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FARM AND DAIRY

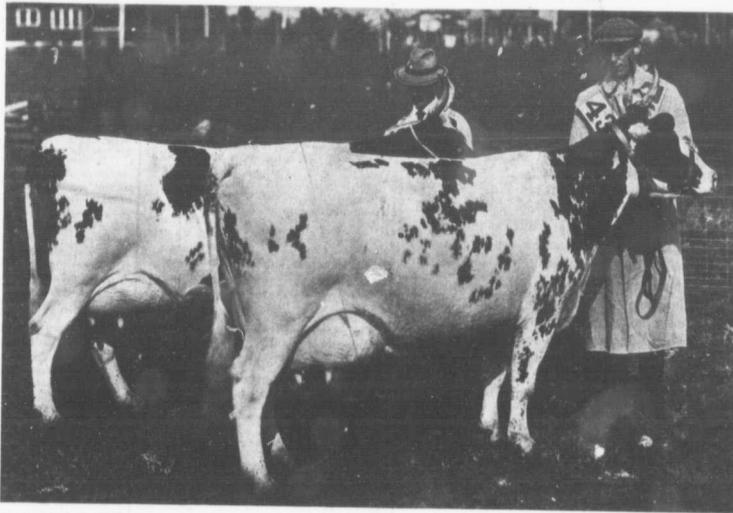
AND

RURAL HOME

PETERBORO, ONT.

NOVEMBER 10,

1910.



PRIZE WINNING BOVINE ARISTOCRACY AT THE NATIONAL DAIRY SHOW, CHICAGO
Quality was the outstanding characteristic of the 450 cattle of the six dairy breeds in the stalls at the fifth annual National Dairy Show held recently in Chicago. Our illustration shows the first and second prize Ayrshire cows, the one in the foreground, Boghall Snow Drop 2nd, (Imp.), being the grand champion. The other cow is Oldhall Ladysmith 4th. W. W. Ballantyne, of Stratford, Ont., was judge of the Ayrshires. Fanciers of the great Scottish dairy breed, the Ayrshire, have before them in this champion Ayrshire cow something well worthy of study.

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National Dairy Show at Chicago

So far as the 450 cattle of the six dairy breeds in the stalls at the fifth annual National Dairy Show, Chicago, were concerned, the show was a quality show. Ayrshires, Holsteins, Jerseys, Guernseys, Brown Swiss and Dutch Belted cattle, each had their representatives on exhibition. There were no Canadian exhibits. W. W. Ballantyne, Stratford, Ont., one of our well known expert judges, placed the Ayrshire awards.

The educational feature was the key note of the Dairy Show throughout. The wide field touched by the dairy industry is evident by mere reference to some of the contributors to this dairy show. These were breeders of pedigreed dairy cattle; the United States Department of Agriculture; the Illinois Food and Dairy Commission; the Chicago Health Department, the Chicago Public Schools; the Chicago United Charities; makers of milk for creamery and bottled trade, ordinary and certified; and manufacturers of all the accessories of dairy farms, dairies, mills, routes and creameries.

PRACTICAL EXHIBITIONS

Interest and education were strongly mingled in the practical exhibitions of the Chicago Dairy Department. An official statement of the support given the show by the Chicago Health Department follows:

Babies fed upon milk which has been properly prepared and properly prepared. Demonstrations of the proper method of preparing milk for a baby. Demonstration of the proper method of keeping milk. Seven milkmen of a Chicago. Scores of entry dairymen. These scores show the cleanliness of milk producers. Charts and maps showing methods of producing milk; also pictures showing the development of flies and their life habits. A branch of the city laboratory on full operation, examining Chicago milk as found on the streets.

SOME OF THE ATTRACTIONS

Attractions to amuse the casual visitor were staged in the judging arena located in the centre of the Coliseum where the show was held. Each afternoon and evening parades of prize winning cattle were given, when the ring was not in use for judging, and at night a "calf scamper" proved to be a delight to spectators. A number of calves representing the different breeds on exhibition were turned into the ring and left to their own capers. The world's champion three-year-old butter cow, a Guernsey, "Dairy Maid of Pinedhurst", stood throughout the week of the show in one corner of the arena. Her owner, it is reported, refused during the show the sensational offer of \$10,000 for this cow. A Canadian Jersey cow, having a record of 700 pounds of butter in one year was a feature in another corner of the arena. These two cows, as the "Chicago" Gazette well puts it, were educational features of the most persistent and convincing appeal.

THE ATTENDANCE

Although the weather was propitious and the show deserving of the most generous patronage, the attendance was not all that could have been desired. The show as a whole was the best conducted and staged the most pleasing exhibits of any yet held by the Association. The attendance if not heavy was sufficient to be noticeable about the hotels even if not in the Chicago newspapers. It has always been difficult to interest the city public in the National Dairy Show owing largely to a lack of support from the Chicago papers.

Breeders of pedigree cattle rallied stoutly to the support of the show by their exhibits, which made spectacular presentation of the results of their work, and by horses on the floor of the Coliseum, and their banners. The Jersey, Guernsey, Holstein and Ayrshire breeders each kept official open

house near the judging arena, which were headquarters for adherents of their respective breeds.

Winter Fair Seed Department

T. G. Raynor, Seed Branch, Ottawa

Less than one month and the Winter Fair at Guelph will be in full blast again; the time is not out till time farmers who intend to make an exhibit of seeds to make their entries. November 12th is the last day.

An even larger exhibit of seeds than ever before should be shown this year. It has been a good year for the production of most grain crops and samples of seed generally are good.

The prize list at Guelph is a generous one, there being, \$6, \$4, \$3 and \$1 in the general classes, and in the Canadian Seed Growers' Association even letter prizes are offered in some sections. Members of the C.S.G.A. should not forget that they are eligible to compete in the general classes as well as in the C.S.G.A. class.

