I had to spare on the outside." When I put the tank outside, I set it on a frame stand and boarded it in below, but the frame did not last many years, and last summer we got a new tank, which we painted on the outside only, and had a circular stone wall built with cement mortar, and we believe that it will be very satisfactory. There is a small door in the south side. We tied several thicknesses of newspaper around the pipe, and then put up a box about 12 inches square around the pipe, making it as close as possible. We then put short pieces of board on the inside of door-frame, and filled all the empty space with cut straw and sawdust, and put on a tight door on the outside of the frame, which was rabbeted to receive the door.

Water tanks should be well made of sound pine or cedar timber, free from sapwood, large or loose knots, rot or shakes, and should be cut at the proper bevel. It seems to me that there is quite a science in making a water tank properly. We put a tight cover on the tank, and in very cold weather we generally endeavor to pump up some water in the evening, if there is any wind, and it is very seldom that there is ice on the tank strong enough to bear up its own weight when the water has been withdrawn. We have the roof water from one side of the barn running into the tank, which is very satisfactory. D. L.

Does it Pay to Board the Hired Man?

Editor "The Farmer's Advocate":

In spite of the fact that the pursuit of agriculture is the most natural, and, therefore, nearest the ideal, we must recognize that there are some things in the life of the farmer and his wife which are not desirable, and which we should strive constantly to eliminate, thereby making the business more attractive and ennobling. The countryman is no longer the butt of ridicule, nor "farmer" the synonym for awkwardness and gullibility. Other professions are beginning to envy us our independence and general prosperity; let us make ourselves all the more the objects of envy, by cutting out, wherever possible, anything in our lives and surroundings which has a tendency to lower our standard of living and our ideals of refinement and culture.

The farmer who would do most to uplift his occupation must be a gentleman, in the true sense of the term; not a polished fop—all manners and no brains, such as our cities often produce—but an intelligent, dignified, self-respecting citizen, who would be recognized anywhere as a man of equal ability and standing with men of all other professions—not excluding bank clerks. His house should show evidence of refinement and culture, so far as his means will allow, and, with this end in view, he should study to expel everything which has a tendency to render his home life less refined and increase the discomforts of his housekeeper.

The practice of boarding hired men is, perhaps, the greatest demoralizer, shall I say, of the farmer's home. In the first place it makes a drudge of the farmer's wife. Many a country girl has been led to seek employment in the city, and finally to marry in the city, simply from the dread that if she remains in the country and marries a farmer, her life will be an unending succession of meals, prepared for those she does not love. No matter how neat and respectable and intelligent the man may be, his presence at the table at all times deprives the family circle of its privacy, and lessens the charm of family happiness. If he lacks intelligence and respectability, and comes to the table in an untidy or filthy condition, his presence is simply unbearable.

I am perfectly aware that in some cases the boarding of hired help is unavoidable, but on many farms this difficulty may easily be overcome. "But," someone will say, "I can hire more cheaply when I board my men; I cannot afford to pay the extra price which they demand when boarding themselves." Let us see how much can be made by boarding a man for one week, at the present prices of provisions, for even those things which are produced on the farm may be sold and turned into money if not consumed. This self-evident fact is often lost sight of. Because we do not have to pay out money for pork, eggs, milk, butter, etc., we are apt to overlook the fact that their real value is what they will sell for.

These figures which I am about to give were furnished me by a thrifty and practical housekeeper, and represent the average consumption for one week of a family of four men and three women:

Table listing weekly food consumption: Meat \$2.50, Fish .25, 5 lbs. butter 1.25, 3 lbs. cheese .45, 1-3 bag flour .83, 2 dozen eggs .40, 1 bushel potatoes .50, 1 pound tea .40, 1 pound coffee .35, Sugar .50, 1 box crackers .25, 14 quarts milk .56. Total \$8.24

Considering that two men will eat as much as three women, which, I think, is rather underestimating the capacity of the men, we have, for the cost of provisions for one man for one week, \$8.24 divided by 6, or \$1.37. In this locality ordinary day laborers charge \$1.00 per day, with board, or \$1.25 when boarding themselves. Men working by the month make about the same allowance. This amounts to \$1.75 per week, including Sunday. (The above list was figured for a full week.) Now follow out these figures and see how highly you prize your wife's labors:

Summary table: Wages saved by boarding one man for one week \$1.75, Actual cost of provisions for one week for one man 1.37, Money saved \$0.38

Thirty-eight cents per week amounts to 53-7 cents per day. And this 38 cents is not all profit either. In the above list no account was taken of the many little things used by every housekeeper, and amounting to considerable in the aggregate. For instance, vegetables and fruits were not mentioned; neither were hard beans, buckwheat flour, graham flour, oatmeal, corn meal, syrup, soda, cream of tartar, rice, sago, tapioca, raisins, extracts, seasonings, spices, pickles, etc., to say nothing of the wear and tear of soap, towels, carpets and furniture. Just think of it, 38



**Order Supplies Early.**

January is perhaps the quietest month of the year on the farm. The preparations for winter are all completed, and the preparations for spring are not yet commenced. For this reason it is an ideal month for doing any work that can be done ahead of time. It is a habit with too many beekeepers to put off preparations for the summer's work with the bees until the summer is almost upon them and the bees are nearly ready to swarm. Then a wild guess is made at the kind and quantity of supplies needed, and a rush order is sent to the supply manufacturer, who, receiving a bunch of such orders every day at that season, is soon put behind, in spite of the fact that he may have had a good stock on hand early in the season, and the beekeeper has to stand the inconvenience and loss of having to wait until the supply dealer can catch up again. How much better and more convenient and profitable it would be for all concerned if the beekeeper would send in his order for supplies early in the winter, thereby giving the manufacturers time to make the goods and ship them, and the customer time to put them together properly, and have them all ready when needed. It is just as easy to figure up what supplies will be needed for the coming season now as it will be three months hence. Go out and count up how many hives of bees you have. Then count how many empty hives, hive and super bodies, combs, bottom-boards, extracting and brood combs, empty frames, queen excluders, etc., there are; how much foundation you have on hand, and anything you may need. Then go into the house, get a pencil and paper, sit down by the fire, and figure up how many of all these things will be needed, providing all your bees winter safely, all swarm in June, and each one require two supers to hold the honey stored. The difference between what your figures show will be needed, and what you have on hand will be what you must order if you would be ready for any emergency in the honey season. And don't be stingy and skimp your order, or you may be sorry if you find yourself next June in the middle of the heaviest honey flow you ever saw, and have not storage room for the bees to put it in. And when you have figured out what you need, go right to work and order it. Don't wait until the first of April or May, for then you will be busy. Get the goods at your house in February, and put them all together well and carefully at your leisure while you are waiting for spring to arrive. Then, when the rush of the season is on, and you want a hive or a super or an excluder or anything else "quick," all you have to do is to go to your "stock" and pick it up. Now, don't blame "The Farmer's Advocate" if you have to have a swarm in an inverted hen's nest next summer. E. G. H.

**Experiments with Dairy Cattle at Ottawa.**

Some lines of work conducted with dairy cattle by J. H. Grisdale, Agriculturist, Central Experimental Farm, Ottawa, have been as follows:

1. Breeding.
2. Economy of production of milk.
3. Values of different feeds, both rough and concentrated.
4. Influence of feeds on quality and quantity of milk.
5. Individual records.
6. Influence of hours of milking on quantity and quality of milk.
7. Cost of feeding.

In Prof. Grisdale's last annual report, his results are summarized thus:

1. Work in breeding for milk production here seems to show that, (a) superior dairy cows may be found in all breeds; (b) pure-bred females are not essential to success in dairy farming, but a pure-bred bull should always be used.
2. Cheap milk production is assured by the use of succulent or juicy feeds, such as mangels, sugar beets and ensilage; and nitrogenous or flesh and milk forming feeds, such as clover and alfalfa hay, bran, oats and oil meal, on well-bred stock, in well-lighted, well-ventilated, comfortably-bedded stables.
3. Sugar beets probably rank first as a succulent feed, mangels and ensilage, however, being very excellent. Bran, oil meal, ground oats, shorts and gluten are the best concentrates.
4. Feeds do not affect the quality of the milk produced so far as per cent. of fat is concerned, but may affect the flavor, of the milk or the character of the butter. They will also affect the total quantity of fat produced in a given time, as well as the quantity of milk produced in the same given time.
5. Individual records have been found to be very valuable as a guide in breeding and feeding. Weighing the milk night and morning from each cow serves not only to show what a cow is at the end of the year, but is sure to make each cow do better on the average, for the milker cannot help taking an interest in her record, and so do his best by her as to feed and care.
6. Whether milking be performed at equal or unequal intervals, does not seem to affect the quantities of milk or butter-fat yielded by a cow, but does affect the character of the milk after each milking, the smaller quantity and the higher percentage of fat being obtained after the shorter interval. Regularity in hours of milking is essential.
7. Cost of feeding should be carefully studied, as our experience shows savings or improvement frequently possible, individuals being often fed too heavy or too light a ration for the milk that is produced or that might be produced at a given time.

**THE FARM BULLETIN.**

**"Vox Populi" and the Teachers.**

Editor "The Farmer's Advocate":

In a recent issue of "The Farmer's Advocate" I read an article entitled, "Sandy Fraser and the School-ma'am," in which the doughty Scot speaks strongly in favor of fixed salaries for teachers, and against the attitude taken by "intelligent and broad-minded agriculturists" toward this law. One of the leading traits of the Scotch character is shrewdness in business; another is the love of learning. Now I greatly fear that this latter feature is so abnormally developed in Mr. Fraser as to entirely overshadow the former.

In the first place, we are informed that some of our farmers, and they are the intelligent and broad-minded farmers who are referred to, are going "to make a big kick against the whole scheme, which they consider wholesale robbery." Unfortunately, Sandy has misunderstood what the robbery refers to. He believes it is the few paltry dollars of extra taxes that are causing the trouble. Here he makes his first mistake. If we, the farmers of Ontario, objected to the spending of four or five dollars annually, to be spent in the interests of education, we would richly deserve the contempt of every human being who has the right to call himself a man. But we do not. What we do object to most strenuously is that kind of constitution which robs us of our right as Canadian citizens to do what we can toward placing our country among the world's greatest nations, and insinuates that ours are incompetent hands to which the education of the rising generation ought not to be trusted.

The school teachers of Ontario have, as a rule, been receiving good wages, not exorbitant wages, but in most districts the teachers are not reduced to the state of want and starvation that prevails in Mr. Fraser's district. Other people, just as worthy as school-ma'ams, have died from overwork and privation without the Government fixing their salaries at a nice round sum. That worthy gentleman also bids us recall the long and toilsome years spent by a teacher in acquiring her right to display the beauties of education to the wondering and dazzled eyes of thirty or forty school children. Now it is astonishing that such an advocate of good education should consider that in these enlightened days the possessor of a first- or second-class certificate has anything above an ordinary education. After one of these certificates is obtained all that one has to do to be allowed to teach is to attend a normal school or college for a few months; then the money invested begins to bear interest. How greatly does this differ from the laborious years of study that a man learning law or medicine must go through. Then instead of a fixed salary, with a chance of saving something every year, such as any teacher has, who is not a spendthrift, the young professional man does well if he manage to earn anything above his expenses during the first years of his practice. These are the returns from a far greater expenditure. Any teacher who is foolish enough to be troubled with pupils four or five years of age, when the law expressly states that children under six shall not attend public school, or allow her older scholars to annoy her with foolish questions, does not deserve sufficient salary to pay her board bill. I would advise such a teacher to try a change of occupation.

In no district in Ontario, that I am aware of, are the taxpayers attempting to keep down the salaries of school teachers. In every school section in this part of the country the wages have been greatly increased during the last six or seven years. That it costs more to live now than it did ten years ago we all know; but in very few sections around here has the teacher's board-bill been raised by the "old skinflints" with whom they live. They are more able than willing to cause the teachers any extra expenditure.

What next do we hear? "In school teachers, as in anything else, you get just what you pay for." No, you will not. You did get just what you paid for before this law fixing the salaries was passed. In those days, when supply and demand were regulating the salaries, a teacher had to be competent or do without a job. Now you get just whatever fate hands out to you. If your school pays five hundred dollars and you get a large number of applications and study out references, it may be that a good teacher will fall to your lot, or it may be that you get a decidedly poor one. No longer have you any chance to hire a young and inexperienced teacher at a moderate figure, and then raise her salary if she proves a success. Then Mr. Fraser tells us that he just wants to see fair-play. So say we all, but for my part all the fair-play I can see in this recent law is the fair-play of dice-throwing, and the Government holds the loaded dice. VOX POPULI.

**World's Leading Firm of Cattle Shippers**

According to figures published by the Winnipeg Free Press, Gordon, Ironside & Fares, of Winnipeg, rank as the most extensive firm of cattle exporters in the world. During last year their exports amounted to 73,000 head of live cattle, and 41,000 sheep. Of the cattle 50,000 came from Western Saskatchewan and Alberta, with a few from Manitoba and 23,000 from Western Ontario. The sheep were all from Ontario, there not being enough sheep in the West, it appears, for their own trade at present.

**THE DAIRY.**

**Provincial Butter-scoring Contest for "Cream Gathered" Creameries.**

The standing for the season in the butter-scoring contest, which was carried on under the direction of the Eastern and Western Dairymen's Associations and the Department of Agriculture, is presented herewith.

Thirty-five of those who entered the competition furnished three samples, which were each scored three times. We give herewith relative standing of first fifteen:

Name of competitor.	Address.	Per cent.	Prize.
1. L. A. Southworth,	Cannington.....	94.88	\$30.00
2. D. E. McKenzie,	Beaverton.....	94.49	25.00
3. W. A. McKay,	Underwood.....	94.46	20.00
4. John McQuaker,	Owen Sound.....	94.3	15.00
5. F. E. Brown,	Dutton.....	94.25	10.00
6. J. Herb. Thompson,	Lucan.....	93.71	5.00
7. Jas. Walker,	Paisley.....	93.37	
8. J. R. McPherson,	Corbett.....	93.36	
9. W. G. Medd,	Winchelsea.....	93.35	
10. Wm. Newman,	Lorneville.....	93.23	
11. Thos. Scott,	Warton.....	93.12	
12. Bluevale Butter Co.,	Bluevale.....	92.84	
13. C. Aldrich,	Selkirk.....	92.72	
14. Saugeen Valley Creamery Association,	per Chas. Heise, Neustadt	92.7	
15. Mac. Robertson,	St. Mary's.....	92.26	

Committee.—H. H. Dean, O. A. C., Guelph.  
G. H. Barr, London.  
J. W. Mitchell, Kingston.  
G. A. Putnam, Toronto.

**Our Best Friend.**

Quite a number of "Farmer's Advocates" come to this neighborhood, but I am pleased to be able to send you two new names, and cannot speak too highly of our best friend. Wishing you the compliments of the season and another year of progress. WM. RIDDLE.  
Norfolk Co., Ont.

Six new cow-testing associations have been recently organized in Eastern Ontario, according to a communication from the Ottawa Dairy Branch last week.

**Remedy for Difficulty in Churning.**

Editor "The Farmer's Advocate":

Having noticed in the December 27th issue of your valuable paper inquiries about cream foaming in the churn and not making butter, and, not considering the answer quite satisfactory, I beg leave to give my experience through the columns of your valuable paper. I have had the same trouble, and tried everything in the way of cleanliness, proper ripening of the cream and temperature, to no avail. I know not the cause, but the remedy is to heat the milk immediately after it is milked and strained to a temperature of 130 degrees. Then set away to cool and for cream to rise in the usual way. Sour the cream, and churn at a temperature of 62 degrees. The result will be delicious, sweet butter, and as much of it as if it had not been heated. Always use a dairy thermometer. SUBSCRIBER.  
Wellington Co.

[Note.—By a typographical error, the answer referred to contained an inaccuracy. It stated that "70 per cent." was not too high a churning temperature under the particular conditions described by the inquirer. It should have been "70 degrees," which would have made the answer intelligible. Let us hear how others have overcome churning difficulties.—Editor.]

The owner of cows must study their habits, likes and dislikes. He must feed them liberally, and make them as comfortable as possible. Unless he or she is prepared to be a student of cows, success is not probable. To the dairy farmer we should say, know your cows individually. This can be best done by weighing the milk from each cow daily, once a week, on two consecutive days each month, or even once a month. Samples for testing should also be taken on the day or days for weighing, in order to know the percentage of fat in the milk. This, together with a close observation of the feed consumed by the cow, will enable a dairy farmer to determine whether or not his cows are making a profit. It will also enable him to intelligently weed the poorer cows. —[Dean.]





## Eastern Ontario Dairymen's Convention.

Like its twenty-nine predecessors, the thirtieth annual convention of the Eastern Ontario Dairymen's Association had the beneficial results of enthusing its members with a new realization of the importance of being careful and progressive in all lines of the industry, and using every effort to keep in the forefront of the procession. The inspiring address of President D. Derbyshire, M. P., contained several interesting points. He thought that the cow-testing associations that are being established under the supervision of the Dairy Commissioner should receive more attention as a means of determining the producing value of individual cows. He estimated the returns from cheese for 1906 at \$100,000 more than last year. But the exports of butter fell off, because more milk was diverted to the cheese factories. Mr. Derbyshire estimated the exports of the dairy industries at \$46,500,000, and the home consumption for the year 1906 at \$51,500,000, making a total production of \$101,000,000. Instructional matters in Eastern Ontario were looked after by a staff of twenty-eight instructors and two sanitary inspectors, under the direction of the Provincial Department of Agriculture under Hon. Nelson Monteith. High praise was given to the good work of Mr. G. G. Publow, chief instructor. A word was inserted regarding the benefit of the extra iced cars provided by the Dairy Commissioner last year, which enabled the goods to reach Montreal in better condition. Mr. Derbyshire expressed his sincere gratitude for the steady support given him for many years, and announced his intention of retiring from the office, mentioning highly the merits of Mr. J. R. Dargavel, M. L. A., as a successor. In concluding, he urged upon the meeting the need of progress, leaving with those present the one word, "Improvement."

Mr. C. F. Whitley, of the Dairy Commissioner's staff, gave a sterling address upon "Dairy Records." The tenor of his remarks was that each cow in a herd must give enough milk of good quality to pay for food, labor and depreciation, and leave a margin of profit. It was his opinion that on farms to-day hundreds of cows fail to yield an annual profit. He then referred to the cow-testing associations, sixteen of which had been established in Canada. They were both valuable and indispensable, because (1) they assist in distinguishing the good from the poor cows; (2) they guide the feeders in preparing rations economically; (3) they give warning of approaching sickness; (4) they give inspiration to those aiming at improvement. "The plea for the keeping of dairy records," he said, "is unanswerable." During the discussion, Prof. Grisdale, Agriculturist of the Central Experimental Farm, gave a statement of results in this line at the Farm. He believed it possible to increase the yield of the average cow by 2,000 pounds a year. Results sent to him by a British Columbia farmer showed an increase from 3,000 to 6,000 pounds per year. Another in Nova Scotia and another in Ontario had informed him of even better results.

Upon the same subject, Prof. Dean said that the test was the only true method of determining the value of a cow. It was impossible to do so by her external appearance. At the college the poorest cow gave 3,000 pounds of milk per year and the best 11,000 pounds per year. Farmers were waking up to the fact that there were vast possibilities in the breeding of dairy cattle which was deserving of thorough scientific study. It was his hope to see, some day, an experimental breeding station established where the closest study could be made of the breeding of dairy cattle.

Mr. J. H. Grisdale, in the course of an address on Farm Economics, advocated in emphatic terms a regular system of cropping, by means of which the farmer could have all the year round a regular supply of feed, in winter as well as in summer. He showed on a chart the division of the farm into four divisions, giving each year a crop of pasture, grain, corn and roots, and hay. In addition, he would provide three smaller plots to give each year a crop of clover, corn, and mixed crop, such as peas and oats. This system, Mr. Grisdale said, not only provides feed the year round, but improves the farm. Example was given of a small farm which a few years ago supported only 15 head of cattle, which now kept 29, and the owner sold hay.

"Stable Hygiene" was the title of a valuable address by Dr. J. G. Rutherford, Veterinary Director-General. Being compelled to breathe the air over and over again, he declared, was a fruitful cause of infection with tuberculosis where healthy cattle were housed with infected ones. Stables were kept too hot. The doctor cited cases of stables he had visited where the temperature inside was 70 degrees and outside 30 degrees below zero. The danger of tuberculosis, happily, was not confined to the infected cattle. Making the milk of such animals was undoubtedly the cause of tuberculosis in pigs, a disease

that had, unfortunately, been increasing. Pure air in plentiful quantities, and at not too high a temperature, would do a great deal towards remedying these evils.

A long and interesting discussion followed. Henry Glendinning, of Manilla, Ont., a director of the Association, spoke strongly in favor of alfalfa as a crop of great value. It should be sown on well-drained land. He told a striking experience he had with nitro-culture, obtained from the Bacteriological Department of the O. A. C. A field on a new farm bought was sowed with three pecks barley per acre, and seeded with 20 pounds per acre of alfalfa. On all but one strip seed was used that had been treated with nitro-culture, and the growth was luxuriant. On the strip sown with untreated seed the growth was small and the stand only fair. This recalled the fact that the first alfalfa sown years ago on the home farm made just such growth, but repeated sowing and dissemination of bacteria through the manure, etc., had since inoculated the whole of the home farm till now, alfalfa sown on any part develops nodules and grows luxuriantly without any artificial inoculation. In reply to a question, Mr. Glendinning said that three crops per year could sometimes be taken off advantageously. Prof. Dean, speaking upon stable hygiene, in reply to a question, favored the keeping of cattle at a higher temperature—about fifty degrees.

An address that was to have been presented to the Governor-General on the evening of the first day, was received by his military secretary, Col. Hanbury Williams, who extended, on behalf of his chief, the sincerest good wishes for the welfare of the Association and sympathy with the good work it was carrying on.

The convention was addressed to good effect by Hon. Sydney Fisher, who pointed out that the dairying sections of Canada were the most prosperous. He believed the prosperity of the people of Denmark came from the development of her dairying industry. He advocated that the aim in agricultural education should be not so much the training of a leader here and there as the general raising of the standard all along the line.

Pres. Creelman gave an interesting review of the progress of dairying in Canada, mentioning the names of Hon. Sydney Fisher, Prof. Robertson, Hon. Nelson Monteith and Mr. J. A. Rudick as men worthy to be honored for the part they had played in the good work.

Hon. Nelson Monteith delivered an address that in part was as follows: "The day may come when, instead of speaking of Ontario East and West, we may speak of Ontario North and South. It may be Ontario's duty to bind the east and west of the Dominion together in common interest—the development of agriculture. I regret that we cannot see here the masses of the people, and teach those who do not already know that life is not a struggle without an object, but a happy, strong and intelligent search after the ideal." He concluded by saying that he hoped the time would never come when the Department gave money for the giving's sake.

The concluding address was given by Dr. Jas. Mills, of the Railway Commission, formerly president of the Ontario Agricultural College, who made a strong point of the sanitary inspection of stables.

### CHEESEMAKERS' DAY.

Thursday was cheesemakers' day. In the morning G. A. Putnam, Superintendent of Farmers' Institutes and Director of Dairy Instruction, spoke extemporaneously on the everlasting text, cleanliness, the fundamental principle of a pure-milk supply and first-class article of cheese.

### MR. PUBLOW'S REPORT.

G. G. Publow, Chief Dairy Instructor for Eastern Ontario, presented an admirable report. The work of instruction, he said, was carried on in a manner similar to that followed the year before, instruction having been given to those factories which applied for it in time. Some, however, applied so late they could not be included in any syndicates. Incidentally, Mr. Publow pointed out that this system of applying for instruction is a great drawback, as he never can tell just how many instructors will be required in any particular year. Last summer the 28 instructors visited 727 factories. The loss of a number of the best instructors was deplored, and substantial increase of salary indicated as necessary to retain the best and most experienced men for the work. At present the instructors can make more out of a good factory than at instruction work. As usual, the instructors spent a ten-days' course at the Kingston Dairy School last spring ere commencing their season's work.

The 727 factories received from the instructors 3,274 full-day visits and 2,702 call visits in the hot weather, when the cheesemaker's troubles are rife. By visiting the factories at short intervals, and spending some time in the curing-rooms with the makers, the instructors are often able to be

of as much service as if spending a whole day at a place.

Turning to the raw-material side of it, the speaker regretted that there was not as much improvement in the milk supply as had been expected. The nature of the season was ascribed as an adverse factor, but the principal trouble is that a certain proportion of the patrons do not furnish themselves with means for keeping the milk cool.

During the summer the farms of 3,352 patrons were visited, and a large number of meetings held, so that the number of patrons who do not know how to care for their milk must be very small. It is encouraging to note that a great many patrons have made satisfactory improvements. Nearly all instructors report that many new milk cans have displaced the old, rusty ones, and probably more new milk-stands, with facilities, erected than ever in any season before. It is neglect of a few patrons in each factory that causes the trouble.

Tests for adulteration were made to the number of 78,086, of which 173 samples had been watered and 267 partially skimmed. From the culprits \$1,800 was collected in fines, and paid into the factories of which they were patrons. The only way of preventing this persistent habit of adulteration is paying according to quality.

"Never in the history of my work as Chief Instructor," said Mr. Publow, "have I been able to report such a great increase in the amount of money expended in repairs, buildings and equipment of factories." There were 396 factories repaired and 34 new buildings erected. The estimated cost of these improvements was \$119,998, and before the opening of another season this amount will have been largely exceeded. Already it is \$19,000 more than the total of last year. Never before were the factories kept in such clean and sanitary condition. For the above improvements, much credit is due the sanitary legislation passed at Toronto last spring.

One of the greatest drawbacks in getting the manufacturers to improve their plants has been the lack of protection afforded by patrons in return for money expended. The proprietors are making on a small margin, and never can be sure when some of their patrons will leave or someone else come in and open a factory nearby, thus cutting into the business on which they have spent so much.

As a result of improvements in factories and equipment, it is gratifying to learn that the quality of our cheese has been of an exceptionally high standard, although makers experienced a certain amount of difficulty in the hot weather. There was a marked decrease in the number of re-claims, and the June, September and October cheese exceeded all previous corresponding periods for fineness of quality. There was a surprisingly small number of acid cheese.

That makers are adopting more uniform methods, is evident from the fact that when the cheese from whole sections was inferior, there are now only a few in each district who have any serious trouble.

By the skillful use of such appliances as the acidimeter and pure cultures, aided by the greater attention being given to the cooking of the curd, there is no reason why the defects in the manufacture should not be largely overcome.

The finish and general appearance of the cheese has received more attention, but there is still much room for betterment in this important detail.

In the early part of July the instructors were given their third visit to Montreal, where common defects were pointed out by the export merchants.

Great improvement is being made in the curing-rooms throughout the country, but high prices during the past summer resulted in the shipment of green or uncured cheese. The effects are now being seen in reports from the Old Country merchants of short weight and injured quality.

During the past season he had greatly missed the official referee at Montreal, whose reliable weekly advices used to be of great service to the Chief Instructor, enabling him to notify the local instructors promptly whenever the cheese from any of their factories were faulted by the buyers. Last winter a number of annual meetings of factories were attended by the syndicate instructors, and addresses given. The results have been very noticeable in the way of an improved milk supply and in the general interest taken by the people. Patrons are reached at these annual business meetings who would never attend a meeting called purely for educational purposes. The instructor, too, becomes better acquainted with the patrons, who appreciate his efforts more readily the following season. Many requests for speakers to address these meetings have been received. If the instructors were employed by the year, and their services thus available to the Chief in winter, a vast amount of good could be



such as this could do was to increase the thought power of the people.

Enumerating a few natural principles, such as conservation of energy and the ceaselessness of motion, he emphasized the dominating power of man's intelligence over all. For instance, Prof. Hays, of Washington, was doing work in seed selection capable of increasing by 25% the annual grain production of the United States. Prof. Grisdale, of Ottawa, has demonstrated that yields can be increased 25% by rotation of crops.

The limit of a man's power to possess is the measure of his willingness to labor.

Dairying conserves fertility. The hay from two acres of land, if exported, will take out of the country more fertility than 2,000,000 tons of butter.

Prefer a man of positive character, even if he has some faults. Some men have nothing that is bad, and nothing else. A little knowledge is not a dangerous thing. A little knowledge is a wonderfully nourishing and comforting thing. Stupidity and indifference and dishonesty are dangerous.

A burnt child dreads the fire; a gratified taste goes back to the sugar bowl.

Our schools have not been trying to furnish vocational power. After a child is 14 years of age his education should partake of a nature that will train him for his calling in life.

The Macdonald College cost \$1,250,000, has 11 acres of floor space, and every building is put up with an eye to extension. In building it and making provision for the education of the people, its founder is laying up treasure in intellectual power.

#### TO COMBINE INSTRUCTION AND INSPECTION.

Friday morning was principally a business session. A. A. Putnam, Superintendent of Dairy Instruction, submitted the report of the joint committee representing the Eastern and Western Dairymen's Associations, to consider the matter of amendments to the Ontario Dairy Act. At present the Government employs, through the two associations, a large staff of creamery and cheese-factory instructors, to visit and assist factories which pay a certain fee for their services. In addition, we have under the Act passed last session two sanitary inspectors, with power to insist on clean sanitary conditions about factories and farms. These visit all factories without fee. It is now proposed to combine the functions of instruction and inspection, making every instructor a sanitary inspector, imposing a fee on every factory in the Province, and thus bringing in the backward factories which need it most of all. A resolution, asking the Provincial Government to amend the Dairy Act according to the recommendations of the joint committee, was carried with but two dissenting votes.

#### AMONG OURSELVES.

Then there were some heart-to-heart talks by J. A. Ruddick, J. H. Grisdale and G. G. Publow.

Mr. Ruddick said he had experienced more difficulty than expected in introducing cool-cured cheese on the British market, but he believed when buyers were able to fill whole orders with cool-cured cheese this would change. There had been a regrettable tendency to confuse cool-curing and paraffining. The two have no necessary connection whatever.

Prof. Grisdale wanted makers to post themselves regarding the farm end of the business, to take a sympathetic interest in the welfare of the patrons, especially in case of the small producer, and try in their own interests to increase the output of milk. He would have them post up in their factories and distribute among patrons in spring posters and folders, supplied free from the Experimental Farm upon request, reminding them to sow crops for provision against the dry weather in summer.

He also urged them to help awaken interest in cow records, take a leading part in organizing cow-testing associations, and get the patrons to correspond with the farm to secure forms for keeping private milk records of their own.

#### REVISION OF CONSTITUTION.

In common with some similar institutions, the constitution of this association was found in some need of modernizing. In making the change, the proposition that has been mooted in certain quarters for the formation of county dairymen's associations was wisely ignored. Instead there is to be provision for the holding of local dairy meetings under superintendence of the local director. At these, or at Farmers' Institute meetings in lieu thereof, nominations are to be made for the director for each particular district for the ensuing year. At the annual convention of the association these nominees will be voted on. This plan will have the advantage of local representation without the multiplicity of organization that would be entailed by the other plan.

#### RESOLUTIONS.

Whereas the Dominion Government has announced a decision to discontinue the operation of the cheese cooling rooms established in 1902, on the ground that they have served the purpose for which they were intended; resolved, that this convention place on record an acknowledgment of the great value of the illustration which they have afforded and impetus given to a most important movement for the betterment of the Canadian cheese industry, viz., the cool-curing of cheese.

A resolution was passed, thanking Mr. E. G. Henderson, Manager Windsor Salt Co., for the handsome badges donated for the convention.

Votes of thanks to the press, railways, city and county councils were also placed on record.

The election of officers was notable for the change

of presidency and introduction of considerable new blood to the directorate. The retiring president, D. Derbyshire, was presented by the directors with a cane, and made Hon. President for life.

Officers for 1907 are:

President, J. R. Dargavel, M.L.A., Elgin; First Vice-President, H. Glendinning, Manilla; Second Vice-President, L. Patton, Brockville; Secretary, R. G. Murphy, Brockville; Treasurer, J. R. Anderson, Mountain Grove. Directors—Glengarry, Mr. McGregor, Alexandria; Prescott, Mr. Fraser, Vankleek Hill; Stormont, A. Grant, Moose Creek; Russell, J. D. McPhail, Russell; Dundas, Mr. Whittaker, N. Williamsburg; Carleton, E. Kidd, North Gower; Renfrew, J. H. Singleton, Newboro; Lanark, T. A. Thompson, Almonte; Grenville, G. W. Carson, Charlesville, and L. Patton, Brockville; Leeds, J. R. Dargavel, Elgin; Frontenac, Wm. Guthrie, Perth Road; Lennox and Addington, Robt. Metzler, Odessa; Prince Edward, D. Young, Ameliasburg; Hastings, J. Whitton, Wellman's Corners; Peterboro, G. A. Gillespie, Baden; Northumberland, T. B. Carlaw, Warkworth; Haliburton, Victoria, Durham and Ontario, H. Glendinning, Manilla. D. Derbyshire, Brockville, Hon. Pres. for life; G. G. Publow, Hon. Director for Eastern Ontario.

#### PROTECTION FOR FACTORY PROPRIETORS.

A feature of the convention was a meeting of cheesemakers, held at the same time, but independent of the general programme. One of the topics discussed was afterwards considered at a directors' meeting of the association, viz., the desirability of devising some system of arbitration for the protection of factory proprietors from cut-throat competition by young men and others who endeavor to start factories wherever an opportunity seems open. This often results in too many factories, and causes proprietors to be timid about making expensive improvements for fear the investment might be spoiled by someone who offers to make cheaply enough to draw away a share, at least, of the patronage.

#### CREAMERY BUTTERMAKING.

By J. W. Mitchell, B.A., Supt. Eastern Dairy School.

In my remarks upon creamery buttermaking I purpose dealing with some of the defective features of our work—some of our sins of commission and omission—and in doing so I feel that I can truthfully claim to be a sympathetic critic.

For us to rest self-satisfied, with our cream-gathering creamery system in its present state, would be the height of folly. Our butter is not all that it should be, and it is better by far that we note the defects, point out their causes and seek to remedy them.

During the past season I had the privilege of visiting most of the creameries in Eastern Ontario, witnessing the condition in which much of the cream arrived at the creameries, and examining the butter made from the same. Furthermore, a large percentage of the creameries of the Province entered the scoring contest inaugurated this last year, whereby samples of butter were shipped monthly throughout the season to Guelph, to be there scored by experts, and I had the opportunity of examining a number of these samples. Not only were they scored when fresh, but they were held for a fair length of time, to be subsequently scored and judged for keeping qualities. In addition, we had samples of butter shipped to Montreal from several Eastern Ontario creameries, and there held in cold storage for a reasonable length of time (four to six weeks), after which I examined them, in company with an expert from one of the largest export houses of that city. After this and several previous years' experience in connection with the cream-gathering creamery system, I feel that the following facts should be stated, and stated as plainly as possible:

1. While much choice butter is made in our creameries, too much of the cream arrives not in fit condition for making a prime quality of butter—its flavor is wrong.

2. Too much of the butter manufactured is inferior in quality when first made—its flavor can be no better than the cream from which it is made.

3. Generally speaking, our butter lacks in keeping quality; even if fair in flavor when first made it rapidly deteriorates, and this is a bad fault in butter for export purposes.

How are we to overcome these defects?

First, we need better cream, and I realize that it is a herculean task, the obtaining of it. But we must persist in educating and training our patrons to provide better facilities for taking better care of their cream. In many cases the trouble starts at milking time. The milking is done in a dirty yard or stable, or the cows are not properly brushed before beginning to milk, and as a result the milk becomes contaminated from an impure atmosphere or through particles of dirt falling into it. This is similar to allowing weed seeds to be scattered over a clean fallow. The milk in the cow's udder is clean, but if due care is not taken at the time of milking, and, subsequently, impure air and particles of dust gain access to the milk and carry with them undesirable forms of plant life—weeds, if you will, for this is what they really are—which in their subsequent development produce bad flavors in the milk, cream and butter, just as foul seed will produce a foul crop or bad yeast produce bad bread. Remember that milk is an ideal seed-bed for almost all forms of germ life—these organisms are minute plants. Again, the separator may be in an undesirable place, or it may be imperfectly cleaned and be a source of trouble, or the cream may be kept in unsuitable surroundings.

The first thing to do, then, is to keep the milk and

cream as free of these bad-flavor seeds as possible, by the exercise of intelligent and eternal vigilance.

The next step is to make provision for rapidly cooling the cream and holding it at a low temperature—say 50 degrees—until sent to the creamery, thus checking the growth of the organisms that do gain access to it. This is the crying need in connection with our cream-gathering creamery system to-day. As proof of this let me cite the fact that the butter that won first place in the last season's scoring contest at Guelph was made from cream that had been properly cooled and cared for at the farm. It becomes absolutely imperative for our creamery patrons to store ice for cooling their cream. A great many farmers made the fatal mistake of discontinuing the storing of ice when they purchased hand separators, thinking that the separator would, in some mysterious way, do away with the necessity for storing ice. I have little hope of obtaining a really first-class quality of cream for our creameries until the practice of storing ice becomes general.

Make a fairly rich cream, say cream testing 30 to 35 per cent., and you will have more skim milk, a better-keeping cream, less cream to cool, less to haul, and a cream that will give your buttermaker better satisfaction.

Many of our creameries need better facilities for gathering the cream. The tanks or cans should be well insulated and well covered. Cover the cans with a good canvas cover. In many instances the haul is entirely too great; that is, the cream is kept altogether too long on the road in summer weather. Where a large territory had to be covered it would be altogether better for one collector to collect the cream farthest away and meet another at a suitable point, than to have the one driver remain on the road all day to cover the whole territory. The cream should be collected as frequently as possible—not less than three times a week in summer. If properly cared for at the farm, collected reasonably often, not kept on the road too long and properly protected in transit, it will arrive at the creamery both clean in flavor and reasonably sweet, and no other quality of cream will produce really choice butter.

Many of our creameries are lacking in facilities for properly caring for the cream upon its arrival. We should like to see all our creameries provided with coolers, so that the cream could be cooled to churning temperature promptly after its arrival at the creamery. The creamery whose butter won second place in the scoring contest at Guelph was provided with a cream cooler and every facility for promptly cooling the cream upon its arrival at the creamery. I am becoming more and more convinced that every creamery should be equipped with both a pasteurizer and a cooler, and that all cream, especially winter cream and cream the butter from which is to be held or exported, should be pasteurized and passed over a cooler.

If we could but get the cream properly cared for at the farm and collected reasonably often and under proper conditions, and were to follow this up by pasteurization and prompt cooling of the cream, we would hear no more about the "cream-gathered cream" flavor, and our butter would become Danish butter in quality.

In conclusion, I would urge upon the creamery patrons and managers throughout the Province the importance of attention to the following:

1. Providing facilities at the farm for promptly cooling the cream and holding it at a low temperature.
2. Collecting the cream reasonably often, in well-insulated, well-covered cans or tanks.
3. Avoiding having the cream on the road too long in warm weather.
4. The use of a cooler at the creamery to promptly cool the cream upon its arrival.
5. Pasteurization of the cream—especially in winter and when the butter is to be exported.

We would call special attention to 1, 3 and 4, as we are in crying need of reform along the lines that these suggest.

#### FACTORY CONDITIONS IMPROVING.

Report of J. H. Echlin, Sanitary Inspector for Eastern Ontario.

I began my work as sanitary inspector of cheese factories and creameries for Eastern Ontario on 1st June, and finished Nov. 30th. The territory allotted to me was that portion of the Province lying between the county of Hastings and the boundary of Ontario and Quebec, in all 12 counties, and in this territory some 667 factories are located. Of this number, I succeeded in visiting 560 before the close of the cheese season, that is, October 31st, the month of November being occupied in making a second visit to some of the places, where work of a special nature was to be performed in order to comply with the recommendations made during my first visit, and in holding meetings with the people to discuss the conditions as they existed in their particular sections.

Much of the Cornwall section was visited a second time, and I was greatly pleased with the earnest way in which the people entered upon the work of improving their factories; and the opening of 1907 will find a great change in the appearance of a large number of the factories of that section.

I also visited the Renfrew County and Vankleek Hill sections a second time, and found that many important and valuable alterations and improvements had already begun.

Many encouraging reports have come to me during the past month from every section of my territory, and I beg to assure you that scores of factory buildings will be greatly improved between now and the opening of the season of 1907. Many of them give promise of being, if



properly manned, in a thoroughly sanitary condition and fit for making an article of human food in, which is much more than could have been said of them in the past.

I might say that I was expected to visit the patrons of factories as well as the factories themselves. For different reasons, however, I was unable to take up this feature of the work to any great extent. In the first place, the extent of territory I had to cover and the number of factories I had to visit practically precluded my doing this, and, furthermore, in many instances it seemed useless to ask the patrons to improve the conditions at the farms until the factories were put in a more sanitary and cleanly condition.

During the earlier part of the season considerable improvement was made on some of the buildings, and in several instances a better water supply was provided, although in many places the shortage of water was a great hindrance to the makers in the way of keeping their factories clean.

One of the most frequent evidences of carelessness on the part of proprietors, patrons and makers was the condition of many of the whey tanks, and I feel that it is an insult to the women of this country to ask them to clean the milk cans after we have filled them with the whey from such tanks.

The nature of the improvements called for in the case of many factories was such that they could not be made until the close of the season. For instance, the condition of many factories called for the laying of new floors; while that of others necessitated the lining and painting of practically the whole interior.

Between June 1st and November 30th I inspected 560 factories. Of this number eighteen might be considered first-class places, having all necessary appliances and well kept inside and outside; 116 good, sound buildings were visited, 92 having really good sites. I found 263 factories having a good, pure and abundant water supply, and 63 having splendid drainage. I found the whey tanks at 52 factories clean and tidy and apparently well kept.

Amongst all the factories visited by me during the season, 35 buildings were considered to be entirely unfit places for the manufacture of cheese, and 78 new floors were asked for; while the interior of 269 make-rooms require overhauling by ceiling, lining, painting, etc. I have a personal knowledge of the water supply at 32 factories having been improved during the season and of several new buildings being erected to replace the ones destroyed by fire during the latter part of the season, so that we have every reason to look forward to the opening of 1907 with a great deal of pride and satisfaction.