It is expected that a better arrangement for showing the seeds to advantage will be made this year and that every precaution will be made to prevent the grain exhibited from getting mixed.

Items of Interest

The Toronto Medical Health Officer as recommended that all milk not up to the standard of certified milk or scientifically pasteurized be heated to the boiling point in the homes before being used. Eleven cases of typhoid fever in the City have recently been traced back to one dairy.

It is officially announced that the C.P.R. has decided to build four new steamers on a fast direct steamship service between Nova Scotia and Boston and New York. These vessels will be larger, faster, and stronger than any at present engaged on the North Atlantic route.

An outbreak of rabies is reported from the vicinity of Tecumseh, Ont. A cow bitten by a mad dog some time ago has developed a virulent case of the dread disease and had to be destroyed. The local authorities are much concerned at the failure in observing the muzzling law.

The annual report of the Minister of Justice shows that crime, like everything else in Canada, is on the increase though apparently the growth is much slower than in other and better things. There were 16,350 charges and 11,400 convictions for indictable offences during the year ended September 30, 1909, an increase of 110 charges and 116 convictions during the year.

Last year the four largest occupations in Canada employed the following numbers: Agriculture, 710,000; manufacturing, 389,873; domestic, 271,000; transportation, 234,236. Besides these the professional class numbered 134,000, manufacturing 30,908, the fisheries gave work to 25,054, the forest and lumber industry employed 16,213, and a miscellany of occupations engaged 4,418. In considering matters of trade the fact must be borne in mind that agriculture is to-day, and is likely to remain for all time, the chief industry of Canada, and cannot be ignored.

In spite of fickle weather, which tended to mar the attendance at the Canadian National Apple Show, Vancouver, during the first two days of the show, the attendance is reported to have been phenomenal. Kelowna, in the fertile Okanagan valley won the grand sweep and stoned preeminence in the exhibition. Quebec exhibits of good hard sweet apples were admitted by visitors. The fruit, grown under various climatic conditions presented a dazzling difference in color, though uniform in size, and excellent in adaptation of use. The show is said to have been the largest ever held on the American continent.

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FOR WEEK ENDING NOVEMBER 10, 1910.

No. 45

ONTARIO AND THE APPLE—A MOST PROFITABLE BUSINESS

J. W. Crow, B.S.A., Professor of Pomology, O.A.C.

The Second Article by Prof. Crow. Apples as Profitable as Peaches. How the Smaller Growers of Apples may Solve the Great Problems that Confront Them.

THE tone of the preceding article in Farm and Dairy, October 20, might lead an unthinking person to conclude that apple growing in the Province of Ontario is an unsafe and an undesirable commercial proposition. As a matter of fact, no conclusion could be farther from the truth. The apple industry offers to-day a better opportunity for money making than ever before. While it is true that conditions previously referred to have resulted in a general depression of the industry, it is also true that there has been gradually brought about a condition of affairs unprecedented in our history. The vast increase in our consuming population and the remarkable extension of our shipping facilities, both boat and rail, have placed an almost unlimited market within our easy reach, and at the present time demand is vastly greater than supply.

It is quite true that in recent years there have been seasons of low prices, and it is also doubtless true that within the next few years similar periods will recur. It is a significant fact, however, and one which cannot be too forcibly brought to the attention of present and prospective fruit growers, that at no time within the last 10 years have strictly first-class apples been over plentiful; nor is it at all possible,—in fact, one might say it is almost impossible,—that such a condition will arise for many years to come.

DECREASE IN QUANTITY

As has already been stated, the proportion of strictly first-class apples and, likewise, the actual quantity of apples of first grade have decreased within the last 15 years. The decrease has been so marked one would seem to be entirely safe in predicting that a number of years must elapse before the production of high-grade fruit begins to equal the demand for it. Low prices, when they come, as they are certain to do, will be caused, not by a surplus of high-grade fruit, but by the placing on the market of large quantities of second-grade and inferior stock. Low-grade fruit when marketed in considerable quantity does affect more or less seriously the selling price of best grades. As a general rule, however, there is practically no difficulty experienced in disposing of fruit of high grade. Growers who will give the necessary attention and care to their orchards are sure of a market, provided they grow sufficient quantity to attract buyers, or to enable them to place their own product on the market independently.

APPLES AS PROFITABLE AS PEACHES

I deem it distinctly a misfortune that so many of our best growers decline to permit the publication of the returns they are receiving and the profits they are making in apple growing. I have been fortunate enough, however, to have been admitted into the confidence of a number of growers, and I have no hesitation in saying that apple growing in the Province of Ontario when conducted by intelligent, thorough, business men pays to-day equally as well as peach growing.

We have been accustomed for many years to regard peach growing as the most profitable branch of the fruit industry. There may have been reason for this opinion in the past, but now the above statement will stand the closest scrutiny. I am quite convinced that an orchard of apples is fully as good financially as a peach orchard, and I can name more than one apple



Trees too Thick to Produce High Class Fruit

grower who would not exchange his apples, acre for acre, for the best peach orchard in the famous Niagara fruit belt.

EXTENSIVE PLANTING JUSTIFIED

The situation in Ontario to-day is one which will amply justify the planting of extensive orchards by men who have sufficient capital behind them. I am continually in receipt of letters from merchants and professional men concerning the opportunities for investment in apple growing. No man with a keen eye for profits can fail to be attracted by a study of the opportunities offered in apple production to-day.

In general, the most difficult phase of the sub-



Trees too Thick and Badly Mutilated

These two illustrations show characteristic orchards near Collingwood, Ont. in the Georgian Bay apple growing district. Think you that the owners of these orchards will not give heed to them after seeing the results obtained from the demonstration orchards in the district? One demonstration orchard there had never before returned its owner \$50. This year, the first season under improved orchard management, it returned \$200 after all expenses had been met.

ject presenting itself at present is the problem of marketing. A man of means going into the business on a fairly extensive scale would have little difficulty on this score. All that is necessary is to grow and pack first-class fruit in quantities not less than carloads.

PROBLEM FOR SMALL GROWERS

The problem for the small grower, on the other hand, is much more complicated. For him the only solution seems to be cooperative selling. At present a small producer, if he is isolated, cannot attract a buyer to his district. If he is situated in a large producing section he will not, of course find it so difficult to dispose of his crop, but even in such sections cooperative marketing has very considerable advantages for the small grower.

I am quite aware that many persons will be inclined to bring up the fact that co-operative selling has not in the past been so uniformly successful as could be desired. It is true that some of our associations have become noted for the quality of their packs and the businesslike administration of their organizations. On the other hand, it is also unfortunately true that a large number of our associations have failed entirely, and several others seem at present to be going backward instead of forward. None of these facts can, however, be taken as reflecting on the correctness of the principle involved.

COOPERATIVE MARKETING

True cooperation is the remedy for the present depressed condition of affairs. It is rather a remarkable fact that up to the present time we in Ontario have made very little use of the results secured by other countries in cooperative marketing. Associations have come into existence here and there, and after a short period of greater or less activity have disappeared and quit the business. Various reasons can be assigned for the many failures. The ordinary joint-stock plan of organization, in which the stock is all held by a few individuals, is not cooperative in principle and has been the direct cause of more than one failure among our associations. Limited liability has been another stumbling block. Older countries adopted unlimited liability many years ago, finding it truly cooperative in principle and perfectly satisfactory in operation.

LARGE MEMBERSHIP UNSAFE AT START

Another fruitful cause of disappointment in cooperative work has been the practice of taking in a large number of members at the start. Experience shows that it is much safer to begin with a small number of first-class men. If five or six careful, thorough fruit growers will make up their minds to stick together in spite of any opposition that may be offered by buyers or others, and if they will at the beginning establish definite, positive rules concerning spraying, cultivating, grading and packing, they will have no difficulty in disposing of their crop, or in securing additively to their number as the results of their work become known throughout their district.

A few good growers banding together in this way will get higher prices than if they were handling the crop from a large number of more or less neglected orchards. The object lesson by which their neighbors will profit and which serves

to attract them into the business is the high price secured. If they can once be brought to realize that good apples properly grown, graded, and packed are actually saleable at high figures, they will be much more likely to give the requisite care to their orchards than if they had been admitted into the association at the beginning. In the latter case, the association would have on its hands, a large quantity of second-grade stock and prices throughout the association would run low in consequence. This would tend to dissatisfy the men in the association and would, of course, have the additional effect of keeping others from joining.

What Care Does for a Binder

Rust and neglect, not legitimate wear, cause many pieces of farm machinery to be sent to the scrap heap long before they have served their proper time. Binders as they are ordinarily known are not used save for a comparatively short time. Notwithstanding the intricacy of their mechanism and their initial high cost, binders in general receive only ordinary care and in many cases flagrant abuse. That a binder of reliable construction will last and render satisfactory service if given proper care throughout a long series of years is evidenced in the case of a Peter Hamilton Binder that has been used by Wm. T. Payne of Peterboro Co., Ont., for 19 years and is still serviceable and is good for harvesting another crop. Some of its work last year is illustrated on this page.

"My implements always get good care and so far as the binder is concerned it is nearly always housed at night and kept dry," said Mr. Payne as he handed the photo, from which the illustration is reproduced, to an editor of Farm and Dairy. "Plenty of oil is the cheapest machinery we have. I never stint it and I give such machinery as the binder plenty. In the case of our old binder, any depreciation in its usefulness is due alone to natural wear, not to any rusting out."

The Colt Throughout its First Winter

T. R. James, Middlesex Co., Ont.

After the colt is weaned it should be allowed to run in a box stall with plenty of bedding. If tied up in a stall there is danger of something going wrong with its legs. Exercise is of prime importance, and the colts should be allowed to run in a field or yard every fine day, morning and afternoon, being brought in to the stable for its three feeds a day. Plenty of good hay can be fed, but care must be taken to feed only as much hay or grain as the colt will eat up clean. About four pounds of oats with one pound of bran a day is a fair allowance for the winter. Start with considerably less than this and gradually increase the amount. An abundance of good water should be obtainable at all times whether the colt is inside or out.

When two colts are kept loose in the same box stall, it is advisable to tie and feed them separately at meal time, as one is sure, sooner or later, to become the master and get the larger share. Some routers added to the ration will keep the colts in better growing condition. Grooming every day will have a beneficial effect on their general thriftiness, and make them look and feel tenfold better when turned out to pasture in the spring. Lice are a great menace to young colts, and every attention should be paid to see that they are kept free from these pests.

A colt will usually live if allowed to run around a straw stack all winter and forage for himself, but there is too much good money in a draft horse for one to be content with giving it this kind of attention. Give the colt every chance to grow and thrive during the first winter of its life, and the effects will be evident all through his later years.

Common Unsoundnesses of the Horse*

Dr. A. S. Alexander, Madison, Wis.

The student should acquire a fair degree of skill in detecting the more common and serious unsoundnesses of horses. The diseases and unsoundnesses should, as follows, be studied according to each part involved:

HEAD.—"Poll evil" is an enlargement of the poll, containing or discharging pus; due to bruise; not hereditary; a serious unsoundness; often difficult to cure; recovered case may leave neck permanently stiff. Look for scars.

EYES.—Test for blindness. Pupil of the eye should contract in the light. Cloudiness or opacity denote "moon blindness" (periodic ophthalmia) or cataract. Specks may be due to injuries; unimportant if the sight is not impaired thereby.