#### Grant for Spring Horse Show.

A deputation, representing the Ontario Horse-breeders' Association, have waited on Hon. Nelson Monteith, Provincial Minister of Agriculture. On the deputation were Messrs. Wm. Smith, Columbus; J. M. Gardhouse, Weston; John Bright, Myrtle; George Pepper, Toronto, and John Boag, Ravenshoe. Mr. Smith, as spokesman, stated that the prizes to be offered at the spring show would amount to about \$3,000, to be offered in the breeding classes for Clydesdales, Shires, Hackneys, Thoroughbreds, Standard-breds and ponies. In order to conduct the show as the association was arranging, the grant from the Department should be \$2,000. The Minister expressed his pleasure at meeting with the members of the deputation, and gave the impression that the request would be very favorably considered.

#### Shorthorn Breeders' Annual Meeting.

The annual meeting of the Dominion Shorthorn Breeders' Association will be held in the Temple Building, Toronto, at 11 a.m., February 6th, 1907. The directors will meet on February 5th, at 8 p.m., in the King Edward Hotel. Complaints having reached this office regarding the lateness of the above announcement, we publish it in our earliest issue after receiving the above information, in reply to an enquiry addressed by us to the President.

#### GOSSIP.

##### AN ANNUAL SALE OF ANNANDALE HOLSTEINS.

Mr. Geo. Rice, Annandale Stock Farm, Tillsonburg, Ont., writes: "I am sending you a change for my advertisement, as I am making a very important change in my policy of selling stock. I am deluged with letters from people wanting Holsteins, and could not supply one-hundredth part of those wanting stock. The trouble, though, is that only a small percentage of enquiries really mean business, and it is impossible to tell which these are. To describe stock to all, giving particulars, records, breeding, etc., becomes a heavy task. Without this information, purchasers have not sufficient knowledge as to the breeding of pure-bred cattle to make their selections. A catalogue becomes a necessity in a large herd. We have come to the conclusion that we have reached that stage when it is best for ourselves, and will save us a

vast amount of useless correspondence, to dispose of stock by public auction yearly, concentrating the matter of sales into one day, thus giving us time for other work. Therefore, you can announce that I shall hold my first annual sale, likely, 27th of February, 1907; exact date will be fixed as soon as I make arrangements with the auctioneers. At this sale, I shall sell positively to the highest bidder 20 head of registered Holstein cows and heifers, two to eight years old, in calf to that prince of sires, Prince Poseh Calamity, records of whose ancestry are given in my advertisement. Every cow in this sale will be AI, with an official or public test to her credit. I shall, in the catalogue, publish cuts of most of the cows offered, and complete information as to breeding and records of their ancestors, so that people who cannot attend the sale will have before them the necessary information to send in bids with confidence. I will also sell 10 bulls, eight to fourteen months old, and a few

bull calves, from great sires and Advanced Registry dams, some of their dams having records over 20 lbs. butter in seven days. Besides the 35 head of registered cattle and a number of grade heifers, I will also sell 10 brood sows; purchasers to have choice of 36 sows now in our yards. We have also about 100 bags of seed corn—the best kind for ensilage—grown on the Annandale farm. Visitors can see this in the ear, and give their orders for delivery when they want it. To gain the confidence of the people, I am prepared to make sacrifices, if need be, at this sale, and everything offered must go. Full particulars later."

At the Farmers' Short-course Judging School, at the Iowa Agricultural College, at Ames, last week, the first prize and champion ear of corn, weighing 19 ounces, was sold at auction, the bidding starting at \$50, and closing at \$150, or at the rate of \$8,850 a bushel, the buyer being the original owner, but, it is said, in

out without a bid that the auctioneers would deign to accept, and by consent of those present the contingent of Mr. Norman F. Wilson, who had several catalogued, were withdrawn. Some rare bargains were secured, and, as the Senator announces his determination to continue the annual auction, a hint at this time may not be out of place to those who will next year be in need of young Shorthorn bulls.

The whole story will be found in the appended list of sales. The eight bulls averaged \$103.13, and the twenty heifers \$176.50:

#### HEIFERS.

Pine Grove Mildred 11th; Robt. Miller, Stouffville	\$175
Lily of Pine Grove 3rd; Robt. Miller	180
Pine Grove Clipper 10th; Thos. Johnson, Columbus, Ohio	240
Missie of Pine Grove 7th; Robt. Miller	300
Pine Grove Mildred 12th; Wm. McGarry, Perth	100
Pine Grove Secret 4th; McDonald Bros., Woodstock	310
Lovely of Pine Grove 5th; McDonald Bros.	125
Jealous Girl; W. D. Cargill, Cargill	140
Zoe of Pine Grove 6th; Robt. Miller	250
Pine Grove Duchess of Gloster 2nd; A. Summers, Aldershot	175
Ruby of Pine Grove 8th; W. D. Cargill	170
Pine Grove Mildred 14th; Capt. T. E. Robson, Ilderton	100
Lady Lancaster 11th; Peter White, Pembroke	300
Pine Grove Clipper 11th; Peter White	210
Ruby of Pine Grove 9th; W. D. Cargill	170
Pine Grove Duchess of Gloster 3rd; A. Summers	170
Princess of Pine Grove 2nd; Wm. McGarry	90
Zoe of Pine Grove 7th; McDonald Bros.	100
Ruby of Pine Grove 10th; Arthur Johnston, Greenwood	150
Saucy Girl; F. R. Shore, White Oak	75

#### BULLS.

Golden Ray; McDonald Bros., Woodstock	\$145
Clipper King; Capt. T. E. Robson, Ilderton	60
Royal Marquis; G. K. Johnson, Mohawk	65
Scottish Marquis; F. R. Shore, White Oak	100
Scottish Fashion; A. Summers	155
Village Pride; W. R. Surtios, Clarence	145
Lily's Champion; Hon. John Dryden, Brooklin	100
Lord Lansdowne; Michael Cavan, Thurso, Que.	55

#### Penitentiary Twine Handicapped.

According to Warden Platt, of the Kingston Penitentiary, satisfactory results have not followed the marketing of binder twine at the factory. "We started in last year with about 350 tons," states the Warden. "We sold about 200 tons—less than half our possible output. Our twine was as good as any on the market. Our price was two cents below other twine of the same grade. But our terms shut us out, and our terms will always shut us out. Farmers will not send cash for any article they cannot see, and many of them cannot send cash because they have not got it. To get up clubs costs money, and increases the price of the twine. Competitors take advantage of our terms and misrepresent the quality of our twine. Altogether the outlook is discouraging. We should be able to run the mill all the year. Give us the retail dealers—give us the market on equal terms with our competitors—and we will sell all the twine we can make if we run our factory night and day every month of the year. If we cannot have the market, why run the factory? All this I say after five years' experience with the present system."

We are indebted to the secretary of the excellent agricultural school of the Trappists, on the Ottawa River, Quebec, for the following kindly reference to "The Farmer's Advocate," accompanying renewal subscription: "With best wishes for your magazine, which I consider the best in America and wish every French-Canadian would subscribe to."

Arrangements are being made whereby 50,000 British navvies will be sent to Canada to engage in railway construction work.

GOSSIP.

The attention of contractors and parties contemplating house-building is called to the advertisement in this issue of ready-made, high-grade panel doors by Messrs. Gordon, Van Tine & Co., Davenport, Iowa, who claim to have the largest mill in the world, to furnish first-class goods at half the regular price...

Mr. Joshua Lawrence, Oxford Centre, Ont., importer and breeder of Berkshire hogs, writes: "I wish to say that my sales have been good lately. I have sold a lot of young pigs, and have some more nice ones for sale yet, sired by Imp. King of the Castle and Imp. Polgate Doctor. I have also bought out Mr. Douglas Thompson's share of Imp. British Duke, and have him now at the head of my herd..."

The whole subject of the proper feeding of horses is one which is not usually appreciated as it deserves. There is far too great a tendency on the part of those having charge of the animals to ignore the fact that constitutions as well as appetites vary, and the result not infrequently is that a horse gets far more than is good for him...

TRADE TOPIC.

An 800-acre farm, only 40 miles from Winnipeg, and 2 1/2 miles from a station, all fenced, 275 acres under cultivation, with first-class buildings, stock if cattle, horses, hay, oats, potatoes, and ample machinery, are advertised in this paper for sale cheap, and on easy terms...

QUESTIONS AND ANSWERS.

- 1st.—Questions asked by bona-fide subscribers to the "Farmer's Advocate" are answered in this department free.
2nd.—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
3rd.—In veterinary questions, the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
4th.—When a reply by mail is required to urgent veterinary or legal enquiries, \$1 must be enclosed.

Miscellaneous.

DIVISION COURT JURISDICTION.

If I buy a pig from a man, and in his letter he guarantees satisfaction or refund of money, and the pig is not satisfactory, and I ship it back at his expense, can I, after sending him a postal note, recover the money at my division court or his? Because of his letter guaranteeing satisfaction, I paid him, before getting the pig, \$12.

CONSTANT READER.

Ans.—Apparently, if suit must be brought in order to the recovery of the money, it ought to be entered in the court of the division in which the debtor resides.

HEIFER FAILING TO BREED.

Have a two-year-old heifer in fair condition that has been bred several times and fails to get in calf. Can anything be done other than continue breeding, and, if anything, what? She is a good animal, and I want to keep her for stock purposes. G. H. T.

Ans.—The only thing we can suggest is trying different bulls. Sometimes the difficulty is overcome by opening the os uterini of the womb with a spiral motion of the oiled finger when the animal is in heat, and having her served an hour after the operation.

CEDAR FOR SILO.

Would good sound cedar plank be all right to build a stave silo? C. C. N.
Ans.—We would think so. Has any reader tried it?

REGISTRATION NUMBER OF STALLION.

Can you tell me the number in the Canadian Studbook of Clydesdale stallion, Baron 2nd of Drumlanrig (5522)? I think he was entered in the Canadian book last winter. E. R.
Ans.—The latest published volume was issued in 1903, hence this horse does not appear. Better write the registrar, F. M. Wade, Dept. of Agriculture, Ottawa, for the information.

LICE ON CATTLE.

What is the best dry substance that is effective in killing lice on cattle? Would sulphur dusted in the hair destroy them? D. H. T.
Ans.—We have had no experience with sulphur for the purpose, but have had complete success with insect powder (pyrethrum) sifted into the hair with a flour dredger. A successful Ontario cattle feeder strongly recommends a mixture of dry cement and insect powder applied in the same way. Probably the cement alone would prove effective, as it would doubtless stop the breathing of the vermin. It is well to clip the hair off the back and neck of cattle, as less of the specific will then answer the purpose, and currying can be done with better effect.

APPOPLEXY IN PIGS.

I have a number of young pigs, ten weeks old. Last week, when I fed them, they rushed to the trough, and, after eating a little, one of them gave a squeal, ran away, tumbled over, after kicking a little, died; acted as if choked. Since then three more of them died, but death was not so sudden; they breathed very hard. What was the cause of death? C. C. N.

Ans.—This is a form of apoplexy, or rush of blood to brain, and is more prevalent at this season when pigs are confined, getting insufficient exercise and access to grass and grit. The feed should be lessened, and given in a thick state, or even dry, so they will eat slowly, rather than too sloppy, their drink being given in a separate trough. If possible, they should have more exercise. A little sulphur in their food will be helpful, and a low box with ashes and charcoal should be kept in their pen so they can take it at will.

CURRENT WORM.

What causes the leaves to be stripped off gooseberry bushes in July? If caused by worms, and requiring a poisonous remedy, is there any danger in using the fruit afterwards? A. B. C.

Ans.—The insect which strips the leaves of currant and gooseberry bushes is commonly known as the currant worm. This is the larval or caterpillar stage in the development of a small yellowish fly. The fly emerges from the ground early in the spring, and deposits its eggs in rows along the veins on the back of the leaf. It usually begins with the lower leaves of the bush, and by the time the leaves are half formed, the eggs may often be found in great numbers. The small caterpillars hatch from these in ten or twelve days, depending upon the warmth of the weather, and begin at once to feed on the foliage. As they work on the lower leaves first and gradually work upward through the bushes, it is not until the foliage at the top of the bushes has been entirely stripped that their work is noticed most. There are two broods during the season, the second one appearing in August after the fruit has been picked. Where the bushes have been seriously defoliated, even by the first attack, the vigor of the plant is so much reduced that good crops cannot be expected the following season. These worms may easily be destroyed by spraying at the proper time with Paris green or hellebore. The best remedy is to spray with Paris green at the rate of one ounce in ten gallons of water. The spray should be applied by means of a nozzle having an elbow, that the spray may be directed from below into the bush. One thorough spraying, early in the spring, at the time the leaves are well formed, will entirely rid the bushes of this pest, and there is no danger in using the fruit, the rains washing it. H. L. HUTT.

A PENDING CASE.

A neighbor woman came into my house at times on her own accord and assisted in waiting on a sick person. The person died, and this woman put in a claim for wages, and she would not state any particular amount. I offered her \$10, which she accepted, saying it was sufficient for all she had done. She has now sued me for \$40 more. Can I be compelled to pay it? SUBSCRIBER. Ontario.

Ans.—It would seem from your statement that plaintiff is not entitled to succeed in her action; but her statement of the case might and probably would be very different from yours, and inasmuch as the matter is now before the court it would hardly be proper for us to pass upon it.

MAMMITS IN COWS.

1. Two of my cows have started giving stringy milk out of part of the udder, which is a little hard. They are near drying-up time; lying on a cement floor, fed on ensilage. What is the right treatment? G. J.
Ans.—1. Treatment for this consists in giving a purgative of 1 lb. Epsom salts; follow up with 2 drams nitrate of potash, three times daily for three or four days. Rub the affected quarter well with camphorated oil after milking, after bathing long and often with hot water. We do not think the cement floor is the cause, as most cow stable now have cement floors.
2. Taking the dog's head off, stopping his breathing, or dosing him with strychnine, are all effective methods, though somewhat severe. We know of no other treatment likely to cure the vice, except keeping the dog tied beyond reach of the fowl. Will someone who has had experience please reply.

ESTATE MATTERS.

1. Father was six years younger than mother. Father's will read as follows: "I will and bequeath my estate as follows: . . . subject, of course, to my wife's lawful rights." That's all that was said regarding mother. He died, and two months after she died. She said nothing about father's will, and made no will herself. There are seven children. Can they, as her heirs, claim anything out of his estate? If so, what? Some of those children had already got their share, and father I don't think intended they should have any more, he evidently expected her to die first.
2. What are executor's lawful fees? Ontario. A CONSTANT READER.

Ans.—1. No.
2. Whatever may be agreed upon between the executor and the beneficiaries of the estate, or, such as the Surrogate Court judge may, in the absence of such an agreement, deem proper to be allowed. There is no fixed tariff of fees or commission for the remuneration of executors or other trustees.

DIVISION OF ESTATE.

1. How long can an heir live on a property before he can own it, if he just pays taxes, and pays no rent under writings?
2. The father died, leaving the place under a mortgage, and also died without a will, and two heirs and his wife redeemed the property. All heirs left, except one, and he stayed six years—a single man. Can he collect wages for the same time? This heir did not help redeem the property.
3. There are five heirs, A, B, C, D, and E. A and B help pay for property, C staying, supporting the mother. Has the property got to be equally divided between the five heirs? SUBSCRIBER. New Brunswick.

Ans.—1. We do not see that, under the circumstances stated, the heir in question could acquire in the way suggested a satisfactory title.
2. Not unless he is in a position to prove that there was an agreement in his favor for the payment of wages.
3. Yes, but subject to such legal claims as any of the five heirs can establish, and in respect of which they would be entitled to a lien upon the property, and subject also to the rights of the widow.

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**Life, Literature  
and Education.**

**Jules Breton.**

[The following, from Current Literature, will be read with interest by those who had the privilege of seeing Breton's painting, "The Communicants," at the Toronto Exhibition last fall. Jules Breton died in Paris about midsummer of last year.]

"Jules Breton and Francois Millet," says an English critic, 'are names that must forever be linked together. If the work of the latter is more profound, the balance is made up by the power of the former to interest an infinitely larger number of hearts.' These words may appropriately be cited at this time as a suggestive commentary on the work of Jules Breton, the eminent French painter, whose passing away at the ripe old age of eighty years leaves the art world immeasurably poorer. Like Millet, he chose to portray the life of peasants, gleaners and humble laborers. But in certain important respects, as Anna Seaton Schmidt, a writer in the Boston Transcript, points out, his motive was markedly different from that of Millet.

"Millet painted types, Breton the selected, individual model. His was the sweet melody of the rippling brook that emptied itself into the fathomless ocean of Millet's divine genius. His gentle, sensitive nature turned from the rough and hard and toil-worn peasant. He saw beauty only in refined, delicate faces, or gentle, undulating landscapes. The immense popularity of his peasant pictures is due largely to this selection. They are far enough removed from the sordid life of toil to charm the workers, and beautiful and gay enough to please the wealthy who prefer to believe that the strenuous work of the world is performed by happy, laughing men and women; that the harvesters blithely sing and dance in the moonlight and the peasants make love as they plow their land. There are few who would not turn with a sigh from The Man with the Hoe to gaze with joy on The Song of the Lark."

"Jules Breton was a writer as well as a painter, and we are fortunate in possessing, in his autobiog-

raphy, a vivid record of his boyhood life, his art studies, his early struggles, and his final triumph. Breton's first Salon picture was exhibited in 1849. It was created at a time of depression and discouragement, and has an interesting history. The period was one of revolutionary ferment, and Breton, caught in the spirit of his age, was ambitious to show the sympathy he felt toward 'the disinherited of fortune.' He writes:

"One night, when I was unable to sleep, there came to me the vision of a lugubrious composition. I saw a garret. A woman was lying there on a miserable pallet. Her face was livid, her cheeks hollow, her eyes red with weeping, her clothes in tatters. Half rising out of the sinister shadow, she clasped to her withered breast, with her emaciated arm, an infant with frightful agony depicted on its countenance, while with her other thin and bony hand she clutched the blouse of her husband, who was breaking from her in a paroxysm of desperation. Arrested for a moment in his course, he turns toward her, but he is inflexible; he grasps his musket, with the purpose of going to the barricade that is seen through the window, in the frame of which is a bullet-hole that lets the

unhappiest periods of his life—a state of anxious suspense that lasted for six entire weeks. According to his account:

"When I say that during all this time I did not sleep, it is not a figure of speech. I did not sleep for a single instant. I tried in vain baths, opium, and various other remedies recommended by friends of mine who were students at the School of Medicine. I felt some symptoms which alarmed me for a time, for around me, as in every other quarter of Paris, cholera was raging. The thought of the plague did not serve to enliven my hours of sleeplessness. What if I should have the misfortune to fall a victim to it before the opening of the Salon! It came at last, this long-wished-for day! I hurried to the Salon. From the moment of my entrance, I perceived from afar those wretched figures, melancholy and gray, too well known, though so different from those I had seen in my vision. In vain I was told that the painting was full of energy, that the vigor of its coloring and design made the pictures around seem weak. I saw that my tragic vision of the night would have done better to wait for a less inept interpreter."

"For his next picture Breton chose a similar subject, 'Hunger.' This

'find himself.' Of quiet months in the country, during which he seems to have experienced a kind of spiritual awakening, he writes:

"Often I would rise before the rays of dawn had wakened the dark and sleeping fields. The streets were silent. Here and there, however, some house would show signs of life; a young woman would open the window, her eyes heavy with sleep, her hair in disorder, half-dressed—delightful glimpses into other lives. Further on was a child crying, or an old woman scolding. And I would walk far into the fields, where the manure heaps smoked beside the herbage wet with dew. The bending wheat sprinkled me with dew as I walked along the parrow footpath. Among the mists the willows dropped their tears, while their gray tops caught the light overhead. Then I re-entered the village, now all bright and awake, where rose, at times, with the blue wreaths of smoke from the chimneys, the sweet, monotonous songs of the young embroiderers. I returned to the fields to look at the gleaners. There yonder, defined against the sky, was the busv flock, overtopped by the guard. I watched them as they worked, now running in joyous bands carrying sheaves of golden grain; now bending over the

stubble, closely crowded together. When I went among them they stopped their work to look at me, smiling and confused, in the graceful freedom of their scant and ill-assorted garments. Ah! I no longer regretted either Clamart or Meudon, and I loved the simple beauty of my native place, that offered itself to me, as Ruth offered herself to Boaz."

"In this simple environment were conceived and carried out most of the pictures that were to bring him fame. 'One day,' he says, 'I made a little gleaner pose for me, standing on a flowery bank beside a field of wheat. Her bent face was in shadow, while the sunlight fell on her cap and her shoulders.'

"As I painted her I felt a secret joy. I cannot express the feeling of rapture caused me by the harmony of this dark face, strongly defined against the golden grain, among which ran lilac, morning glories, by the warm glow of the earth, the violet reflections of the blue sky, the flowers and the shrubs. All this enchanted me. I had already sent my "Gypsies" to the Exhibition at Brussels, when one day my brother Louis, coming across this little "Gleaner" in the corner where it had lain for-



**"The Communicants"**

(From a painting by Jules Breton. Exhibited at Toronto Exhibition, 1906, as a loan from Lord Strathcona. This picture was bought at the Morgan sale in New York, in 1886, for \$45,500.)

light enter, and it is in vain that the crucifix suspended to the wall under a branch of box, seems to plead for pity."