EARS.—Excessive mobility may indicate impaired vision, viciousness, or nervousness; lack of mobility may indicate deafness, or tetanus (lock jaw). Base of ear sometimes seat of troublesome discharging fistula.

MUZZLE.—Nostrils should be free from discharge of chronic catarrh or glanders. Sometimes plugged with sponge to hide "roaring." Lining membrane should be healthy pink in color; free from ulcers, or purple spots or bad smelling discharge. Lips not torn; free from chronic sores from bit at angle of mouth.

TEETH.—Examine for diseased, missing or pro-



A Good Crop of Buckwheat, Well Harvested

Not many binders can do much better work, if as good, as that shown in this illustration after they have been used a few years. The illustration shows some of the work done by a Peter Hamilton binder in its 19th year of use on Peterboro County farms.

—Photo by W. T. Payne.

JECTING MOLARS; overlapping incisors ("parrot mouth"); "bishopping" (artificial marking of the incisor teeth to alter indications of age) and under-shot jaw.

TONGUE.—See that the tongue is intact and healthy. Part of it may be missing, or mutilations present. See that floor of mouth is sound where bit rests.

UNDER JAW.—Look for discharging, or plugged fistula of salivary duct or one connecting with a molar tooth root; abscesses and tumors.

NECK.—Broken crest in stallions; sores; skin disease; watch for artificially "braided in" mane.

WITHERS.—Fistula of the withers acute, chronic or healed; collar sores.

SHOULDER.—Collar Loils; fibroid tumors from bruising; "sweeney;" fistula or abscess.

ELBOW.—"Shoe boil," from bruising of point of elbow.

KNEE.—Scars from "broken knee," due to falling; puffs; "buck knee" (bent forward); "calf knee" (bent backward); high splint; capped knee.

CANNONS.—Splints are abnormal bony growths located at the sides of the cannon bones where the small splint bones (metacarpals in front, metatarsals in hind leg) overlie the large cannon bones. They are objectionable, may cause lameness when forming, are often an indication of light bone, but ordinarily should not be deemed to constitute hereditary unsoundness. If found on all legs, of large size and associated

with other bony growths (exostoses) they may indicate a hereditary tendency to such bony growths (bony diathesis) and the animal should be rejected for breeding purposes. Examine back tendons for thickening of "hewed" condition. In examining horses having hairy legs search for evidences of grease and grease heel, such as old scars, fissures, grape-like growths or discharge having bad odor; also for "scratches."

FETLOCKS.—Seat of puffs (wind galls); interfering sores; "knuckling" or "cocked" ankles; grease, grease heel and scratches. Examine just above or below for scars of "unnerving" (neurotomy).

PASTERNS.—Seat of ringbones; a serious, hereditary unsoundness. These bony growths are on the upper, middle or lower portions of the pastern bones, may partially or wholly encircle the bone, and in aggravated cases, cause lameness and involve and interfere with the proper action of the fetlock joint above, or with the coffin joint at the lower end of the pastern bone. They give a bulging appearance to the part of the bone affected, have the feel of bone and constitute unsoundness. In work horses ringbone involving a fore pastern is much more serious than ringbone on the hind pastern.

CONVERS. (hoof heads). Sidebones are located under the skin of the coronet, at the quarters. They are due to the lateral cartilages at these parts changing to bone. When present they may be detected as prominent, hard, bony masses protruding above the hoof at the sides of the feet toward the heels and bulging the hoof under the part involved. When sidebones are absent the cartilages can be grasped between the fingers and thumb and moved or bent from side to side as they were formed of stout rubber. Sidebones are common in draft horses and constitute unsoundness. Horses having wide, flat low holed hoofs are most subject to this unsoundness. Horses afflicted with sidebones and ringbones should not be used for breeding purposes. "Quittor," a fistulous abscess, is also a common unsoundness of the coronet.

FRET. "Navicular disease" causes hardening and contraction of the hoof and chronic lameness. The affected horse "points" his lame foot forward when standing at rest, starts off lame and "warms out" lameness. The tendency to the disease is deemed hereditary. It constitutes a grave unsoundness for all purposes. Other common unsoundnesses to be looked for are "founder," indicated by rings and ridges on the hoof wall, abnormal projection at the toe, convexity at the sole ("dropped sole") and lameness; sand crack (in wall at front of toe); quarter crack (in wall at quarter); cerns, in the sole at the angle of bar and heel; and "thrush," a diseased condition of the frog characterized by a bad smelling discharge from the cleft.

HIPS. Examine for fractures of the point or shaft of the hip (ilium) indicated by distortion on comparing one hip with the other from the rear; also examine for similar distortion on haunch at side of tail (from fracture of the tuberosity of the ischium).

TAIL. The black skin of the under side of the tail and nearby parts often is the seat of cancerous, melanotic or "pigment" tumors in aging white or grey horses. The disease is incurable and constitutes unsoundness in both work and breeding horses. Examine end of tail for disease or unhealed conditions due to docking and see that the tail is not artificial and "joined on."

STYPLE. Should be free from dropsical swellings and the knee cap (patella) should remain firmly in place during motion.

HOCKS. These important joints should be free from "lone spavin," "bog spavin," "thorough-pin," and "curb." Each constitutes an unsoundness in both work and breeding animals; tendency to them is considered hereditary. Bone spavin is

(Continued on page 10)

*An extract from a recent bulletin, from the University of Wisconsin, entitled Draft Horse Judging.

Crushed Gravel and Stone for Highways

W. A. MacLean, C.E., Engineer of Highways for Ontario

Rock crushers with screen attachments are used for breaking quarry stone, field stone, and for treating gravel. They are being largely purchased throughout the Province of Ontario. Under suitable local conditions they are an essential part of a road-making plant. They are subject to severe strain, and in selecting one of these machines, municipal councils should seek strength and economy of operation rather than a low first cost. Portable crushers such as are rated at 100 cubic yards in 10 hours are more economical than small sizes, as the cost of operation is nearly the same in either case.

Crushed quarry or field stone of reasonable quality is much more durable than is common gravel. The comparative life of stone and gravel roads depends on the amount of traffic. Gravel may give good service under light travel. But the heavier the travel, the more favorable becomes the use of broken stone, which is more durable and does not wear and rut so readily as does gravel. It is ordinarily assumed that one load of crushed stone is equal to two loads of gravel.

Crushed and screened gravel very often does not cost any more, on the road, than does gravel in its natural state. This arises in two ways, from reduced cost of teaming and loading.

(1) Coarse or loamy or sandy pits near the work may furnish a supply of gravel suitable for crushing or screening, but not fit for use in its natural state, and in this way the shorter haul and reduced cost of teaming offsets the cost of crushing.

(2) By elevating the crushed gravel to a bin, wagons may be loaded in three minutes, instead of in a quarter of an hour or 20 minutes, so that teams are not paid for standing in the pit.

Bins should always be used to receive stone from the crusher. Unless this is done, the crusher must frequently be stopped, keeping the entire equipment of men and machinery idle while waiting for empty wagons. For the same reason, if field stone is used, it should

be piled in advance of crushing, so that the outfit will not be idle while waiting for loads of stone to come up. By piling stone in the winter when farmers are idle the cost is usually lessened.

A rotary screen should be used on each crusher, elevating the crushed gravel or stone to the screen by means of chain buckets. The size of perforations in the screen will depend on the material being crushed. For ordinary quarry limestone or field stone when a roller is used,

it is desirable to separate into three grades.

(1) Such as will pass a 1-inch mesh; (2) such as will pass a 3-inch mesh; (3) tallings.

The "tallings" or coarsest size passing the crusher should be put in the bottom of the road. The 3-inch material should be spread over the tallings. And the 1-inch material can be used as a surface dressing. Care should be taken not to use too much of the surface dressing—merely enough to assist consolidation with a roller.

For crushed gravel the screen should have a wire dust jacket wrapped around part of the 1-inch section of the screen to remove sand, dust and loam, using a 3/8-inch mesh for this purpose.



Stone Crushing in South Oxford—Coarse Gravel being used to make "Metal"

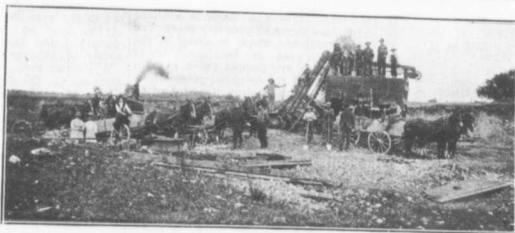
Forty-eight miles of Oxford County, (Ont.) roads have been graded, metalled, and fully gravel pits. This material is put through a crusher, screened and is received into elevated bins from which it is loaded into wagons with a minimum of labor.

This fine material should be wasted. When spread on top of the stone to a depth of two or three inches as is sometimes done, the effect of screening is largely lost, as the fine stuff turns into slush in wet weather and ruts are commenced. There is usually plenty of sand and mud on the road with out paying for hauling more. Clean stone, well consolidated by rolling, is what is needed on the roads.—Extract from "Highway Improvement".

Reasons for Practising Winter Dairying

Parham Allison, Dundas Co., Ont.

My first and greatest reason for practising winter dairying in preference to summer dairying is that we get 50 per cent. more for our milk which is shipped to Montreal in the winter than we do from the cheese factory in the summer. Also we get more milk in a year when we practise winter dairying. Cows that freshen in the fall give a good flow all winter and when they



Getting out Red Metal to Improve the Roads of Perth Co., Ont.

The illustration shows a "gang" at work near St. Mary's, crushing gravel.

begin to shrink in yield they are turned out to pasture and get a fresh start. They are then dry during the fly season when fresh cows naturally slacken in their milk flow.

I prefer winter dairying also because it gives us a better division of labor. We are milking in the winter when we have not much to do and the work is that much lighter in the busy season. I also believe that we can produce milk more cheaply in winter than we do in summer.

Hints on Storing Vegetables

A. H. MacLennan, O.A.C., Guelph

The commonest places for storing vegetables are house cellars, specially constructed houses, barn basements, and outside pits. The place of storage should be cool and moist with good air circulation so as not to allow of excessive collection of moisture. The most desirable temperature for the store room for most vegetables runs from 32 degrees to 40 degrees above zero. Pits, if used, should be on well-drained land and protected from north and west winds. On the whole pits are unsatisfactory as they entail double work. Pits should run north and south so as to give even distribution of the sun on warm days.

Potatoes keep best at 34 degrees to 38 degrees. The air should be sufficiently moist to prevent shrivelling. If the potatoes are placed in bins in the cellars, the bottom and sides of the bin should be boarded. It is not advisable that these bins be more than three or four feet deep. If the air in the store room is too dry, cover the tubers with sand and keep it moist. All potatoes should be sorted thoroughly before finally storing.

CELERY AND CABBAGE

To store celery place it in a cool, damp cellar at 32 degrees to 34 degrees temperature. Plant the heads in good soil, close together, in beds about six feet wide with passages from 12 to 18 inches wide. Water the celery well after bedding. Air circulation between the plants is essential.

Cabbage must be kept near the freezing point. Leave a part of the stump on. Place the cabbage in double rows with stumps inward on slatted shelves, about two feet above each other. They may also be stored in trenches or pits. Three cabbages are placed in a row across the pit, tucking the outer leaves which have been left on under the head. Then two cabbages are placed on top of these, letting the outer leaves hang over the heads below, tucking in the leaves on the inner side of each cabbage. Another head is then put on top, letting the outer leaves hang over. This makes a kind of thatched roof to protect the heads. Such a pile may be run to any length desired. Ventilation in the trench can be secured by tiles run in at equal distances apart. Cover the cabbage with six inches of straw and then with earth. If very cold weather comes, the ventilators should be closed and the rest of the roof covered with more coarse straw.