"Against the advice of his friends, and after exhausting effort, Breton succeeded in transferring his conception to canvas. He called the painting 'Want and Despair,' and, with many misgivings, submitted it for exhibition. Then followed one of

was exhibited in the Salon of 1851, but, much to his disappointment, was 'skied.' At the same exhibition appeared 'The Sower,' Millet's first effort in the rural genre, which was also hung so high that it was scarcely noticed by the general public.

"It was not until after he had abandoned the feverish life of Paris, and returned to his birthplace at Courrières, that Breton began to

gotten, said to me, "Why do you not send this, too, to the Exhibition?" "That?" I replied. "It is not worth while." And, then, I had no frame. My brother persisted, and in the end discovered in the barn an old, tarnished frame that had once inclosed a poor portrait. It was near the expiration of the time of grace allowed in sending pictures. I sent it off at once. What was my astonishment when, a few days afterward, arriving in Brussels, I found my "Gypsies" badly hung and my "Little Gleaner" on the line in the center of a panel, where it attracted general attention.

"The success of the 'Little Gleaner' encouraged Breton to choose the same subject for a larger composition. 'The Gleaners' was exhibited at the International Exhibition in Paris in 1855, and established the painter's reputation. He was greatly astonished, he confesses, when he was afterward told that he had been the first to treat this subject. 'The Gleaners' of Millet were not painted until 1857.

"During the years that followed, Jules Breton painted picture after picture, devoting himself almost entirely to peasant and religious subjects. Troyon, Corot and Gerome were among his friends and guides. As he grew older, the mystic in him seemed to become more pronounced. Religious processions had impressed him even as a boy, and he had stood silently while they passed through the winding streets of his village: 'First came Monsieur le Cure, then all the notables of our village. I knew them well, yet their faces seemed different, as if surrounded by a mystic aureole. They had lost every trace of vulgarity, and seemed to move in a divine atmosphere. They walked gravely with bent heads, carrying reverently their large torches.' Jules Breton is said to have been always deeply moved by the simple faith of the peasants, and he had little patience with the irreverence and materialism he encountered in Paris. And so it seems as though he had put his very soul into the portrayal of such semi-religious subjects as 'Blessing the Wheat,' and 'The First Communion.' This last-named picture brought the fabulous price of \$45,500 at the Morgan sale in New York in 1886.

American millionaires have vied with one another to possess Breton's canvasses, and some twenty-five of his most representative works are now in the United States.

"No French artist, it has been remarked, was ever more generous than Jules Breton in praise of his brother-artists. 'I never cross the threshold of our museum (the Louvre),' he once declared, 'without experiencing a reverential emotion.' To Leonardo da Vinci's head of 'St Anne' he paid the following tribute: 'I do not think art has ever produced anything more touching. No artist has ever joined more profound feeling with greater correctness of design. It is ideal sweetness expressed with ideal force. I love this Leonardo with all the fervor of an artist's soul.' As for Rembrandt's 'Pilgrims of Emmaus,' it was the goal of his pious pilgrimages whenever he could make them, and he was never weary of contemplating it. Corot also compelled his whole-hearted admiration:

"Each of his landscapes is a hymn of serene purity, where everything lives, rejoices, loves and palpitates! We say the divine Mozart. We may also say the divine Corot; for he was the Mozart of painting! Genius made of dawn and springtime! Eternal sunshine that age has not been able to chill! Paris may well be proud to have given him birth."

"Even more significant, in view of his own artistic kinship with Millet, is the following utterance:

"The wretched beings depicted by Millet touch us profoundly, because he loved them profoundly and because he has raised them to the higher regions inhabited by his genius. He attains character and sentiment even with ugliness. He has gradually added to his pictures an element wanting in them in the beginning—depth of atmosphere. With a plow standing in a rugged field where a few slender thistles are growing, two or three tones and an execution awkward and woolly, he can stir the depths of the soul and interpret the infinite. A solitary, at times a sublime genius, he has made a sheepfold lighted by the rays of the rising moon, mysterious as the eternal problem she presents, a little picture life-like and pure as a work of Phidias, unfathomable as a Rembrandt."

Zealand, and received his earlier education at the university in that country.

A scheme for shortening the voyage between Britain and Canada to four days is to be considered during the coming session of the British Parliament. The proposal is to establish a packet station, with railways and ferry steamers, to carry mails and passengers across to Ireland, at Blacksod Bay, Mayo, the point in the British Isles nearest to Canada. Ships could then go on their way without stopping at any other point in Ireland.

Premier Stolypin and several Conservative members of the Russian Cabinet have received letters of warning from the Terrorists.

The islands of St. Pierre and Miquelon, in the Gulf of St. Lawrence, are agitating for a separation from France and a union with the United States. They say they are being taxed by the mother country out of all proportion to the resources of the islands, and claim that to the United States, which has advocated their rights better than England, their allegiance is due.

#### PROGRESS OF LOCAL OPTION.

A noteworthy feature of the recent municipal elections in the Province of Ontario was the voting on local-option by-laws in a large number of municipalities. The principle of local option is simply this, that the ratepayer of a municipality exercise the right, by ballot, to say whether or not they will authorize the sale of intoxicating liquors under license

#### Power: Individual.

The great things of life are compassed by units, and not by aggregates of men. By individuals, and not by companies, are great thoughts and great actions evolved.

Thoughts that have vital power, energy, initiative—thoughts that shape themselves into action, create or crush empires, build or subvert dynasties, set laws, leave their impress upon the face of time—such thoughts were those of Alexander the Great, Hannibal, Napoleon Bonaparte, and other world-conquerors. Not "multitude of counsel," but individual conception, creation, execution. The powerful intellect and magnetism of such men attract, fascinate, command aggregates of ordinary minds. The latter are the means, agents or instruments of achievement. Conception and plan are moulded in a superior mind. Organizing, directing and controlling power reside in the individual.

Go back to the dawn of history. We find Moses—commander, teacher, lawgiver. We next find Joshua—governor, leader; a figure conspicuous, colossal, not to be measured by ordinary standards. Then David, a central character in history and song. Solomon, a teacher of wisdom. The Prophets, from whom we have not only inspired records, but also the world's best philosophy and poetry. Jesus Christ, the Man-divine, the soul's eternal hope. Paul, and the other Apostles, standing forth as world-teachers.

Turning to the heathen world, we note such teachers as Mahomet, Confucius and Zoroaster—men of comprehensive force of mind, whose thoughts have for many centuries shaped the moral and religious life of millions in the Orient.

In the Western world, who shall estimate the vast influence of one man, Martin Luther, whose thought and fiery zeal changed the religion of continents?

In the field of discovery, it was not a company or convention of men who conceived, planned and consummated the voyages of Columbus; it was Columbus himself. So of Vasco de Gama, Magellan, and other distinguished navigators and explorers. Men of less ability are employed in

the undertaking, but one man is the prime mover and the esprit de corps. Of this type, also, are the great inventors, among whom may be named Guttenberg, Morse, Edison and Marconi. In sciences and arts we have Copernicus, Sir Isaac Newton and Galileo, discovering laws among the stellar worlds. These men placed astronomy on a truly scientific basis. Noted names in medicine and surgery are: Jenner, Simpson, Pasteur and Dr. Lorenz. In physiology, Harvey, Carpenter and Owen. Important advance in manufactures accrues from the researches of Wheatstone and Faraday. Travel is facilitated and commerce advanced incalculably by the locomotive of Watt and Stephenson, and the steamboats of Bell and Fulton. In agriculture, the inventions of the few have immeasurably lightened the labor of the many. Investigators, such as Lubbock, Murchison and Dana, have unfolded to us a knowledge of the rocks and strata of the earth, while Linneus and Buffon have classified life on its surface and in its seas.

Of philosophers, only a few can be classed as taking high rank. First among the ancients were Socrates and Plato, founders of the "Philosophy of Mind," and Aristotle, who pursued chiefly the sciences of nature. Their works are still read and debated by thinking men. Bacon, Descartes, Kant, Hamilton and Reid stand out conspicuously among the moderns. Bishop Butler, in his "Analogy," has given to the world a masterpiece of exact and profound reasoning, which shows that all objections against religion are equally valid against universal truths.

Among orators, Cicero and Demosthenes shine resplendent in superlative greatness.

Great minds are beacon-lights, or, as Carlyle would say, "fire-pillars in this dark pilgrimage of mankind."

At widely-separated points of time and place, an orator or a writer endowed with unusual vigor of intellect and vividness of imagination, discloses realms unseen before, or dimly seen by the mental eye.

Great poets erect images of higher and better things, and these reflect to us through the mists of the present, glimpses of an age more divine yet to come, when righteousness and knowledge shall "cover the earth." Kent Co., Ont. W. J. WAY.

### Current Events.

The Shah of Persia died at Teheran on Jan. 8th.

Russia will shortly undertake the reorganization of her navy.

The bandit Raisuli has been defeated in an almost bloodless battle, and has fled to the mountains.

About 23 acres of Kerr Lake, one of the richest prospects in the Cobalt district, was sold by tender on Jan. 9th for \$178,500.

The United States Steel Co. will build next summer, at Sandwich, Ont., an extensive steel plant, which will employ 5,000 men. A tract of land comprising over 1,000 acres has been bought for the erection of works, docks, etc., by the corporation.

Professor Rutherford, of McGill University, Montreal, has been appointed Longworthy Professor and Director of Physical Laboratories at Manchester University, Eng. Dr. Rutherford is only thirty-six years of age, but his researches in the field of radium and radio-activity have stamped him as the first scientist in Canada, and one of the foremost in the world. He was born in New

#### Two Women.

One sanctified her homely household labor  
With patient kindness and with tender grace;  
Love set his seal upon her faithful service;  
Sweet peace and joy illum'd her placid face.  
Her presence seemed to those for whom she wrought  
With blessing and with benediction fraught.

The other toiled with fretful, weak repining,  
Sullen of visage, cheerless, heavy-eyed;  
Missing the joy of love's unselfish labor,  
"I weary of this ceaseless toil," she cried;  
"I hate these narrow walls and duty's chains,  
And long for broader fields and higher planes."

One caught the morning sunlight on the mountain,  
The noontide splendor and the twilight's spell,  
And heard with joy Creation's vocal anthem.  
The other walked alone where shadows fell.  
One face, uplifted, shone with Heaven's own light;  
The other, downcast, made of noonday night.

—[Elizabeth Hardy, in Good Housekeeping.]

The directing and controlling of wireless waves so that they can be aimed at a specific point—as at a ship or some particular station—is engrossing Marconi at present. He has an apparatus for this purpose in hand, and expects to soon perfect it.

within its bounds, as is usually done in bars in connection with hotels. In many municipalities local option has been in force for some time. In seven instances by-laws were submitted for repeal, but in all seven the by-laws were defeated, thus sustaining local option. Probably the most significant of these was in Toronto Junction, where a strong effort was made for repeal, but the prohibitory regulation, after three years' trial, was sustained by a majority of 333. Three years before the majority in its favor was 190. Throughout the Province local option was carried in at least 41 municipalities and defeated in over 50, but some 38 of these gave majorities for local option, though not reaching the 60 per cent. imposed at the last session of the Local Legislature.

#### When the Birds Come North Again.

Oh, every year hath its winter,  
And every year hath its rain—  
But a day is always coming  
When the birds come North again.

When new leaves swell in the forest,  
And grass springs green on the plain,  
And the alder's vein turns crimson—  
And the birds come North again.

Oh, every heart hath its sorrow,  
And every heart hath its pain—  
But a day is always coming  
When the birds come North again.

'Tis the sweetest thing to remember,  
If courage be on the wane,  
When the cold, dark days are over—  
Why, the birds come North again.

—Ella Higginson

The Quiet Hour.

God's Thoughtfulness.

Are not two sparrows sold for a farthing? and one of them shall not fall on the ground without your Father. But the very hairs of your head are all numbered. Fear ye not therefore, ye are of more value than many sparrows.—St. Matt. x.: 29, 31.

Whatsoever ye shall ask in My Name, that will I do.—St. John xiv.: 13.

One day in stress of need I prayed: "Dear Father, Thou hast bid, me bring

All wants to Thee: so, unafraid, I ask Thee for this little thing Round which my hopes so keenly cling; And yet remembering what Thou art— So dread, so wondrous, so divine— I marvel that I have the heart To tell Thee of this wish of mine!

"Thy heavens are strewn with worlds on worlds, Thy star-dust powders reachless space; System on system round Thee whirls Who sittest in the central place Of Being, while before Thy face The universe hangs like a bead

Of dew, upon whose arc is shown, With but reflected flash, indeed, Godhood's magnificence alone.

"And when I think, Our world is one, But one amid the countless band That in its daily course doth run Its golden circuit through Thy hand, And that its peopled millions stand Always before Thee, even as I— Sad suppliants with their pleadings dumb,

Waiting for every hour's supply— I wonder that I dare to come!

"The thing I ask Thee for—how small, How trivial, must it seem to Thee! Yet, Lord, Thou knowest, who knowest all,

It is no little thing to me, So weak, so human as I be! Therefore I make my prayer to-day, And as a father pitieth, then, Grant me this little thing, I pray, Through the one sacred Name. Amen!"

I had my wish. The little thing So needful to my heart's content Was given to my petitioning, And comforted I onward went With tranquil soul, wherein were blest Trust and thanksgiving. For I know Now, as I had not known before, The "whatsoever's" meaning; so, I cavil not nor question more.

—Margaret J. Preston.

We say of anyone who is constantly kind and considerate in small matters, that "he is thoughtful," but too often we fail to expect God to be thoughtful in little things. We can understand His kindness in sparing the doomed city of Nineveh—for that seems to us to be a great thing and well worth attending to—but it is hard to believe that He was

considerate enough to cause a plant to grow up as a shelter for Jonah from the sun's rays—for that seems to be such a trifling matter. We turn confidently to Him for help when we or our dear ones are in great danger of soul or body, but feel almost afraid to ask His help, when the oven refuses to heat or when we have mislaid some little thing we want. Surely this is treating God as though He were an earthly king who only had time to attend to matters of grave importance, when He desires to enter into our every thought.

To "pray without ceasing" is only possible if we allow God to share all our interests, large and small, good, sad or monotonous. If we only admit Him into fellowship with us in great matters, where are we to draw the line? If we are to wait until some great thing needs attending to we shall probably crowd Him out of whole weeks of our time. Then, when the great thing—or what seems great to us—really arrives, we shall be more likely to turn to an earthly friend, because we have not got into the habit of looking to God every hour for sympathy in gladness and in sadness, for help in difficulty and in danger. Is it possible that we are afraid of wearying God, or of taking up too much of His time? And yet we know, when we stop to consider, that He either has time for everything that is of interest to us, or else He has no time to spare for our concerns at all. Among all the uncounted millions of creatures in the universe we could have no chance to gain His attention if it were not that He is infinite in His thoughtful care for all. The microscope opens our eyes to marvels hidden from ordinary eyesight. Creatures so tiny as to be quite invisible to our eyes yet show the careful, loving handiwork of the Great Creator.

A very slight examination of the hairs of one's head will prove to any reasonable mind that—whether they are numbered or not—at least they are carefully designed and marvellously made. The structure of each hair proves that it did not come into existence by accident, and its power of growth shows an everyday care far beyond any human wisdom. God has evidently taken the trouble to make each hair; and if He is so thoughtful about a little thing like that, then nothing that concerns us can possibly be unimportant in His eyes, and we can safely trust Him to guide and guard us in our journey through this wilderness, sure that all the little things we need will be remembered and thoughtfully provided. As Brierley says: if intelligence has made each hair and is looking after it, then intelligence is looking after its wearer. "It is amazing we do not more definitely settle this matter with ourselves. It would resolve so many questions. We should go on working, but leave off worrying. As it is, we imagine the world is on our shoulders. We groan over the condition of the Church, and the back ebb in which religion finds itself. If we believe in the sermon our own hair teaches us as we brush it of mornings, we shall stop this lamentation. As if religion began when we took up its business and will end when we retire. Of the amazing tricks

men resort to, in the notion that thereby they are keeping religion going, there will also be a final end. Orthodoxy will cease to be alarmed about Biblical criticism, under the assured persuasion that God knew its conclusions and results long before Wellhausen. We need evidence that we have not to fight our way unhelped or unguided."

We are willing enough to recognize a great sorrow as a "visitation of God," or a wonderful joy as a gift straight from His hand; but how often—in little matters—our Lord might say of us as He said of Jerusalem long ago: "thou knewest not the time of thy visitation." Either everything comes to us from God, or else nothing does. The food brought to Elijah by ravens was not more really sent to Him by God than the wheat which grows so marvellously in our fields, or the meat which is made out of the grass so mysteriously. One who has had a narrow escape from death naturally gives God thanks for His watchful Providence, but each one who abides under the shadow of the Almighty is watched and cared for every moment. Of such it is said: "He shall give His angels charge over thee, to keep thee in all thy ways. They shall bear thee up in their hands, lest thou dash thy foot against a stone." Such a little thing, is it not? to hurt the foot against a stone! But when such trifles are allowed to hurt us we must not think that God's thoughtfulness has failed. No, He allowed the small pain in order to give us through it some great good—let us take it as a gift instead of grumbling at what we dare to call our "bad luck." As though "luck" were possible to a child of God when infinite Love is always preparing each step of the way for his lasting good! Let us walk forward joyously and securely, for nothing can happen accidentally to really injure us in the slightest. God is always thinking about us, and will give not only what we need, but what we want too, if we really should want it, were the whole road as open to us as it is to Him. Ages ago He thought about our future need, and took long years to prepare coal for our use, and just now He has prepared the next bit of the road all ready for us. If only we could always remember that He is there, close beside us, smiling encouragement into our eyes, holding out a strong hand to steady our doubting steps, how different life would be. The weary, spiritless tones would go out of the voice, the cross lines would vanish from the face, the anxious ache of the heart would change to sweetest peace and confidence. It is such a comfort to put any matter that troubles us into strong, safe hands, and roll the burden of care off our weak shoulders. And that is what God has told us to do. He wants us to cast all our cares on Him and be happy. If we are burdened with care, it must be our own fault. Pain, trouble and sorrow He sometimes lays upon our shrinking shoulders—if life were made too easy, we should never grow strong and brave either in soul or body—but He never lays anxiety on us. That heavy burden is one we take up of our own accord, against His express com-

mand. The present difficulties and troubles are quite heavy enough, He has declared—quite sufficient for our strength to-day. It is entirely against His will that we shoulder also the possible troubles of the future.

The present is God's gift to us, and a rich gift it is. Perhaps He has laid a difficulty in the path. That is intended to strengthen faith, courage and patience. Or He may slip into your present moment the opportunity of ministering to Him. Perhaps it may be only to pick up a child and kiss its laughing lips, or to give a bright word to an old grandmother, or the thought comes to write a line to cheer a sick or lonely friend. Small things these, but God has, in thoughtful love, placed along your path opportunities for doing countless little kindnesses. If you spend each day in ministering to Him, if you look for the image of the Christ in every man, woman and child you meet, and spring eagerly to welcome Him everywhere, your life will blossom out and grow more and more beautiful. Then you will preach daily sermons which go straight to the heart, and all who know you will try to become more like the Christ they see in you. Goodness is very contagious. We always make some attempt to grow better when we see real goodness in anyone else.

We want to be good and happy, and God wants us to be good and happy—the two things go hand-in-hand. He who cares for each sparrow is far more watchful over us, His dear children. As the Israelites were guided by the fiery pillar, so He directs us if we go obediently where He points the way. As they were given bread from heaven and water out of the flinty rock, when the ordinary supplies failed, so we can find strength and refreshment in the most monotonous daily duties by continual communion with our unseen Friend and obedience to His orders. We too must gather our supply of manna fresh every morning, we too must come to the Rock for cleansing and fresh springs of life and vigor. The touch of His hand in the darkness brings a wonderful security and sweetness into our daily walk.

"In that stronghold salvation is; Its touch is comfort in distress, Cure for all sickness, balm for ill, And energy for heart and will. Securely held, unflinching, The soul can walk at ease, and sing, and fearless tread each unknown strand, Leaving each large thing, and each less, Lord, in Thy Hand!"

HOPE.

I wish to thank the subscriber who sent fifty cents for the little Italian girl, Katherine Fasanello. I did not give her the money, but spent it for her—buying some much-needed underclothing. I could not tell her the name of the donor as I did not know it myself, but said it was from a friend of hers in Canada. I am sorry the kindly giver could not have been there to enjoy her delighted reception of the unexpected gift.

HOPE.

With the Flowers.

Feverfew as a House Plant.