OTHER VEGETABLES

Carrots are stored on slatted platforms. They are laid two feet thick and lightly covered with sand. Ventilation must be good as the carrots are apt to heat.

Beets, parsnips, turnips and salsify are stored in bins or boxes, two to three feet deep and covered with sand or soil to prevent shrivelling.

A dark, dry cellar, below 40 degrees is ideal for onions. Place them in tiers, the layers of onions being eight to 10 inches deep. Never allow them to freeze. As the warm weather approaches, air the cellar at night and close in the day. If held for spring sale they may be kept frozen all winter. Store them in outbuildings in layers eight to 10 inches deep and after they are frozen solid, cover with waste hay. Do not handle when frozen.

Squash should never get frozen. If stored in a cellar there should be good ventilation with plenty of heat (40 degrees) without using artificial heat. Store on tiers of shelves two feet apart. For large quantities have a separate building.

The chief thing to remember in storing any vegetable is to have good ventilation and a suitable temperature, which is generally just above freezing.

I believe there are more Helstein cows with official records of from 20 to 30 pounds of butter in a week in Leeds Co., Ont., than in all the rest of the province.—G. A. Gilroy, Leeds Co.

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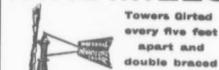
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SYNOPSIS OF CANADIAN NORTH-WEST LAND RIGHTS

ANY person who is the sole head of a family, or any male over 18 years old, may homestead a quarter section of available Dominion land in Manitoba, Saskatchewan or Alberta. The applicant must appear in person at the Dominion Lands Agency, or Sub-Agency, for the District Entry by proxy may be made at any agency, on certain conditions, by father, mother, son, daughter, brother or sister intending homestead.

Duties—Six months' residence upon and cultivation of the land in each of three years. A homesteader may live within nine miles of his homestead on a farm of at least 20 acres solely owned and occupied by him or by his father, mother, son, daughter, brother or sister.

Pre-emption—A homesteader in good standing may pre-empt a quarter-section alongside his homestead. Price \$10 per acre. Duties—Must reside upon the homestead or pre-emption six months in each of three years from date of homestead entry (including the time required to earn homestead patent) and cultivate fifty acres extra.

A homesteader who has exhausted his homestead right and cannot obtain a pre-emption, may enter for a purchased homestead in certain districts. Price \$50 per acre. Duties—Must reside upon it in each of three years, cultivate fifty acres and erect a house worth \$500.

W. W. COREY,

Deputy of the Minister of the Interior, N. B.—Unauthorized publication of this advertisement will not be paid for.

FARM MANAGEMENT

Management of a Peat Swamp

In a peat swamp which I am planning to bring under cultivation there are from two to three feet of vegetable soil on a subsoil of gravelly loam. Now would you advise me to proceed to use the tillabier?—M. S. Carlton Co., Ont.

The first point to be observed in bringing the peat bog in question into such a condition that it will grow good crops of manure is that if tile drains are used, they should be laid deeply as when the land is brought under cultivation, the peat surface will gradually decrease in depth and if the tiles were not laid deeply in the first place, they would come too near the surface.

The peat soil owing to the large amount of vegetable matter is certain to be sour, so sour in fact that the bacteria that are so necessary to a fertile soil are unable to work. An analysis of the soil says 2,000 or 3,000 pounds to the acre would be advisable. Where the surface accumulation of peat is excessive, ploughing, harrowing, leveling and burning is advisable among other things means a large loss of valuable fertilizing material.

Peat soils unless underlain by a clay subsoil are not liable to produce fertilizer. In any case to get the best results the subsoil and peat must be incorporated. Various plans are advocated whereby the surface and subsoil may be mixed together. Many peat bogs have been rendered profitable by opening wide and deep ditches and spreading the subsoil so obtained on the surface of the peat soil. Where the subsoil is sandy, there is very little chance of the swamp ever being brought into a fertile condition. Hauling soil to cover the surface of the peat, while practised to some extent where land is dear and labor cheap, is too expensive in Canada except under ideal conditions. Applications for drainage and of gravelly loam also aid in making peat bogs fertile.

When to Trim a Cedar Hedge

Kindly let me know through your valuable Paper, Farm and Dairy, if it would be any harm to a cedar hedge to clip it at this time of year.—J. C. Middlesex Co., Ont.

The fall of the year is the most advantageous time to trim a cedar hedge or any of the evergreens, although they may be trimmed at any season of the year without any noticeable ill effects. The majority of those who have cedar hedges prefer to have them trimmed in the fall.

Notes on Swine

To get the best results from feeding skim milk to pigs, it should be fed on the cold side. A half pint of skim milk makes a splendid balanced ration for shoats. What shorts mixed with skim milk just as it will run and fed in addition to all the soaked corn the pigs will eat, will produce excellent gains.

If a man wishes to know just what his brood sows are not doing him for profit, he can figure it out according to the following formula: On the debit side—Price of sow, keeping spring pigs, keeping fall pigs; and on the credit side—Value of spring pigs sold, spring pigs on hand, value of fall pigs sold, fall pigs on hand, sow on hand.

What a blessing it is to the poor, weary suffering hog that men everywhere are beginning to realize that he is naturally as clean as any other animal and will avoid filth if allowed to. For many years he has been forced to live and sleep in foul, unhealthy quarters; but now intelligent

swine raisers are providing clean troughs, clean beds and clean yards for their hogs, and they find it pays better.