Many people have Feverfew or Pyrethrum growing in their gardens, but comparatively few know what a desirable house-plant it is. The foliage is very attractive, although the yellow-leaved kinds are, perhaps, more suitable for bedding or for edgings than for the window garden, a place which is better filled by the darker varieties, with their white or rose-colored chrysanthemum-like flowers. With even ordinary care the pyrethrum will blossom the whole winter through. It is particularly free from insect pests; the red spider, which is easily kept in check by frequent dippings or sprayings of water, being the only one which ever bothers it; and, as it will stand a certain amount of frost, it proves desirable for many houses in which more tender plants would not thrive. It should, in fact, be kept always in a cool room, as otherwise the flowers may blast.

The pyrethrum will flourish in any ordinarily rich soil, provided the drainage is good, and requires about the same amount of water as geraniums. As

cutting the flowers only serves to make the plant bloom more freely, it may be depended upon for keeping the table supplied with cut flowers during the winter.

Impatiens Sultani.

Another valuable winter plant is the Impatiens Sultani, often known by the name, evidently a contraction or corruption of the right one, "Patience." If persistence in blooming, however, be any sign of patience, the plant has been well nicknamed, for if it receives no setback it will throw out all winter long a profusion of blossoms. These are cerise in color, and are suspended like tiny salvers at the extremities of the numerous semi-transparent branches.

Impatiens Sultani requires a light, open soil, plenty of room, in order that it may develop symmetrically, and plenty of water at the roots, with a daily washing of the foliage to keep off the dust and prevent red spider. It is rather tender, hence should not be exposed to much cold; neither does it care for much sunshine, hence it should be kept near an eastern or northern window. It may be quite easily grown from the seed, and a good plan is to keep a number of young plants ready to succeed the older

one when it has exhausted itself flowering.

The Heliotrope.

The heliotrope, with its lavender-colored blossoms and strong, sweet perfume, will also bloom all winter, provided it has not been permitted to exhaust itself flowering during the summer, and it, also, like the pyrethrum, permits of much cutting, as the more blossoms are cut the more new wood, upon which the blossoms appear, is forced into growth.

The heliotrope may be grown either from seed or from cuttings started in sand. A good plan is to start cuttings in the spring for bloom during the following winter. Then the parent plant may be planted out in the garden for the summer. The young plants thus started will require two or three shifts before flowering time.

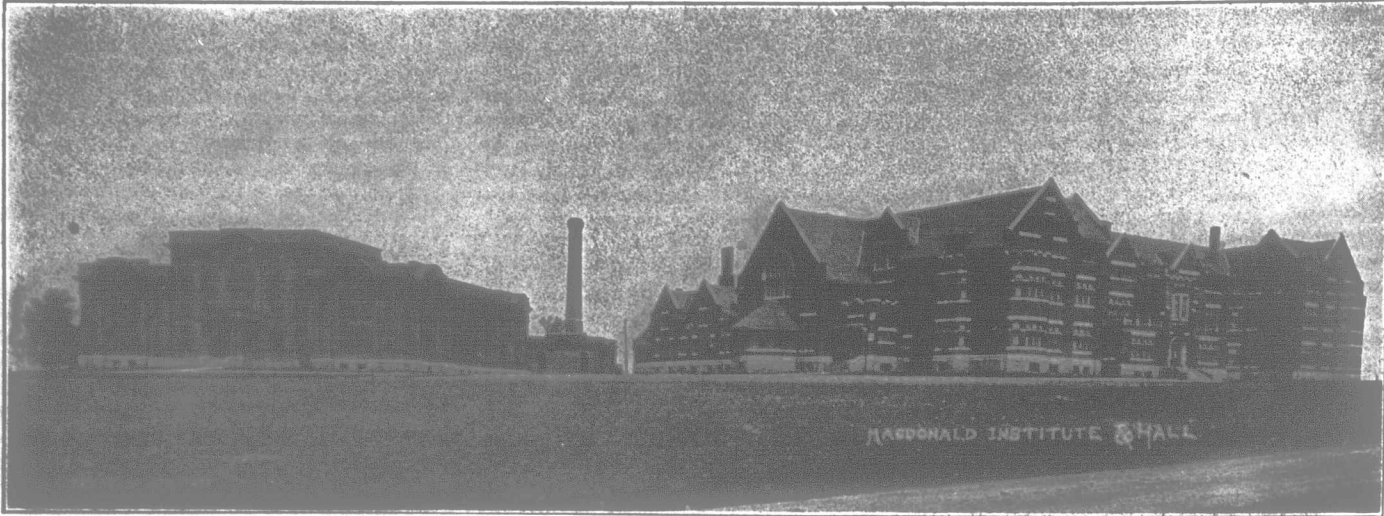
The conditions of success with this plant are plenty of sunshine, a warm atmosphere, plenty of water, a light rich soil, and a pot rather generous as to size. If the roots are once cramped or stunted for want of water the edges of the leaves immediately begin to turn brown. Applications of weak manure

water to the roots at frequent intervals will be found very beneficial.

Steel Armored Hotel.

San Francisco will soon have one of the most unique buildings in the world; it is a hotel, and on account of its extremely slender shape has been christened the "Toothpick." The steel framework had been nearly completed at the time of the fire, and the original plan was to encase it in stone and brick. Now the skeleton, which was uninjured, will be finished, but instead of outer walls of stone, great plates of boiler iron will be riveted on in the same manner as the armor of a battleship. The building will cost \$750,000, and be fire and earthquake proof.

This construction appeals strongly to Frisco architects, and already another building has been decided on to follow the same lines. The steel plates will not only greatly strengthen the structure, but cannot shake from the skeleton, and will present a smooth face, which can be painted any color, and is expected to present an extremely pleasing appearance.—[Popular Mechanic.



Macdonald Institute.

Macdonald Hall.

## The Ingle Nook.

### "A Visit to the Macdonald Institute."

Dear Chatterers,—I suppose a great many of you when at Guelph on farmers' excursions or W. I. conventions, have strolled through Macdonald Institute and Hall, admiring the spacious rooms, harmonious furnishings and excellent equipment of these institutions; but I venture to say that (if you will tolerate a bit of slang in your staid Dame Durden) I got "one ahead of" the most of you in being privileged to stay in the Hall for a couple of days. Lest you accuse me, however, of pluming myself, I must explain that it was by no means because of any native sweetness or charm, nor yet by force of the stern look and "violent plaid skirt," that I managed to get behind the ramparts for so long. Oh, no—nor for any reason under the sun save that I belonged to the "F. A." Visitors are strictly tabooed at Macdonald Hall, yet "The Farmer's Advocate," so closely in touch with the agricultural work of the college, and the agricultural interests of the country at large, proved the golden key. Now, you see I'm telling you this so you'll not all be thinking you can "put up" at Macdonald Hall next time you go to Guelph. Understand?—!!!

And now just a bit of chatter to tell you all about it. Honestly, my little visit to the Macdonald Institute was a revelation to me. I had had no idea that the equipment was so perfect, or the facilities for teaching and studying so complete.

It was very close upon six o'clock in the evening when our train drew up at Guelph. A Macdonald girl—for by good luck I knew one of them—met me, and soon we were making our way up the hill towards the O. A. C. in a street car, crowded to distraction, with people fugging and swaying at the straps, very much a la Queen City mode. Have you "straps" in Victoria, or Montreal, or Halifax? We haven't in London. But to return.

Alighting opposite Macdonald Hall, which lies across the campus from the O. A. C., we made our way through a rainy mist, such as might have delighted the heart of a Bell-Smith, towards the brilliantly-lighted entrance. Someone has observed that the chief interest in any building is centered in its doorway, and that, consequently, particular care should be exercised to make the door and its casement as chaste (whatever that may mean in architecture) and beautiful as possible. The idea is certainly worth a thought. In going to a building the doorway is the prospective point for which you "head." It is the point by which you must gain admittance, and stands, as it were, for the hand of the building waiting to welcome you. Not without reason, then, is it argued that the door and doorway should be in all respects attractive; and certainly the designer of Macdonald Hall has not overlooked this, fact. The entrance is in perfect keeping with the attractive exterior of the building, and the large hall (Ill. No. 2) which extends before the visitor as he crosses the threshold, by no means belies the promise of the exterior. The pre-eminent impression which this hall conveys is, perhaps, that of space

and airiness. There is no clutter of furniture, all of the halls and corridors being, in fact, quite devoid of furnishings, save for a few palms, and the "cozy corners" disposed invitingly here and there.

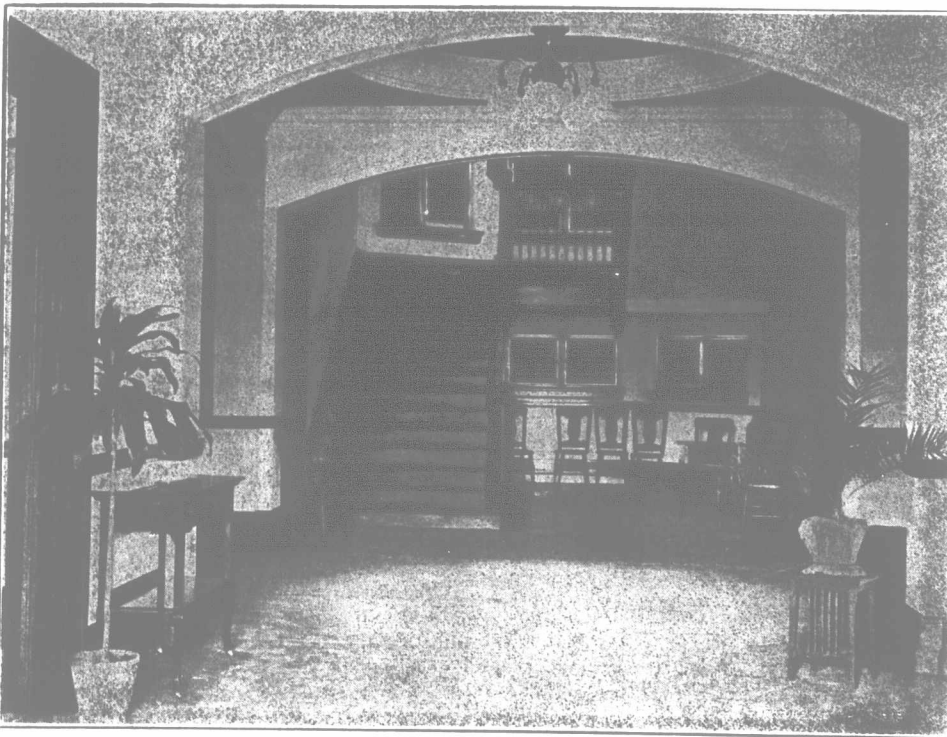
Upon one side of the main entrance are the drawing-rooms, furnished in English chintz and rattan; upon the other is the library, simple and dignified in style, with moss-green carpet, a dulled brick fireplace, and dark, massive "Mission" furniture. Above the grate hangs a portrait of Sir William Macdonald, the munificent donor of the entire institution. "Who is he?" is the common inquiry of visitors to the Hall. "Why, the Montreal tobacconist," is the explanation; whereupon there is usually a laugh, and a shrug from the male "element," and a very enlightened and self-satisfied "Oh! . . . I guess I put a few bricks in this then."

Upstairs there are a gymnasium, study-rooms furnished according to a color scheme of crimson and green, and rows and rows of bedrooms. Each of the latter is supplied only with a cot, dresser, washstand, table, chairs, and two electric lights, one arranged for a table study lamp, with a green shade; but the girls transform the cots into cozy corners, bring in screens and rockers, and beplaster the walls with banners

there?" I asked the housekeeper. "Oh," she replied, with the most unconcerned air in the world, "Up in the thousands, somewhere." This housekeeper, by the way, is a graduate of the institution, a living testimony to the efficiency of its "Professional Housekeeper" course.

So far I have told you nothing of the teaching. Well, so far I had learned nothing of it. That was to come after tea in the big dining-room, where about a hundred happy-looking girls—of all ages, I should say, from eighteen to forty—with their instructors, assembled, and after a pillow-fight in the hall at 10 p.m., and a sound sleep in one of the comfortable little bedrooms. As we walked next morning from the Hall to the "Institute," in which the classes assemble, this was all explained. There are several courses, any one of which may be taken. (1) The professional housekeepers' course; (2) the short course of three months ("F. F. W's.," "fit for wives" the girls call those who take it); (3) the nature-study course; (4) the domestic science teachers' course, which takes two years to complete; and (5) the "Two in One," or two years' course in one year, which is taken by teachers who have already had Normal training as public school teachers.

In connection with these courses all sorts of useful things are taught, home



Entrance Hall, Macdonald Hall

and photos and knick-knacks, in regulation college-room style, at their own sweet will. Nevertheless, so simple and effective is the general effect of the furnishings of the building that, as the Superintendent remarked to me, it would be almost impossible for any girl who spent three months there to go home and litter up a house with a lot of inartistic and purposeless fancywork.

The immense panelled dining-room; the kitchen, with its rows of ranges and big boilers for making porridge, boiling puddings, etc.; the laundry, with its quick "driers," were all things of interest; and the fruit cellar, with its sealers, and sealers, and sealers! "How many are

nursing, cooking and the science of it, horticulture, dairying, household accounts, millinery, dressmaking, water-color work, wood carving, beaten copper work, English literature, with 'ologies enough, if one chooses, to make one's hair turn gray. In the cooking classes each girl is provided with an individual gas stove and all the necessary utensils. Usually a whole class cooks at once. At the "Dem." (demonstration) which we attended that morning, only one girl acted as cook, and all the rest wrote criticisms. Her subject was "Using Up Left-overs," and from some cold porridge, some greasy-looking chopped beets and unappetizing meat scraps, with, of

course, a couple of eggs, some flour, etc., the demonstrator deftly fashioned some muffins with the very right sort of a "nose" on, a salad, and a meat soufflé. And all the time she looked as clean and dainty as a short-sleeved blue cotton gown, white apron, cap, collar and cuffs could make her. In fact, it would be hard to devise a more trim or attractive-looking kitchen dress than that adopted by the "Macdonald" girls, or one in which the dainty misses themselves could look prettier. Just here I must tell you a tale out of school. Before we left the building someone ("a mere man") in telephoning was given Macdonald Hall instead of Macdonald's store down town. "This is Macdonald Hall," explained the blue-gowned "Dem." miss who answered the phone. "I don't think we have what you want here." "Oh, I don't know about that," was the reply, "You have a pretty good assortment up there." That mere man evidently knew what he was talking about.

Seriously, the two days' visit convinced at least one female that the Macdonald Institute is doing a great work, not only for the girls who attend it, but for Canada itself. Each of these girls, passing out to different parts of the country, among less scientifically-instructed people, must become a little center from which all sorts of information of the greatest importance to the health and comfort of the nation must radiate. The course is above all things practical, yet at the same time it does not leave out the æsthetics, or anything that can refine and elevate womanhood. Music, it is true, is not taught, notwithstanding the fact that there are six pianos in the institution; yet music may be studied almost anywhere nowadays. On the other hand, the course in English literature follows very closely those given in the universities.

Again, as in the O. A. C., the cosmopolitan influence of the institution is worth something. Last term there were representatives from England, Halifax and Regina in the Hall. They may be expected from almost anywhere, and each must bring with her a little fund of influence, which must tend to broaden, intellectually and sympathetically, those with whom she must associate.

Last of all, the Macdonald Institute must act strongly in breaking down the barrier between the country and the town. Too long the town has held itself proudly as the be-all and end-all of that which makes life worth living. It has too often considered itself "The Pale," outside of which existed—well, just the natives. At Macdonald Hall, in touch as it is with the O. A. C., the city girls—for there are many of them in residence—learn that the country-folk are not all mossgrown, nor the concerns of farming all uninteresting. Girls who can cheer, as the "Macdonald" girls did last fall, wildly, enthusiastically, over the victory gained by the O. A. C. boys at the stock-judging competition in Chicago, must learn that as much interest—and vastly more science—is connected with judging cattle as in judging cloth in a dry-goods store; and it may dawn upon them that similarly some amount of interest and skill may be possible in the handling of crops and gardens, and all the other necessities of the farm life. The city girls of the big school may, it is true, be able to teach the country girls something; the country girls may also, if they will, teach the city girls something. Going back to the spheres which they must fill in the world, each must do something towards breaking down a barrier which never should have existed, and must help to put the social intercourse of the Dominion on a more rational and sympathetic basis.

DAME DURDEN.

### An Answer from Lanekshire Lass

Dear Dame Durden.—Well, here I come again, and it's a Happy New Year I'll wish you all, and many of them. How did you enjoy the Christmas time? Was it not delightful to have such beautiful weather, and the nice sleighing for those that could go and enjoy a nice drive? I was indeed thankful for the mild weather, and also to the many kind friends who remembered me so kindly in so many ways. Not a few of them seemed to be thinking of me, sending me so many pretty and useful gifts from far and near.

and many loving friends came, so you see I had a bountiful lot of cheer when at home. Was it not kind and thoughtful of all? Indeed, I appreciate it very much. Although I wasn't able to go feasting or join in the jolly time away, yet there is comfort in knowing I can have Jesus at home, and He does tarry with me as I abide here, and hitherto hath He helped me, and the way is so delightful in the service of the Lord.

Now, I hadn't intended writing so soon, but I see many are asking for that syrup recipe. Here it is, and don't you laugh. Just try it first. No one would ever guess how it is made. Some declare it is made out of maple chips, for it certainly is splendid if you get it right. Well, just you get enough little potatoes to fill a pot or kettle, and with a little brush scrub each one well and wash in several waters, then put in boiling water. Have enough water to cover them, and do not let them boil till they break up, then pour off the potato water into a deep crock and let settle and strain it; then add enough light-yellow sugar to boil into a thick syrup. I'll be wondering if any of you try it, and how you like it. It is so easily made, but never use granulated sugar; that will not do at all. Do not peel the potatoes before boiling, or cut them at all.

To make good grape pie, line your pie plate with nice pie pastry, then cut up in thin slices some nice cooking apples. Put a layer in the plate, then a layer of blue grapes, and sugar well. Bake with under and upper crust. The apples impart a lovely flavor, and are much nicer than grapes alone.

Please can anyone tell me how to make frosting adhere well to a fruit cake, as it seems to drop off it so soon?

I thank all of you for your kindness, also Ruby for those nice papers, and so many of them.

Now, dear Chatterers, don't you think we all should move a vote of thanks to Dame Durden, for doing so much to help and cheer us along? I'm sure she has been real patient with all of us, and gave us so many nice chats. I enjoyed the closing discussion of last week, Miss D.; I must thank you also for the beautiful Christmas number. Now I'm tired, so must close, and send this with our subscription, as my son is sending for it another year, and another new subscription with his own. We don't want to be without so good a paper as "The Farmer's Advocate." Wishing you many new subscribers and a glad New Year.

Your friend and shut-in,  
A LANKSHIRE LASS.

Wellington Co.

We are indeed glad to hear from Lankshire Lass again, and I am sure we all join in wishing her better health for the New Year. Her recipes are much appreciated.

Now for her question: In order that frosting may stick it must not be too stiff, and it should be put on when the cake is cold. The following frostings are recommended:

(1) White of 1 egg, 8 even tablespoons powdered sugar, 1/2 teaspoon vanilla. Beat the egg just enough to thin it, not to froth it at all; add the sugar and stir until smooth and light; add flavoring and spread on cake.

(2) Without eggs: 4 tablespoons powdered sugar, a small tablespoon milk. Stir well, adding a little more sugar if the icing is not stiff enough. Flavor with vanilla, lemon or almond extract. For chocolate icing add 1/2 square chocolate grated in a cup and melted over steam.

Some Recipes from "Peaches."

My dear Dame Durden, I have been following with pleasure the Chatterers of the Ingle Nook, and would like to help someone else if permitted. The following are some recipes, which shall be of use to any housekeeper:

White Cake.—1/2 cup white sugar; 1 tablespoon butter, soft, not melted; 1/2 cup new milk; 1/2 teaspoon soda; 2 teaspoons cream tartar; 3 or 4 drops oil of lemon; 1 egg; flour enough to make the dough same as for jelly cake—not so thick that it will drop, as for sponge drops.

Icing.—1/2 cup pulverized sugar; 2 heaping teaspoons breakfast cocoa. Mix with a little milk until consistency of thick cream; spread on top of cake. While the icing is still soft, dot over with walnuts.

Cream for Apple Pie.—1 cup granulated sugar; juice of one sour apple; white of one egg. Mix thoroughly until smooth. Looks just like whipped cream, but is much more easily digested, especially when taken with pie. This can also be used for puddings.

Some Points in Making Tea.—Always empty the kettle and refill with fresh water for every meal. Never steep the tea until the water is boiling, but never boil the tea. Never steep the tea until three or four minutes before using, especially if there is black tea in it; it is unfit to drink if it stands.

"PEACHES."

Victoria Co., Ont.

A New Topic.

Dear Dame Durden, I have been entertained and helped by the Ingle Nook page for some time, and would like to have a little "say" now too. I am going to suggest a new topic, one that has not been mentioned before, to my knowledge. If you do not see fit to introduce it to the Chatterers I shall not be offended in the least; but it is a matter that is very near to my heart, i.e., "The care of feeding infants." So many helpless little innocents are made to suffer by injudicious mothers, who give them solid food long before the little stomachs can stand it. My sister-in-law commenced to feed her little boy "solids" when six months old, and laughed at me because I would give mine nothing but milk till he was a year old. That was three years ago, and now her boy is small and puny, while mine is sturdy and hardy. Perhaps I am going out of the "sphere" of your corner in writing on this subject; if so just drop this in the waste basket. We have taken "The Farmer's Advocate" for years, and it is the best paper that comes to our home. There is something in it for everybody. Wishing you a joyous and prosperous New Year.