In preparing sows for breeding it is necessary to feed well and keep them gaining weight. A weak sow will have little chance to produce a good crop of pigs, when all her feed is needed to keep her up to living conditions and to keep her in thriving condition when bred, so that she can use the nourishment given her, not alone for herself, but for the youngsters she is producing. In breeding a large number of sows in the fall it is advisable to breed a part at a time, shipping a few days between lots, so that at farrowing time in the spring the owner will be able to get a little sweep occasionally. Breeding from November 16 to 20 will bring the pigs from March 8 to 14.—N.

Economy in Cement Work

Peter de Linde, Zion City, Ill.

I would say that every year in the United States 1,000,000 tons of coal go in smoke, that is, are burned, and that the insurance on these is \$500,000,000. When people wake up to this business loss and the danger to human life enough to bring the owner to the life enough, they will begin to see the economy of building with concrete. Just think of saving, and adding to the normal wealth of the country \$500,000,000 every year. It seems like a dream, but it can be made a reality.

Tons and tons, and thousands of tons of good building material are wasted every year on the farms and dairies of the great West, and in the forests and everywhere that can so easily be converted into fireproof and fire-proof building material. There are many places in this country, especially in the prairies of the great West, where the ordinary building material is very scarce. Lumber in those regions is worth from \$30 to \$50 a thousand feet. At such prices many farmers can scarcely afford to build comfortable dwellings for their families; and hence the necessary outhouses in which to store their hay and feed and in which to shelter their live stock are beyond their ability to furnish. On this account a great number of material goes to waste, and still worse, a great number of horses and cattle and sheep are suffering and perishing every winter for lack of shelter. All of this can be avoided if the farmers only knew of the abundance of building material that is going to waste all around them every year.

Prairie fires also consume millions of dollars worth of property every year that could and would be saved by the economic plan of building. Great straw piles are burned every year in order to get rid of them, great stocks of corn cobs are burned every year in the same way. This is extravagant and sinful waste.

All of this is excellent building material, as well as tons of dry grass and stubble that are likewise waste. The corn cobs should be dried and ground in the feed mill, the straw and the hay should be cut as fine as possible in the feed cutter and mixed with sand and Portland cement, and it makes one of the finest building materials for outbuildings. Piles of waste, as well as tons of dry grass to be used—nothing being wasted.

To one barrel of Portland cement and one barrel of fine sand add six barrels of ground corn cobs, or six cut hay or straw. The wood fibre must be thoroughly saturated for 24 hours and then mixed with the dry sand and cement until it is in a good working condition. This quantity of material will make 25 cubic feet of solid wall.

Such building material is unequalled for the construction of stables, barns, granaries; for it is almost fireproof, and is fireproof. Not only

can the wall be built of such material, but also the floors and the roof can be made of it, if it is mixed with wire netting. The floor and the roof should be only three inches in thickness. It should then be finished with a thin paste made from Portland cement and water which can be applied with a whitewash brush. The house will be much warmer and far more durable than those constructed of lumber.

If these materials of vegetable fibre are ground into a fine flour, mixed with corn meal, and then mixed with the cement as described in part of my book, it can be manufactured into fine-grained, grained, solid hard wood or lumber, as good as oak, and can be nicely polished. Unlike wood, it will not split, nor crack nor rot, and is fireproof. From it can be made floors, doors, door frames, window frames, the mop boards, window casings, shingles and all kinds of fine furniture.

Of course the articles have to be made in molds. Some may be disposed of in the form of paper, or made to laugh at, or doubt these statements, but they must know that the beautiful white sheets of paper upon which we write, and the envelopes which we use, are made from the same material. Gather up the fragments that "waste remain," is a holy command, which we of us have learned to obey. Obey this command and poverty flees and wealth abounds.—Extract from "Cement."

Shapes of Horse's Heads

A tapering shape of the head—that is, tapering towards the muzzle—is a most attractive feature and characteristic of all well-bred horses, says an English Exchange. It is particularly pronounced in thoroughbreds and in horses nearly so, as well as in the various considerations of the way in which it is shaped, perhaps, more than any other point, imparts individuality to them. The line of the face, from forehead to muzzle, may be straight, or more or less curved, or may be dishd somewhat; or there may be a curve in the other direction, imparting convexity to it; and when this last is at all marked we get the so-called Roman nose.

In some horses, further, the forehead is found to be prominent, it so to speak, bulging out at the eyes and between the ears. That decidedly detracts from the appearance of the animal, giving a heavy look and spoiling its gracefulness of contour. Although a straight profile undoubtedly looks the best, a slight dishing of the nose is by no means objectionable as it does not in the least impair the good shape of the head or its locks. Such a slightly dishd face is to be seen in a number of thoroughbreds.

A Roman nose, however, a tendency thereto, on the other hand, is not liked; at any rate, not in horses of high breed, because it does not look particularly well in them. It certainly imparts an unduly pronounced cast of feature, and a head of this kind seems to lack in refinement as compared with a straight or slightly convex profile. But, unimpaired though this feature is usually considered, it is widely held among horsemen that the fact of a horse being Roman-nosed is an indication that the animal is of a low breed, and that he is of a good wearing sort. So far as regards English-bred horses there may be some truth in this theory, but it does not apply to the horses of foreign extraction which are imported into this country. These frequently have a Roman nose, yet such are, nevertheless, generally of a high quality, and are usually proved to be of a fine sea soft; at least, in regard to Continental breeds.

I must congratulate you upon the advancement of Farm and Dairy.—J. W. Richardson, Haldimand Co.

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 Wool Grease, Arsenate of Lead, Lime and Sulphur, both a Contact and Poison Spraying Compound.
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conducted with skill and intelligence. If the experience of the best men is worth anything, if their observations and book-keeping have any value as standpoints from which to judge, there is surely a profit in wisely bred, wisely fed hogs, and there always has been, at any price for which they have been sold two years in succession within the observation of men new in active life.—From Coburn's "Swine in America"—Price through Farm and Dairy, \$2.50.