Lanark Co., Ont. GENEVRA.

It was rather a peculiar coincidence, that when your letter was received our "Nurse" had already an article partly written on the very subject which you suggested. She is going to write a series of articles on the "Care of Children," which, I am sure, will be very helpful. Thank you for the clipping. There is not room for it this time, but we will hope there may be again.

From Our Old Friend "Wrinkles"

Dear Dame Durden, I began to fear that I was wearing out my welcome in the Ingle Nook, but after your last kind invitation, I think I can venture once more. There is one thing I have always

thought would go a great way to keeping the daughters contented on the farm. Let the farmer give his daughter a colt or calf, or even a pig or a couple of sheep; if he is a fruit-grower, let him give her a few fruit trees, something she can call her own and see growing into money. It is a very nice feeling to have your own purse. There are so many ways for a boy to make a little pocket money, but I do not think the farmer's daughter has quite a fair chance. If the girls are wise they will see to it that the poultry do not slip into the hands of the men. Now that prices for poultry and eggs have gone up, you hear the men talking poultry, but now is the time for the girls to show that they can manage the poultry-yard. Incubators have certainly done away with a great deal of the most disagreeable part of poultry-raising.

Do not think because you have an incubator you must run off five or six hatches in one season. That is just the time you will find you have got yourself into a sad mix-up. Be satisfied with two good hatches, and take proper care of them, and you will have both pleasure and profit; whereas if you go in for five or six hatches you will probably lose two-thirds of your chicks and be disgusted with the whole business, unless you have proper equipments for a large poultry business. An old Irish neighbor used to say to me, "A woman with young children cannot raise poultry and do justice to herself." I wish I could give her remark the rich Irish brogue she said it with. I found there was a great deal of truth in what she said, but now I find my poultry a pleasant pastime.

I wonder if any of the members of the Ingle Nook are interested in wood carving? I know one farmer's wife and three daughters of the farm who do chip carving beautifully. This Christmas I saw so many pretty things made by a girl who can carve. It is a very interesting way of spending the long winter evenings, and so many useful and ornamental things can be made for the home.

R. M.'s Brown-flour Hot Cakes.—3 cups brown flour, 1 cup white flour, 2 table-spoonfuls of lard or butter, 1 salt-spoon of salt, 2 teaspoonfuls cream tartar (rub all these ingredients together), 1 tea-spoonful soda dissolved in 8 cups of milk. Mix into a batter not very stiff; drop into a pan in spoonfuls, and bake in rather a quick oven. They can be rolled out by adding a little more flour, but I prefer them dropped. If liked sweet, add 1 table-spoonful of white sugar.

WRINKLES.

Never be afraid of wearing out your welcome. Wrinkles. D. D.

About the House.

Cooking the Poorer Cuts of Meat.

Winter is the meat season. In summer the body seems to require cereals, fruits, cooling foods, but in winter the carbohydrates and fats, the heat producers so bountifully found in meats, are called for. Yet no kind of food, perhaps, is spoiled more often in preparation than the meats, especially the less choice cuts. You have, perhaps, sat down occasionally to a table at which boiled beef was served—a tasteless, colorless, hard, indigestible mass. If uninitiated into the mysteries of cooking you have probably laid the blame upon the quality of the meat itself. You have thought it "cheap"; or, perhaps, the good lady of the house has explained that she hadn't had a good piece from the butcher for a long time. Now the probabilities were that neither the quality of the meat nor the honesty of the butcher were at fault. It is not necessary to have expensive cuts in order to have fairly good meat. Even a comparatively cheap one may be made into appetizing dishes if properly cooked, while the most expensive may be completely ruined by wrong treatment.

A few weeks ago, there appeared in "The Farmer's Advocate" (Dec. 6th issue) an illustration showing the cuts of a beef animal, and attention was called to the fact that the upper cuts, those nearest the backbone, are in all cases the most tender, the lower ones—the leg, round, flank, navel, brisket, etc.—those taken from the parts of the animal called into action as it walks, being of necessity of harder, coarser fibre or muscle. It is, of course, very necessary to know how to cook all kinds of meat, yet as very few people can afford to eat only the choicest cuts all the year round, it is doubly necessary to know how to prepare these tougher portions, so much more easily spoiled than the better cuts, yet quite as nourishing, and, if properly prepared, very nearly as appetizing. To the cooking of these, then, we shall confine today's talk.

In beginning, it may be necessary to repeat a few injunctions as to "how" the different portions may be used:

- 1. For corning, use the plate, navel, brisket, rump and bottom round.
- 2. For pot-roast—the bottom round, face cut of the rump, and cross-ribs from the shoulder.
- 3. For stews—any part of the meat, except, of course, the choice cuts.
- 4. For Hamburg steaks—the tough part of the round, or any scraps of meat.
- 5. For boiling—the flank.
- 6. For soups—tail, leg bones, etc.

It may also be worth mentioning that a meat-grinder, or, in default of that, a wooden bowl and sharp chopping knife, is



Millinery Class, Macdonald Institute.



invaluable in making many otherwise unappetizing portions of the meat into very acceptable dishes for the table.

1. **Boiling.**—In boiling fresh meat, always remember that it is absolutely necessary to put it into "boiling" water, water boiling hard enough to form, almost immediately all around the outside of the meat, a coating firm and close enough to keep the juices in, and so prevent them being drawn out and wasted in the water. It is a piece of "boiled meat," not a pot of soup, that you expect to redeem from the operation. If the boiling continues four or five minutes after the meat is put in, no harm will be done; but, as you value the flavor of your meat, do not let it continue any longer than that. Remove the pot to the back of the range, and keep it simmering for three or four hours, or until the meat is quite tender. Then you will have an appetizing dish of meat, juicy, tender, nutritious, very different from the India-rubber article you would have had by cooking it more quickly by the "boiling" process. Corned beef, if not too salt, should be cooked in same way, and all left-overs of it should be put back in the stock, where they will keep pink and juicy until all are used. All afternoon is not too long to simmer corned beef.

Salt or smoked meats, on the contrary, being already coated by the action of the salt or smoke, should be placed in cold water and allowed to come to a boil, then simmered. If very salt, they should be soaked over night, and the water changed before putting on to cook.

2. **Stews.**—In making a stew remember that the object is to keep the meat juicy and appetizing, and still have the gravy rich too. First set your stew-kettle on the range with a dessertspoon of dripping in it, and let the latter become so hot that a blue smoke seems rising from it. Add to it one onion (sliced) and your bits of meat ( $\frac{1}{2}$  lb.), which should be in squares about an inch across. Let both brown, then shake in one tablespoon of flour, and let that brown also. Add 2 pints of cold water very gradually, stirring slowly; season; add such bits of vegetable, potatoes, carrots, etc., as you choose, and simmer two hours. On no account let it boil. "A stew boiled is a stew spoiled." If you choose, you may leave out the vegetables, and one hour before serving put into the stew a few balls made as follows: Sift together 2 small cups flour, and  $\frac{1}{2}$  teaspoon baking powder. Mix with this  $\frac{1}{2}$  lb. suet chopped fine, and a little salt. If you choose, you may also add a dash of pepper and a teaspoon of chopped parsley or leaf of sage. Make into a very stiff dough with cold water, and form into balls. Stir occasionally while cooking. When serving, put the meat in the center of the platter, pour the gravy around, then arrange the balls about the edge. They must be served immediately when cooked. If preferred, when nearly done, you may cover your stew with pastry, set it in the oven to bake, and make a meat pie of it; or you may simply pour it over some nice light biscuits, split in two, and arranged neatly on a platter. Serve while steaming hot.

3. **Soup.**—In making soup, the object is "soup," not "meat," hence the aim is to get the juices of the meat all out into the water. Since, then, it will be seen that the meat left after soup must be insipid, almost useless, it will be obvious that only such portions of the meat as are otherwise of little use should be used for it. Some people recommend making soup from the shank; we would prefer making potted meat from the shank, and using just scraps or broken bones for the soup.

Whatever meat is used, it should be remembered that for soup it should be placed in cold water, soaked for a while in it, then put on the range and permitted to come gradually to a boil. For people who use soup often—and, as an appetizer and stimulant to the glands which secrete the gastric juice, it should begin almost every dinner—a jar of stock is useful. A good plain stock is made as follows: Put the soup bones in a kettle, cover with cold water, and soak an hour; then place over a slow fire; and let simmer slowly for several hours. When it is cooked so that the meat falls off the bones, take out both meat and bones,

and strain the liquor either into vessels that can be sealed like fruit, or into one that may be put into a cold place without danger of being broken in case of frost. Before reheating for use, remove the fat from the top; then add water as necessary, and such seasoning and vegetables as may be desired. If you wish to use the left-over meat, chop it fine, season it well with pepper, salt and onion juice (which, if you have no onions, may be bought by the bottle). Mix a little of the liquor in, and set away in a mould to stiffen.

4. **Hamburg Steak.**—For this use the tougher portion or the round, or, in fact, almost any of the poorer portions of the meat. Chop  $1\frac{1}{2}$  lbs. of the raw meat very finely. Add 2 cups of breadcrumbs soaked in milk, 1 onion (minced), seasoning to taste, and 2 eggs. Make into a roll, put in a baking pan, pour over it some warm water in which a piece of butter has been melted, and bake, basting frequently. If preferred, the "steak" may be made into small cakes, and fried.

5. **Pot Roast** may be cooked, either in the old-fashioned way in a pot on the stove, or in the oven. The latter method is easy and quite satisfactory. Trim off a few bits of the fat, and try them out in a kettle on top of the stove. Put the meat in and brown very quickly on all sides. Add enough boiling water to come two-thirds up on the meat, also an onion, carrot, etc., as preferred. Put in the oven, turning when necessary. When it has cooked an hour, add seasoning. For the gravy, skim off the fat, mix with an equal quantity of flour; add some warm (not boiling) water; set on the stove, and stir until it thickens, adding any gravy still left in the pan.

### Some New Recipes.

To cook salt bacon or salt pork of any kind, cut into slices, and put over the fire in a frying pan, with enough water to cover. If the meat is old, add 2 or 3 spoonfuls of vinegar. Cover, and let parboil five minutes. Pour off the water, and set the pan, uncovered, over a hot fire or in a hot oven. Turn often, and cook till crisp.

**Breslau Beef.**—One pint cold cooked meat chopped fine, yolks of three eggs,  $\frac{1}{2}$  cup breadcrumbs, 1 cup milk,  $\frac{1}{2}$  cup stock or gravy, a bit of butter, seasoning to taste. Mix well; put in small dishes in a pan of hot water, and bake in a moderate oven half an hour. Serve on a platter, with the following sauce poured over them: One cup canned tomatoes (strained), 1 tablespoon butter, 1 tablespoon flour. Cook until thickened, and season.

**Bologna Sausage.**—Take 6 lbs. lean beef, 1 lb. salt pork, 3 lbs. fresh lean pork, 1 lb. beef suet, 1 oz. white pepper, 1 teaspoon ground mace, 3 ozs. salt,  $\frac{1}{2}$  small teaspoon cayenne, 1 large onion (chopped fine). Chop the meat and suet separately; very fine, then mix; add the seasoning and mix well. Fill into casings or strong linen bags, and tie into lengths. Make a brine that will bear an egg; put the sausage in, and let stand two weeks, turning and skimming every day, and changing the brine at the end of the first week. When taken out of the brine, smoke for a week. Last of all, rub the outside with olive oil, and store in a cool, dark, dry place. If you wish to keep the sausage a long time, sprinkle the outside with pepper.

**Skirt Roast, or Flank of Steak.**—Lay the steak out. Parboil 6 onions, and spread over, or spread with dressing made as for fowl. Roll up and tie, then bake one hour.

**Beef Loaf.**—Two lbs. beef and  $\frac{1}{2}$  lb. salt pork (chopped fine), 2 eggs, 2 slices stale bread soaked in milk, seasoning to taste. Mix; make into a roll, and bake. Let cool gradually, and serve cold, in slices.

### Recipes.

**Buttermilk Cake.**—One pint buttermilk, 1 teaspoon soda, pinch of salt, and Five Roses flour to make stiff as biscuit dough. Bake in three cakes in a hot oven.

**Sally Lunn.**—Half cup butter,  $\frac{1}{2}$  cup sugar, 1 cup milk, 1 egg, 2 teaspoons baking powder, 1 pint Five Roses flour.

## Children's Corner.

### The Sleepy Song.

As soon as the fire burns red and low,  
And the house upstairs is still,  
She sings me a queer little sleepy song  
Of sheep that go over the hill.

The good little sheep run quick and soft,  
Their colors are gray and white;  
They follow their leader nose to tail,  
For they must be home by night.

And one slips over, and one comes next,  
And one runs after behind;  
The gray one's nose at the white one's  
tail,  
The top of the hill they find.

And when they get to the top of the hill  
They quietly slip away,  
But one runs over and one comes next—  
Their colors are white and gray.

And over they go and over they go,  
And over the top of the hill  
The good little sheep run quick and swift,  
And the house upstairs is still.

And one slips over and one comes next,  
The good little, gray little sheep!  
To watch how the fire burns red and low,  
And she says that I fall asleep.

—Josephine Daskam, in T. P.'s Weekly.

### The Letter Box.

#### Another Reformer.

Dear Cousin Dorothy.—We have taken "The Farmer's Advocate" for about three years. I read the "Children's Corner" every week, and never in all that three years had I read a letter that interested me so much as that of Eulalie Jeffs. As you, Cousin Dorothy, say that it is difficult for our little friends to write letters, we will excuse them; but I don't see any excuse for those boys and girls who are continually writing about their pets and their father's animals, which does not interest me or any of us a bit. [Speak for yourself, Fred! C. D.] I hope that during 1907 we shall have at least one discussion on some current event, every week.

Here goes for the first one: In nearly every paper one picks up, he finds something about that great country in Asia called China. China is continually wakening up, and is opening towns to the public, which a few years ago a foreigner could not enter, and to-day he may go in without fear. Their friends, the Japanese, have prospered greatly within the last few years, and I have no doubt that China will do the same in the next few years.

There is a certain feeling existing among the people of Europe about that which is called "The Yellow Peril." The question is if the yellow race should rise to their possibilities what would happen? I think that China would rise to the place of Great Britain, and be the strongest nation in the world. This is not a very good start, but I hope to see better after this is printed. Wishing all the members of the "Children's Corner" every success, I remain,

FRED BLACK (age 13).

Box 329, Orilla, Ont.

I see that we shall all have to settle down to studying our geographies and histories, if such deep discussions as this are to be started. Won't somebody dispute Fred's idea that China is likely to take the place of Great Britain? C. D.

Dear Cousin Dorothy.—My cousin has taken "The Farmer's Advocate" for a long time, and I read the Children's Corner, and I thought I would write too. He has a good collie dog, his name is Paddie. He will do anything he is told, even to holding a chicken's head till you cut it off. I live in Rocklyn; it is a village of seventeen houses, three stores, two blacksmith shops and one temperance house. We have a black mare; her name is Baby. She took first prize at Rocklyn Fair. She has a little colt, and we call it Wild Wood. My father is a shoemaker, and gets all the work he can do. HARMAN COOK (age 12),  
Rocklyn, Ont.

Dear Cousin Dorothy.—I live about a mile from a small village called Chantry.

It consists of a cheese factory, sawmill, two stores, a church, a schoolhouse, and a blacksmith shop. Papa has taken "The Farmer's Advocate" for a year, and says he could not do without it. We have five geese, about 100 chickens, 29 milking cows, two colts, two horses, and 21 pigs. For pets, I have a kitten, a dog, and a bird.

LULU DERBYSHIRE (age 12).

Dear Cousin Dorothy.—I am in the Junior Second Class, and I have a mile and a half to go to school. I get the mail on my way home from school, and I always watch for "The Farmer's Advocate." I have one dog named Rover, and a kitten named Spot, a lot of hens and geese and turkeys, and fourteen pigs. We have two horses and two colts; their names are Jess and Maud, and our colts' names are Topsy and Nellie. The river runs through our farm, and I enjoy fishing in the spring.

LENA DAVIS (age 7).

Dear Cousin Dorothy.—My papa has taken "The Farmer's Advocate" since last New Year's, and we like it very much. I live on a farm of ninety-nine acres. The schoolhouse is on the West corner of our farm, and I go to school every day. I passed the Entrance last June, so I am now in the Fifth Book. We live four miles from our town, Ridgeway. I have one sister, Alta, and one brother, Herbert, both younger than I. For pets, we have one dog, Collie, and one cat, Joseph. We have twenty pigs and nineteen cattle. We milk five cows; mother milks three, and I milk two. I have taken two quarters of music, but am not taking at present.

ANNIE MAY CAMPBELL (age 11).  
Ridgetown, Ont.

Dear Cousin Dorothy.—My father has taken "The Farmer's Advocate" for a long time. I enjoy reading it very much. I am in the Senior Fourth at school, to which I have two miles to walk. We have four horses and three colts, fifteen cattle, nineteen sheep, ten pigs, seventy chickens, and sixty colonies of bees. For pets I have one collie pup (four months old), four cats, five pigeons, one hen, and one colony of bees.

LEO W. CHALLAND (age 11).

Marburg P. O.

#### Ridd es.

When is a nest like a man's mouth?  
Ans.—When it has a swallow in it.  
When are ladies like tropical fruits?  
Ans.—When born under the same sun.  
Why are cannons like cigars?  
Ans.—Because they have mouthpieces.  
When are potatoes like a full audience?  
Ans.—When they are spectators.  
(Sent by) ERNEST EATON (age 10).

#### A New Cousin.

Dear Cousin Dorothy.—My sister wrote to the Children's Corner, and I saw her letter in print, so I thought I would write. I go to school every day. I am in the Part Second Book. The school is on our farm. I have four sisters and no brothers. For pets, I have one dog. I call him Ben. We have three horses; their names are: Fly, Prince and Bella. We have seven cows and three little calves, besides the other stock. I think I will close, sending a few riddles:

1. Old Mother Twitchet has but one eye and a great long tail, which she can let fly; and every time she goes through a gap she leaves part of her tail in the trap. Ans.—A needle and thread.  
2. There is a well 20 feet deep. A spider in the bottom of it tries to get out. He climbs 3 feet every day, and slips back 2 feet every night. How long does it take it to get out? Ans.—Nineteen days.  
3. When did the blind carpenter see?  
Ans.—When he took up the hammer and saw.  
4. When is a black dog not a black dog?  
Ans.—When he is spotted.  
5. Four stiff standers, four dilly danders, two hookers, two lookers, and a wigwam. Ans.—A cow.  
JAMES EMERSON FLOID (age 7).  
Mount Forest, Ont.

Dear Cousin Dorothy.—This is the second time I have written to "The Farmer's Advocate." We have only taken it for a year. We live in a town and so we haven't any farm pets. We




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have a dog called Taps. I collect post cards, and have over a hundred. I haven't far to go to school, and I go as much as I can. I am in the Seventh Grade, and find the work easy. We cook every Wednesday afternoon in school, which I like very much. I will close now, wishing the editor every success.

GWENDOLEN REID.  
Windsor, Nova Scotia.

Dear Cousin Dorothy,—This is the first letter to your corner. I live on a small farm. We have one horse; its name is Billy. We have about 30 chickens, and four cows. I go to school every day. I am in the Fourth Book. I like my teacher very much. I have one kitten; its name is Snowball.

OLIVE TAPLEY (age 13).  
Mt. Vernon, Ont.

Dear Cousin Dorothy,—I am in the Part Second Book, and I like to go to school. We live on a farm, which we call Montrose, and there are two hundred acres in it. We have a pup; his name is Tory. My father has about 14 horses, eight cows and some pigs and sheep. My mother has twenty goslings and over two hundred Plymouth Rock chickens. I have four brothers and two sisters; they are all older than I am.

ETHEL J. COWAN (age 8).

Dear Cousin Dorothy,—I have often thought I would write a few lines to the Children's Corner. I am eight years old, and am in the Senior Second Class at school. I am a farmer's boy. We took our team to the fair this fall, and got first prize. I have a collie dog and six pigeons for my pets. My little sister, Beatrice, has three little kittens and a bird; she thinks they are very nice pets. I hope this will escape the waste-basket, for I have been a long time making my mind up to write this letter.

EUGENE PROCTOR (age 8).  
Newmarket.

Dear Cousin Dorothy,—We drive to school every day, and keep our horse in town in a stable all day. I am in the Fifth Class in the first room. I live in the country, two miles from Drayton. We have a farm of two hundred acres. We have two dogs now. We call one Flossie and the other Gamey. We used to have a goat, but it died. It was black and white. We also had about a dozen white rabbits, but we had to sell them, because they barked the trees and hedges. I will close now, sending a few riddles:

1. Which is the greatest riddle? Ans.—Life, for we all have to give it up.
2. What is the best time to study the book of nature? Ans.—When autumn turns the leaves.
3. Three of us in six, five of us in seven, four of us in nine, and six in eleven? Ans.—Letters.
4. What creature has many trunks? Ans.—A woman when travelling.
5. What smells the most in a drug store? Ans.—The nose.

ELGIN T. ARMSTRONG (age 9).  
Drayton, Ont.

Dear Cousin Dorothy,—My father owns a two-hundred-acre farm. We have seven pigs, two hundred and twenty-five fowl of all kinds, fourteen horses, six cows, eight calves, and about 30 fattening cattle. I go to school, and am in the Junior Third Class. We have some saddle horses which my brother Harold rides. He has them broken in to jump over the hurdle. I can ride a little, and we intend to break the colts when the winter comes. I will close now, as my little brother has also written.

1. Why is the 12.50 train hard to catch? Ans.—It is ten to one if you catch it.
2. I saw a duck swimming in the pond, and a dog sitting on its tail. Ans.—The dog sat on his own tail on the shore.
3. How can you change a pumpkin into a squash? Ans.—Throw it up, and it will come down a squash.

IVAN ARMSTRONG (age 11).

**Royal Motherhood.**

Royal mothers are often more dutiful than some other aspirants to high positions. True womanhood graces many exalted places. A little story came to the writer from a Danish lady's maid. Once in the employ of a countess in Denmark, she lived opposite the royal palace in Copenhagen, and frequently attended her mistress on informal visits to the late Queen of Denmark, when often much time was given to fine music, duets, and social chat over afternoon tea. The family life was as simple, refined and affectionate as could be imagined. The children who came to visit the good queen, we know as the dowager empress of all the Russians, the lovely Queen Alexandra of Great Britain, King George of Greece, and Princess Thyra. Once they were all there, and also Prince Waldemar's family. One night the chief caretaker of the children of Prince and Princess Waldemar was taken ill. After seeing that she was made comfortable for the night, the princess did not leave her to the care of others. Early the next morning Princess Waldemar stepped into her room, and, finding her still asleep and the room cold, returned to her own room quietly, and brought back an armful of wood for the fireplace. The noise of the kindling fire awakened the nurse, who beheld in astonishment the princess, daughter of the old royal house of France, hard at work over the fire. She was very much touched by this kindness, and related it to her friends, the employees of the castle, among whom was the lady's maid who brought the story to this side of the Atlantic.

It reminds one of the sweet tenderness of Saint Elizabeth of Hungary, who used to creep out from her castle with food for the hungry, in spite of her husband's remonstrances. One day, so the story goes, when he detected her and snatched her apron filled with bread, the loaves miraculously turned to roses and lilies.

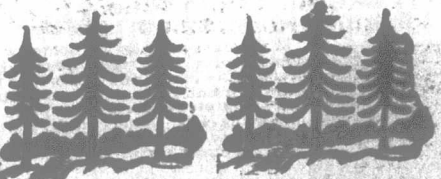
"That best portion of a good man's life, His little, nameless, unremembered acts Of kindness and of love."

This Danish maid thought it strange that rough women and girls were chosen or taken from necessity as nurses for children. In Denmark, she said, nurses come from the educated, well-to-do middle class, and they are respected and suitably treated.

We have all read of Queen Victoria's care for her children and the respect they were taught for their governesses. There is a school in England, where women of good birth, as daughters of army officers, are fitted to become instructors to royalty and the nobility. Besides having a good education, they must be able to teach deportment, erect and graceful carriage, and the necessary etiquette for all formal occasions. These ladies are in demand in all parts of Europe. The new Crown Princess of Germany, Cecilie, had such an English governess. The Czar sent for one to take charge of a young Georgian princess, really a political prisoner, although surrounded by every luxury, in St. Petersburg. Until she married, this English lady had the entire charge of her. This governess now in the United States, bewails the snobbery and show of many American families of large wealth. The constant thought of elaborate dress, rather than of fine arts and literature and general culture, the hurry and struggle for place and precedence, is noticeable, she says, also how even little children take seats away from older people at public resorts and clamor at public tables. The fault is in the training of the little folk, who know no better, and it reflects upon the grasping spirit of the country.

A recent lecturer, speaking of Italian gardens and describing the magnificent, solemn arches of ilex, tapestried with climbing roses, to be seen in the Quirinal gardens at Rome, said that one comes upon rows of little mud pies, gayly ornamented with chicken feathers and set to bake in the sun, on the great stone seats mossy with age. Just plain little mud pies, but made by the dimpled hands of sensible Queen Elena's little folk. Queen Elena, like the empress of Germany, is a devoted mother, busy in rearing a happy, healthy flock of girls and boys. Little has been published about the girlhood of the fair Empress Augusta; but Queen Elena, a Montenegrin princess, with her sisters, ran wild in the forests,

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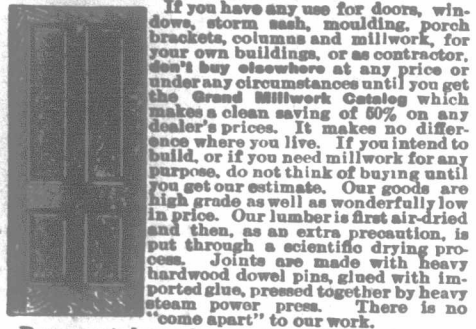
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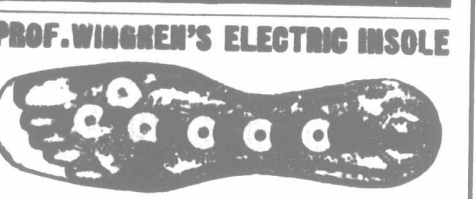
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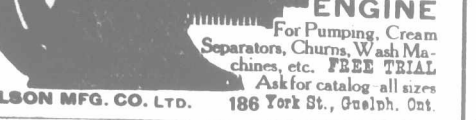
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Cor. Queen & Victoria Sts. Toronto, Can.

**SEEDS FOR THE FARM.**

Geo. Keith, 124 King St. E., Toronto  
Send for 1907 catalogue.

**Tobacco Habit.**

Dr. McTaggart's tobacco remedy removes all desire for the weed in a few days. A vegetable medicine, and only requires touching the tongue with it occasionally. Price \$2.

**Liquor Habit.**

Marvellous results from taking his remedy for the liquor habit. Safe and inexpensive home treatment; no hypodermic injections, no publicity, no loss of time from business, and a cure certain.

Address or consult Dr. McTaggart, 75 Yonge street, Toronto, Canada.

hunting and fishing like boys, swimming like mermaids, and riding wild ponies, until in their teens, when they were packed off to fine schools far away from the little mountain principality over which their father reigns.

Being domestic does not mean being a stupid drudge. When Mrs. Enid Stacy Widrington was lecturing in this country, she said enlightened women should have no quarrel with the word "domestic" as a desirable adjective. Taken in its narrowest sense, it may seem unpleasant; but, if a woman is truly domestic, she will widen the application of the word, until it will mean all that her heart can hold or her brain plan or her hands execute for those dear to her. She will know what a home should be, and how a house should be built for health, beauty, and economy, and what community or neighborhood is best, what schools and neighbors they will have, how to regulate the income and apportion it properly, how to make the home a spot ever to be remembered when she is gone. And for those who do not love children the words of an American mother may bring a lesson: "Suppose your children are not all that you hoped or dreamed. They are yours; and, if they do not meet your expectations or fill your heart to overflowing with happiness, at least, if your duty be done toward them, it will so occupy your time that you will have no thoughts of regret and self-pity."—(Boston Cooking-School Magazine.

**The Old Song.**

You may talk about the new songs  
That you hear sung nowadays  
At the high-toned classic concert,  
Operas, musicales and plays;  
We hear them whistled on the street  
By the rich, poor, sad and gay,  
But the old-time songs of long ago  
Will ne'er dim nor pass away.

There was "Gentle Annie," "Annie Laurie,"  
"My Old Home in Tennessee,"  
"Away Down in Dixie Land,"  
"Mollie Darling," "Bessie Lee";  
"Daisy Dean" and "Darling Mabel";  
"Not for Joe," "Old Uncle Ned";  
"My Old Kentucky Home," and "Maggie May,"  
"Put Me In My Little Bed."

The singer on the Minstrel stage  
Must sing the popular songs,  
Like "Dem Goo-Goo Eyes," "My Baby Lou,"  
To please the frivolous throngs.  
But, goodness, how I'd like to hear  
Those dear, sweet songs of old,  
"In the Evening by the Moonlight,"  
"Silver Threads Among the Gold."  
Folks now want the ragtime music;  
They don't want the "Old Zip Coon,"  
And will sure make fun of grandma,  
If she hums an old-time tune.  
In my heart I thank the author—  
It makes no difference where I roam  
For giving us the dear old ballads,  
"Down in the Corn Field," "Old Folks at Home."

We may cross the grand old ocean,  
Raven locks be changed to white,  
But the old songs learned in childhood,  
Bring back memories of delight,  
And the world seems really brighter,  
Makes the heart feel all aglow,  
That we have not ceased to love them—  
Those sweet songs of long ago.

**At the Wharf End.**

Ye'll weep it out, and sleep it out,  
Faith, forget me in a day!  
Ye'll talk it out and walk it out—  
Yis, I'll be long away!

But what a heavin' shoulder this  
To rock a lad to sleep!  
Ach, me gurl, that one kiss,  
Ye knew it couldn't keep!

Some cry it out, and sigh it out,  
But we'll forgit the ache!  
Ye'll laugh it off, and chaff it off,  
And learn to give and take!

And that's the grey ship waitin' me—  
Sure, what's the good o' tears!  
It's got to be, and ought to be—  
One kiss—for twenty years!

—Arthur Stringer, in the Smart Set.

**IMPORTANT AUCTION SALE**

OF IMPORTED AND CANADIAN-BRED

**Scotch Shorthorns  
Clyde and Shire Mares  
and Stallions**

35 Imported and Canadian-bred Scotch Shorthorns, including one of the best young imported stock bulls in Canada. They represent the Nonpareil, Ury, Maggie, Fairy, Missie, Undine, Minnie, Miss Ramsden, Village Girl and Rosebud strains. Are all in fine condition, and an essentially high-class lot.

8 Imported and Canadian-bred Clyde and Shire fillies (all registered), and 1 Shire and 1 Clyde stallion—yearlings. Also

**Imported and Canadian-bred  
Leicester Sheep**

in lamb to a Toronto and London winner.  
The property of

**J. M. Gardhouse, Weston, Ont.**

Will be sold under cover at Weston, on

**THURSDAY, FEB. 7th, 1907**

Sale at 1 p. m. sharp.

Term cash, unless otherwise arranged for before sale.  
This is one of the best offerings ever sold by auction in Canada.

Catalogues. **Capt. T. E. Robson**  
**J. K. McEwen** } Auctioneers.  
**H. Russell**

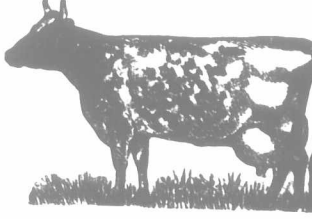
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of Winnipeg, Man., the only weekly agricultural journal edited and printed west of Lake Superior.  
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We now offer our grand imp. bull, Lessnesock Royal Star. Always winner of first prize at Toronto except once, when he was placed second. Now four years old past. Other young bulls fit for service from heavy miking stock on both sides, with large teats. Females of almost any age. Young sows in farrow. One aged boar c cap. Pigs from 2 to 4 months old. Prices right. Long-distance phone, Campbellford Central.

**ALEX. HUME & CO., MENIE, ONT.**

Mr. Carnegie once listened to a colored preacher's sermon in a little village church in Georgia, and was so much affected by the appeal for funds that he dropped a fifty-dollar greenback in the collecting-box. Standing in the pulpit, the preacher counted up the offerings; then, clearing his throat, he said:  
"Breddern, we has been greatly blessed by dish yer contribution. We has heah fo' dollahs an' fo'ty cents; an' if'—he is ed suspiciously at the donor of "dollahs; an' if de fifty dollah bill put in by de white gemman, with de grey

whiskahs tu'ns out to be a good one, we is blessed a whole lot moah."

Recently a little girl was taken to London by her parents for the first time. On her return home she was describing the places she had seen to her friends. One of them asked:

"Did you see the Old Bailey, where they hang the murderers?"  
"No," replied the girl, "I don't think so, but I saw the Royal Academy, where they hang the artists."







## U. S. CREAM SEPARATOR



**WEARS LONGEST**  
as well as skims cleanest. Time has proved the simple, strong construction of the U. S. is more durable than any other separator.

**Used 14 Years Repairs 75 Cents**

From THE LAC, Wis., Nov. 8, 1906.  
To whom it may concern:  
I have used one of your U. S. Separators for the past fourteen years and it has given me the very best satisfaction. I have paid 75 cents for extras since getting the machine. I cannot recommend the U. S. too highly.  
J. BALSOW.

27 pictures with plain, easy-to-understand explanations in our new catalogue, make the construction and operation of the U. S. as plain as though the machine was before you. Let us send you a free copy. Just write: "Send Construction Catalogue No. 110". Write today.  
Don't buy a Cream Separator before you see this book.

VERMONT FARM MACHINE COMPANY  
Bellows Falls, Vt.

## CARNEFAC

IS JUST WHAT  
THAT THIN HORSE NEEDS

THOSE STEERS that are not thriving need only **CARNEFAC** to bring them on. **CARNEFAC** brings results **SURE** and **QUICK**.

The Carnefac Stock Food Co.,  
Toronto.

## AUCTION SALE

At Maple Hurst Farm, KENILWORTH, on

Thursday, Jan. 31st, '07,

At 1 p.m. sharp.

Consisting of seven bulls, ranging from one to two years old; twenty females, twelve of which are choice young cows of good milking strains, with calf or calf at foot, sired by present stock bull, Prince 61878, by Prime Favorite (Imp.), a Marr Princess Royal, and the balance are a choice lot of young heifers, of the thick, mossy type. Also a few matched pairs of road and carriage horses will be offered, and a few pure-bred Yorkshire and Berkshire sows.

Farm: one mile from Kenilworth, seven miles from Arthur, eight from Mt. Forest, on C. P. R. All trains met on day of sale.

M. J. McGILLICUDDY, Proprietor.

## Important Dispersion Sale!

One of the oldest and best flocks of Cotswold sheep in Canada will be sold at the  
ROYAL HOTEL STABLES, WOODSTOCK, ONT., on  
WEDNESDAY, JANUARY 23rd, 1907.

## 30 Registered Cotswold Ewes

From one to five years old. All bred to the imported shearling ram, champion at the Canadian National Exhibition, Toronto, 1906. This grand ram is also included in the sale. Sale to commence at 1 p. m.

VALENTINE FICHT, PROPRIETOR, ORIEL, ONT.

E. R. Almas, Auctioneer.



## Every Subscriber

should be a member of our Literary Society and wear one of our handsome Rolled Gold and Enamel Stick Pins. They are beauties. Send us **only one new subscriber to THE FARMER'S ADVOCATE AND HOME MAGAZINE**, at \$1.50, and we will send you a pin, and enter your name on our Society membership roll.

chair overturned with a crash; a great body struck him on the chest; a hot, pestilent breath volleyed in his face, and wolfish teeth were reaching for the throat.

"Come on, Killer!" he screamed. The horror of suspense was past. It had come, and with it he was himself again.

Back, back, back, along the wall he was borne. His hands entwined themselves around a hairy throat; he forced the great head with its horrid lightsome eyes from him; he braced himself for the effort, lifted the huge body at his breast, and heaved it from him. It struck the wall and fell with a soft thud.

As he recoiled a hand clutched his ankle and sought to trip him. David kicked back and down with all his strength. There was one awful groan, and he staggered against the door and out.

There he paused, leaning against the wall to breathe.

He struck a match and lifted his foot to see where the hand had clutched him. God! there was blood on his heel.

Then a great fear laid hold on him. A cry was suffocated in his breast by the panting of his heart.

He crept back to the kitchen door and listened.

Fearfully he opened it a crack. Silence of the tomb.

He banged it to. It opened behind him, and the fact lent wings to his feet.

He turned and plunged out into the night, and ran through the blackness for his life. And a great owl swooped softly by and hooted mockingly:

"For your life! for your life! for your life!"

### PART V.

Owd Bob o' Kenmuir.

#### CHAPTER XXII.

A Man and a Maid.

In the village even the Black Killer and the murder on the Screes were forgotten in this new sensation. The mystery in which the affair was wrapped, and the ignorance as to all its details, served to whet the general interest. There had been a fight; M'Adam and the Terror had been mauled; and David had disappeared—those were the facts. But what was the origin of the affray no one could say.

One or two of the Dalesmen had, indeed, a shrewd suspicion. Tupper looked guilty; Jem Burton muttered, "I knoo hoo 'twould be"; while as for Long Kirby, he vanished entirely, not to reappear till three months had sped.

Injured as he had been, M'Adam was yet sufficiently recovered to appear in the Sylvester Arms on the Saturday following the battle. He entered the tap-room silently, with never a word to a soul; one arm was in a sling and his head bandaged. He eyed every man present critically; and all, except Tammas, who was brazen, and Jim Mason, who was innocent, fidgeted beneath the stare. Maybe it was well for Long Kirby he was not there.

"Onythin' the matter?" asked Jem, at length, rather lamely, in view of the plain evidences of battle.

"Na, na; naethin' oot o' the ordinar'," the little man replied, giggling. "Only David set on me, and me sleepin'. And," with a snig, "here I am noo." He sat down, wagging his bandaged head and grinning. "Ye see he's sae playfu', is Davie. He waxes ye o'er the head w' a chair, kicks ye in the jaw, stamps on yer wame, and all as merry as May." And nothing further could they get from him, except that if David reappeared it was his (M'Adam's) firm resolve to hand him over to the police for attempted parricide.

"Brutal assault on an auld man by his son!" Twill look well in the Argus, he'll be!" They couldna let him aff under two years, I'm thinkin'."

M'Adam's version of the affair was received with quiet incredulity. The general verdict was that he had brought his punishment entirely on his own head. Tammas, indeed, who was always rude when he was not witty, and, in fact, the difference between the two things is only one of degree, told him straight: "I sowed ye well ree, an' I nobbut wish he'd made an end to ye!"

"He did his best, pair lad," M'Adam reminded him gently.

"We're bad enough, ye, continued

the uncompromising old man. "I'm fair grieved he didna slice yer throat while he was at it."

At that M'Adam raised his eyebrows, stared, and then broke into a low wattle.

"That's it, is it?" he muttered, as though a new light was dawning on him. "Ah, noo I see."

The days passed on. There was still no news of the missing one, and Maggie's face became pitifully white and haggard.

Of course she did not believe that David had attempted to murder his father, desperately tried as she knew he had been. Still, it was a terrible thought to her that he might at any moment be arrested; and her girlish imagination was perpetually conjuring up horrid pictures of a trial, conviction, and the things that followed.

Then Sam'l started a wild theory that the little man had murdered his son, and thrown the mangled body down the dry well at the Grange. The story was, of course, preposterous, and, coming from such a source, might well have been discarded with the riddle it deserved. Yet it served to set the cap on the girl's fears; and she resolved, at whatever cost, to visit the Grange, beard M'Adam, and discover whether he could not or would not allay her gnawing apprehension.

Her intent she concealed from her father; knowing well that were she to reveal it to him, he would gently but firmly forbid the attempt; and on an afternoon some fortnight after David's disappearance, choosing her opportunity, she picked up a shawl, threw it over her head, and fled with palpitating heart out of the farm and down the slope to the Wastrel.

The little plank-bridge rattled as she tripped across it; and she fled faster lest any one should have heard and come to look. And, indeed, at the moment it rattled again behind her, and she started guiltily round. It proved, however, to be only Owd Bob, sweeping after, and she was glad.

"Comin' wi' me, lad?" she asked as the old dog cantered up, thankful to have that gray protector with her.

Round Langholm now fled the two conspirators; over the summer-clad lower slopes of the Pike, until, at length, they reached the Stony Bottom. Down the bramble-covered bank of the ravine the girl slid; picked her way from stone to stone across the streamlet tinkling in that rocky bed; and scrambled up the opposite bank.

At the top she halted and looked back. The smoke from Kenmuir was winding slowly up against the sky; to her right the low gray cottages of the village cuddled in the bosom of the Dale; far away over the Marches towered the gaunt Scour; before her rolled the swelling slopes of the Muir Pike; while behind—she glanced timidly over her shoulder—was the hill, at the top of which squatted the Grange, lifeless, cold, scowling.

Her heart failed her. In her whole life she had never spoken to M'Adam. Yet she knew him well enough from all David's accounts—ay, and hated him for David's sake. She hated him and feared him, too; feared him mortally—this terrible little man. And, with a shudder, she recalled the dim face at the window, and thought of his notorious hatred of her father. But even M'Adam could hardly harm a girl coming, broken-hearted, to seek her lover. Besides, was not Owd Bob with her?

And, turning, she saw the old dog standing a little way up the hill, looking back at her as though he wondered why she waited. "Am I not enough?" the faithful gray eyes seemed to say.

"Lad, I'm fear'd," was her answer to the unspoken question.

Yet that look determined her. She clenched her little teeth, drew the shawl about her, and set off running up the hill.

Soon the run dwindled to a walk, the walk to a crawl, and the crawl to a halt. Her breath was coming painfully, and her heart pattered against her side like the beatings of an imprisoned bird. Again her gray guardian looked up, encouraging her forward.

"Keep close, lad," she whispered, starting forward afresh. And the old dog ranged up beside her, shoving into her skirt, as though to let her feel his presence.

(To be continued.)





## THE RAVAGES OF RHEUMATISM

ARE CHECKED BY BILEANS

A Woman's Sensational Cure.

Mrs. Selina Davis, a resident of Abingdon, has proved how wonderfully effective Bileans are in cases of rheumatism and debility. She says: "I had pains in the limbs and across the back, weighing down symptoms and great weariness. Two years ago the pains in the back and about the loins became almost unbearable. I tried various pills and physics, and still found no relief. In October came a crisis. I was rendered completely helpless by active rheumatism. By the doctor's advice I went into hospital, where I remained under treatment for nine weeks. On returning I was confined to my bed again for seven weeks. I read a description of the good work Bileans were doing. This induced me to obtain a supply. After a little while I regained the use of my limbs, and after that my progress was rapid. For some time now I have been able to resume my ordinary life and work, and am altogether a different person from what I was during the last few years."

Rheumatism is due to the presence of certain poisonous acids in the blood. The "filter beds" for the blood are the liver and the kidneys. Through these organs the blood passes, and when the organs are in healthy operation they filter out the harmful substances. When they are not in healthy operation they fail, and rheumatism is one of the many serious results. Bileans do not act directly on the blood, but they act upon and correct the liver and kidneys, and thus correct the real cause of rheumatism. Bileans are also a sure cure for indigestion, liver troubles, headache, gas, belching, pains in the chest, constipation, piles, female ailments, and all blood impurities. All stores and druggists sell at 50c. a box, or post free from the Bilean Co., Toronto, for price. 6 boxes for \$2.50.

## ALBERTA

Offers Opportunities.

Northern Alberta is the garden land of the West. The district around MILLET is unsurpassed. The town presents many chances for business openings. For full information write:

**P. J. MULLEN,**

Sec. Millet Publicity Committee,

MILLET, ALBERTA.

## BROOKS' NEW CURE

FOR RUPTURE  
Brooks' Appliance. New discovery. Wonderful. No obnoxious springs or pads. Automatic Air Cushions. Binds and draws the broken parts together as you would a broken limb. No salves. No lymphol. No lies. Durable, cheap. Pat. Sept. 10, '01. SENT ON TRIAL. CATALOGUE FREE.  
C. E. BROOKS, 3129 Brooks' Bldg., MARSHALL, MICH.

## Huntlywood Shorthorns.

Young bulls for sale. The best lot we ever had, by imported Cicely's Pride (78394), out of imported dams. Broadhooks, Lavenders, Lancasters, etc. Prices reasonable.

**W. H. Gibson, Manager,**  
Huntlywood Farm, Beaconsfield, Que.

## Men Wanted

to advertise and introduce our stock and poultry compounds to farmers and dealers. Work during spare time or permanently. This is an exceptional opening for a hustler. Write for particulars. **GOLDEN ORBIT CO., 58 BATHURST STREET, LONDON, CANADA.**

## GOSSIP.

From January 1st up to November 12th, 1906, the number of Clydesdales exported from Scotland was 1,180 head, distributed as follows:

Canada .....	928
South America .....	151
U. S. America .....	86
New Zealand .....	8
South Africa .....	5
Australia .....	4
Denmark .....	3

These figures represent the numbers reported at the office of the Clydesdale Horse Society, for each of which a certificate of registration was issued.

D. Milne, Ethel, Ont., writes: "My stock of Shorthorns (59 head), headed by the Cruickshank Broadhooks bull, Broadhooks Prince (imp.), is doing well. Of twelve calves dropped to date, two are red-roan, the others red; all thick, mossy calves. Have thirteen cows and heifers to calve yet, of the following Scotch families: Minas, Claras, Clarets, Crimson Flowers, Rosebuds, Marr Beautys, Scottish Maids, and others. The young bulls I advertise have only to be seen to find buyers, as I have sold to every man that came here to buy this winter. Will make prices and terms to suit purchasers. Have made the following sales lately: Bull to P. J. Bishop; bull to Matthew Smith, Gadshill, Ont.; bull to Donald Campbell, Komoka, Ont."

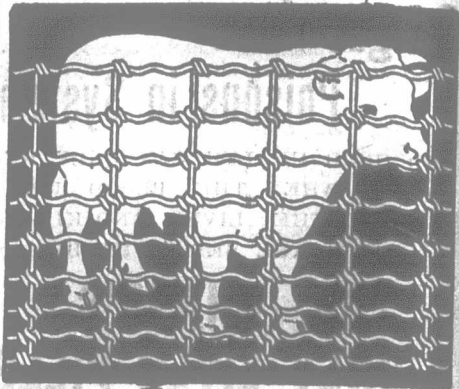
Mr. Alex. Hume, Menie, Ont., in ordering a change in his advertisement of Ayrshire cattle, writes: "Our herd is in fairly good shape after their long trip East, to the Halifax and Charlottetown exhibitions, a trip we enjoyed, everyone we met being obliging and courteous. At Halifax and Charlottetown we met many fellow breeders, fine fellows, with whom it was a pleasure to associate or compete. We won in all \$736, out of which we had to pay expenses, but it was not so much the money we won as the associations it brought us, and the advertisement it made for us. Having so many of breeding age of his get, we have concluded to offer for sale our stock bull, Lessnessock Royal Star (imp.). His stock won in the strongest competition. He is still as active as ever, and will be a good investment to any breeder. The young bulls we offer have been carefully bred for milk, and ought to improve any dairy herd. They are in fine fit, and our prices are reasonable. Our aged Yorkshire boar is a big fellow of excellent type, and we will sell him cheap, rather than castrate him. He was winner of sweepstakes at Ottawa when a six-months pig. The young sows are of smooth type, perhaps not the extreme bacon type, but profitable breeders. The young things are choice ones. Following is a partial list of recent sales: Yearling bull to J. O'Connor, Campbellford; another to Jas. S. Hill, Madoc; bull calf to W. Innes, another to R. Scott, both of Campbellford; bull calf to W. W. Whitton, Menie; another to C. C. Moore, Kingsville; two-year-old heifer with calf at foot to Will Croskery, Kinburn; two heifers to Mr. Thompson, B. C.; the two-year-old heifer, Banalee, to R. Hunter & Sons; two-year-old heifer with calf at foot to Alexander, Industrial School, Toronto; bull calf, Shining Star, to Messrs. Crawford Brothers, Brown's Corners; bull calf, Prince Juno, to a party in P. E. I.; the yearling bull, Starlight, by Lessnessock Royal Star, which appears in Christmas number of 'The Farmer's Advocate,' to the Michigan State School for the Deaf, at Flint; Messrs. Simmons Bros., of Charlottetown, P. E. I., selected the grand two-year-old bull, Prince Sunbeam of Glenora, at a long price, to head their very promising Ayrshire herd. Mr. Ed. Cains, of Campbell's Bay, Que., when at Ottawa Fair, would do with nothing less than the grandly-bred, under-one-year

bull, Golden Star, from Eva of Menie, sweepstakes winner at Toronto in 1906, and by Lessnessock Royal Star, first-prize aged bull in Toronto. This bull ought to breed both milking and showing stock. Mr. Cain is to be congratulated on his choice. The high price did not at all daunt him in purchasing him. In Yorkshires we have made several sales. In fact, trade all round has been unusually good; thanks to our advertisement in 'The Farmer's Advocate.'"

Ten saddle horses recently sold at auction in New York for an average of \$377.50, the highest price being \$825, and the lowest \$225. Pretty fair for horses of just everyday use, indicating that any kind of useful horse is salable at a fair price nowadays.

The Morgans were a very intelligent, affectionate, handsome, tough and enduring breed of horses. Their broad breasts, with their fore-legs wide apart, made them about as sure-footed as the mule, and their short, broad backs, with their short, light, easy step made them the best saddle horses to be had. Their broad breasts, with their short bodies and short stride, showed they were not fast for a mile, but for an all-day drive, or several of them, they would outlast the most of the fast ones. The shape of an animal shows if it is made to go fast. The race horse is thin and narrow, and it is so with the pure-bred trotter. Shape has much to do in getting speed. The white man's boat cannot speed with the Indian canoe. It may be said that the Morgan blood alone will not produce the trotter, but the cross has done much in producing the American trotter. It has given intelligence, beauty, lasting and enduring qualities, which the trotter should and must possess.—[Horse World.]

Messrs. H. Cargill & Son, Cargill, Ont., report the following recent sales of Shorthorns from their herd: "To A. Edward Meyer, Guelph, Ont., the choice roan heifer calf, Snow Girl C., by the Dutch-bred Missie bull, Lord Mistletoe (imp.), and out of the Scotch imported cow, Snow Girl, whose dam was got by a grandson of Field Marshal (47870), and granddam by a son of Royal Star (58082). To James Connor, Chepstowe, Ont., the grand-quality roan bull, Lancaster Choice, out of an imported Lancaster cow, and sired by Choice Koral (imp.), a choice bull for some time at the head of the herd of Geo. Johnston, Balsam, Ont. To Fitzgerald Bros., Mount St. Louis, Ont., a beautiful roan bull calf, sired by Lord Mistletoe (imp.), and out of a Roan Lady imported cow, whose sire was by the Cruickshank bull, Coldstream (60510), a son of Cumberland (46144), and her dam, a granddaughter of Star of Morning (58189). To Donald Darrock, Gillies' Hill, Ont., a low-down, thick, grand-quality white bull, sired by the home-bred bull, Carolman, by Merchantman (imp.), dam Caroline 13th (imp.); his dam, Merry Girl 9th (imp.), which family are noted prizewinners in the hands of Jno. Cran, Kelth, Scotland. To R. O. Miller, Lucas, Iowa, U. S. A., we shipped, by express, two choice-bred and grandly-modelled bulls, viz., Lord Lancaster and Lord of Sittytan, both sired by Lord Mistletoe (imp.), and out of two Scotch imported cows of exceptional quality and breeding, a Lancaster and a Secret, the sire of the latter being Pride of Day, by Pride of Morning, a son of Star of Morning; her dam by Gravesend, granddam by Cumberland, great-granddam by Roan Gauntlet. Mr. Miller is gradually building up a choice herd of Scotch cattle in his native county, which will be heard from when he gets straightened away. Have also sold to E. G. Kuntz, of Formosa, the royally-bred five-year-old Clydesdale mare, Royal Mabel, sired by Royal Carruchan; her dam was Balmedie Mabel (imp.), bred by W. H. Lumsden, of Balmedie, Scotland, sired by Royalist, and out of Lady Marjorie Erskine, by Lord Erskine. Balmedie Mabel is full sister to Balmedie Queen Mab, the champion of Scotland in her show days."



## No. 9 Hard Steel Wire

from top to bottom. Does it look strong? Do you know what No. 9 hard steel wire means? It means double the strength and durability of light wire fences. Means the toughest thing known to fence builders. Means the biggest and heaviest wire used for fencing in Canada.

Mr. Fence Builder, just stop one moment and think. You don't want to do the job over again year after next. Take a lesson from some of the two-year old fences you know. They are usually made of poorly galvanized wires that rust soon and slip. Your experience tells you these are the things to look out for. Keep them in mind and take a good look at

## Ideal Fence

Look at one that's been up two, three, four or five years. If you'll examine carefully, we'll be satisfied with your judgment. Don't forget to look at the lock. It grips the wire on FIVE bearing points. We show it good and large below so you'll be sure to see it. No. 9 wires, No. 9 stays, locked as Ideal locks them at every crossing, there's not going to be any slips or breaks or holes in your fence and there's not going to be any sagging.

The railroads know how to fence for permanency. They are buying more Ideal than any other make. Farmers are following suit, fencing their farms to stay.

We'd like to talk Ideal fence personally to you for a few minutes. Write in and give us the chance. We'll send you a little book with the particulars to start with.

**THE MCGREGOR BANWELL FENCE CO., Ltd.,**  
Dept. B. Walkerville, Ont.  
**THE IDEAL FENCE CO., Ltd.**  
Dept. B. Winnipeg, Man.

NOTE THE LOCK



When Writing Mention this Paper.

## DON'T BUY GASOLINE ENGINES

UNTIL YOU INVESTIGATE "THE MASTER WORKMAN," a two-cylinder gasoline, kerosene or alcohol engine, superior to any one-cylinder engine. Its weight and bulk are half that of single cylinder engines, with greater durability. Costs less to buy—less to run. Quickly, easily started. Vibration practically overcome. Cheaply mounted on any wagon. It is a combination portable, stationary or tractor engine. SEND FOR CATALOGUE. **THE TEMPLE PUMP CO., Mrs. Meagher and 15th Sts., Chicago.** THIS IS OUR FIFTY-THIRD YEAR.

















**DR. McLAUGHLIN'S  
ELECTRIC BELT  
MADE US STRONG**

**AND WE DID NOT PAY FOR IT UNTIL WE WERE CURED**

When you hear a lot of people praising a thing, you begin to realize that it must be good. One man, or maybe two, in a community may be mistaken, but when a dozen remark that they have found Dr. McLaughlin's Electric Belt a good thing, you are forced to believe it.

When you meet a friend on the street and comment upon his improved appearance, and he tells you that Dr. McLaughlin's Electric Belt has done it, even though you don't believe in electric belts yourself you can't help feeling glad that your friend imagines that it helped him.

It's hard to convince some people that there is so much good in a thing that is worn about the body only a few hours at a time; it looks impossible, but when a dozen people whom you know to be honest persist in saying that it made life worth living for them you are forced to take some stock in it.

That is why Dr. McLaughlin's Electric Belt is so popular now. It has cured a lot of people, and they are praising it; they call it their best friend.

One man who had felt run down generally, who had no life in him, no ambition for the future, and was always groaning with some sort of a pain or ache, was cured by it, and he seemed to think a good deal of it, because he said there was not enough gold in the Dominion to buy it of him, if he could not get another like it.

The most noticeable thing about men who have been cured by Dr. McLaughlin's Electric Belt is the way their views change as to their future; men who have looked for nothing but hard luck and discouragement seem to take a new grip on prosperity, and aim higher from the day they begin wearing the Belt.

You know men who seem to think that they have no luck, nothing turns out right for them. They are men without nerve, with some sort of trouble that is holding them down; they are discouraged, and tired of the fight; they wake up in the morning with a pain in the back, a tired feeling and very little interest in the day before them; they go about their work without caring, and are glad when quitting time comes.

How can luck favor that kind of a man? If he does succeed, it is certainly luck for him, but fortune smiles mostly on the man who goes after her with a club; you've got to train your luck as the man tamed the shrew, by being master of it, and shaping it in your favor by your power to command.

Luck is generally nothing but energy turned to working for you; success comes to the hustler. Nobody can hustle who has not strength and vitality. Men who wear Dr. McLaughlin's Electric Belt are full of energy; they aim high; they bring success to themselves with the health and strength that the wonderful Belt gives them.

That is why men who wear this Belt

are bright, happy and cheerful; they feel good, and show it.

The majority of cases which have been lately cured by the Dr. McLaughlin Belt are of men broken down by nervous strain, overwork, overeating and late hours. In them the old ambition seemed to have gone; self-confidence was lacking, and there was a tendency to premature old age. In such cases, Electricity is most effective, as its effect is to restore life to the nerves and all the vital organs. As examples of the influence of the Dr. McLaughlin Belt upon such cases note what Mr. Jos. Armstrong, 173 Rectory St., London, Ont., says:

"I am glad to say that I never felt better in all my life, and all the praise is due to you and your Belt, which I laid aside as good as new. To put the whole thing in a nutshell, every joint in my body and my back is working like a new clock. My work is no bother to me, and I thank you again for the cure of my back and stomach, and for my whole system. Do not be afraid of letting anyone see this, and if they are not satisfied with this, send them to me, and I will prove it to them. After suffering for the most of four years, you and your Belt cured me. I came here from Scotland for that cure, and I am for stopping in this country now. I am here to witness all I have said. Wishing you all kinds of prosperity and sale for your good remedy."

Here is another: Mr. J. Harry Denton, Trenton, Ont., says:

"I used your Belt for nervous debility and rheumatism in 1903, and it cured me. I wrote at that time to this effect, and what I said then I can verify now. I am enjoying better health at the present time than I have done for many years. I would recommend the Belt to anyone suffering from rheumatism or from any form of nervousness."

Mr. A. Russell, Niagara Falls, Ont., writes:

"I am glad to tell you that I have not felt better in years. I have had no signs of a lame back since I wore your Belt, and that is over a year ago. I think they are the best thing for a lame back that anyone could get. I could not have got along without one, and I will be pleased to recommend your Belt to anyone that is troubled with a lame back."

In cases of Rheumatism, the Dr. McLaughlin Electric Belt has a specific action in quickly relieving the pains and freeing the blood of the Uric Acid deposits that cause the trouble. Among the recent cures, we may mention Mr. Angus McDonald, No. 9 Buffalo St., Brantford, Ont., who says:

"I came to Brantford a little over two years ago, crippled up with Rheumatism so bad I had to be carried into the house, and was helpless for six months. I was treated by three differ-

ent doctors. I went to Preston and took the baths, and received slight benefit from them. I then bought one of your Belts, and at that time considered my case hopeless. I have improved steadily since wearing it, and have been able to resume my business as builder and contractor. I have recommended your Belt to many as a sure cure for Rheumatism, even in its worst form, as I was about as bad as anyone could be with it when I got your Belt, which has, I am glad to say, completely cured me. The Rheumatism had affected my heart, and it has greatly improved me in that respect."

Mr. Robert, Arcola, Sask., is another man cured of rheumatism two years ago. Here's what he says:

"Dear Sir, I wore your Belt two years ago for rheumatism, and it cured me completely, and I can now say that I can have no return of it since. I thank you very much for urging me to take your Belt at that time. I feel stronger and younger than I have for years, and I would advise anyone suffering from rheumatism to try your Belt, as I do not think they could find a better remedy."

The man or woman whose stomach seems to be "knocked out" can practically get a new stomach by using the Dr. McLaughlin Belt. The reason for this is that the stomach when in healthy condition is an electric battery in itself. It furnishes power and strength to every organ of the body. When it is weak, it is a sign that the natural Electricity is below the normal. It is useless to take drugs to refill the human electric battery with the element that is so necessary for its health. They can't do it. How the stomach is reinvigorated by the Dr. McLaughlin Electric Belt is told by Mrs. Bertha Hamilton, of Erin, Ont., who writes as follows:

"Since calling at your office on June 22nd, I must tell you that I am sure it was the Electric Belt that has helped me. I know that I would not have lived if I had not got it when I did, and I cannot be too thankful to you. After five years of agony that I endured, it is like having a new lease of life now. I am gaining two pounds of flesh a week, and am eating solid food. I have been taking liquid food a month nearly, and solid food for three weeks. The people think my cure very rapid and wonderful. Many of them said I would never eat again. I am certain that you cannot advertise your Electric Belts enough. The only trouble is that there are those sold that are no good. We do not think anything of the money we spent on the Belt. I have to repeat my story over and over again every day to different people, as everyone wants to hear from myself about my cure. I never felt better than I do now. Of course, my nerves began

to quiet when I began to use the Belt, and, as you know, I wore it even when I was very weak. I have a host of grateful friends who wish me to thank you also for them, for they were all nearly sick about me, thinking and seeing me starving every day, with plenty of food about me. I cannot speak too highly of your Electric Belt, for it is a perfect fit, and is doing just what you said it would do, and in so short a time, I never expected the cure so quickly. It was a surprise to me, and I can hardly believe it. I now look very well. You would hardly recognize me as the woman who called at your office on June 22nd. I think my doctor here is as delighted over my recovery as anyone can be. With best wishes for your continued success."

Here's a man cured of stomach and kidney trouble and diarrhoea. A. P. Hickling, of St. James, Man., says:

"My indigestion has quite disappeared and my kidneys are free from pain. I no longer feel any weakness in my spine, and my appetite has returned, so that I can enjoy as good a meal as any man my size. I have gained five pounds in weight, yet the neighbors say that I do not look as fat as I did. I am also free from diarrhoea, which was severe during the summer months. I am most thankful to say that the Belt has about cured me of other weaknesses. I believe your Electric Belt is a genuine success."

We could fill pages of this paper with letters of praise from those who have been cured by Dr. McLaughlin's Electric Belt, but those given above are certainly enough to suggest to the reader that he may also find relief from his ailments by using electricity. If I don't cure you, it costs you nothing. All I ask is reasonable security and you can pay when cured.

If you are suffering from Nervousness; Back Ache, Rheumatism, Stomach Trouble, Constipation, or any ailment which drugs fail to cure, call to-day for Free Book. This Book should be read by every man. It tells facts that are of interest to every man who wants to remain young in vitality at any age. Call if you can; if you can't, send coupon for our beautifully illustrated 84-page Free Book.

**Dr. M. S. McLaughlin,**  
112 Yonge St., Toronto, Can.

Please send me your book, free.

Name .....

Address .....

Office Hours—9 a. m. to 6 p. m.; Wednesday and Saturday until 9.00 p. m.