Why Hogs Root
 It is said by observers that a hog roots in the ground for alkali which it finds in the soil and which aids him in digestion. Nature helps him out in this way when man is foolish enough to neglect him. In the amount of carbonaceous feed that we feed the hogs there is too little phosphate for them. Anything that we throw to the hogs, whether lime-bones or oyster shells should be greatly relished and seems to be a great help to them in digesting their other feed, and promoting their general health.

Tankage is an excellent feed to prevent the sows and pigs from having an apparent craving for uncommon feeds like bones, old leather and also killing chickens. It also aids them in getting more nutriment out of their other feed by keeping them in a healthy condition. A good plan is to satisfy the craving for "something different" by planting a patch of artichokes which will give them their fill before putting them on clover or grass.

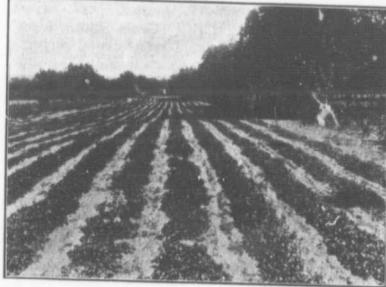
Pork and the Jews.—By some of the ancient nations the hog was considered a sacred animal. By others it was regarded as unclean, and prohibited as food. This prohibition among the Jews was regarded by Tacitus and others as having been because of a feeling that pork was often unfit to eat in warm climates, and apt to encourage the spread of leprosy. Moses is thought to have forbidden the eating of pork because it was liable to give the Israelites diseases that would make them unable to endure the long march out of Egypt. In those days when cooking was crudely done, there was no doubt much reason to fear trichinosis. From Coburn's "SWINE IN AMERICA."

HORTICULTURE

A Profitable Orchard
 Five miles northwest of Forest on the shores of Lake Huron is one of the most profitable orchards in Lambton Co., that of Johnston Bros. In all about 70 acres of this farm are planted in orchard. Apples, plums, and peaches are grown. The apple trees range in age from 65 years to this year's planting. There is a 12 acre plot of three-year-old peaches, and 15 acres of bearing plums. This orchard demonstrates strongly the value of scientific treatment. Under the old method of letting trees grow without attention, the yearly product was about 200 or 300 barrels. Last year 2,300 barrels of apples were exported and 2,000 barrels made up into the evaporated article. This represents a gross return of over \$10,000 from 35 acres of bearing orchard.

Protection of Strawberries
 K. A. Kirkpatrick, Exp. Station, Minn.

Plan now to protect the strawberry bed before the ground freezes. Probably the best material for this purpose



If you would have Thrifty Strawberries Next Spring, Protect Them in Winter
 Strawberry plants should be protected by a covering of strawy manure or litter of some kind as soon as, or shortly after, the ground is permanently frozen. Directions for protecting the strawberry plantation in winter are in adjoining article. The illustration shows a well cultivated strawberry plantation in an orchard on L. A. Hamilton's farm, Peil Co., Ont.

ing of the marsh grass. In extreme situations such as points of knolls or exposed hillsides, it may be necessary to resort to small brushwood poles to retain the covering. These should be laid on top of the hay, at right angles to the prevailing winds and about three feet apart.

The great damage is done to strawberry plantations in the early spring months, when the snow has disappeared, allowing the thawing of the surface through the day, followed by sharp freezing at night. This results in the heaving of the plants or the killing of the crowns through the rupture of the prematurely-distended cells. While the damage comes at that time, covering must be done in the fall in order to do it efficiently.

How to Store Cabbage
 E. F. Eaton, Colchester Co., N.S.

For keeping cabbage till spring there is nothing better than the old-fashioned pit. To make it, a trench is dug wide enough for the heads and so deep that when the cabbages are in it, heads down, only the roots are above the surface. The pit is lined with straw or loose leaves broken from the heads. Over the heads a little straw is placed, or a few leaves, then the trench is partially filled with earth. Before winter sets in the trench is filled to make a ridge about the roots and a covering of litter is

posed will be a light covering of marsh hay. This will be least likely to introduce seeds of weed pests into the bed. Material, useless for food, such as reeds, rushes and the coarser grasses, will be ideal, because it will not pack so closely to the ground and at the same time it is not so easily lifted by the wind.

The whole surface of the bed should be covered rather lightly, an even depth of three inches being very desirable. On small beds the material can be hauled up to the edge of the plantation while the weather is fine, placed in a neat pile, and, when the ground is frozen, it can be scattered over it with a fork. On larger plantations, the work of hauling may be deferred until the ground has frozen, when the loaded wagon may be driven astride a row, the driver pitching the material off on either side of the load, while two helpers scatter it to the proper depth over a convenient swath.

RETAINING THE COVERING
 The problem of retaining the covering during the windy weather of early winter, before the snow has fallen to weight it, and in early spring after the snow has left is a serious one. On small beds it may be advisable to use stakes cut from the cornfield after husking, or gathered from the racks where bundle-corn is being fed. These may be used alone, or in conjunction with a light cover-

added after the ground is frozen solidly. In the spring the heads come out crisp and delicious. This is a time-honored method which has defied all attempts at improvement.

Heads intended for early winter may be put in paper sacks which are tied closely about the stems, then hung from the wall or ceiling of a cool, dry cellar. They will keep for several weeks, but are liable to dry out more than is good for them before spring.

To store cabbage so that it will be crisp and fresh when wanted is not difficult. It is among the easiest of all vegetables to keep. With a little care it can be had in good condition at all times from fall till spring. Only such heads as are solid and mature should be selected. Those that have begun to split should be discarded. They will do for immediate use, but do not keep well. Pull them and if not perfectly dry stand them on their heads under cover till they are. It will do no harm to treat them in this way, anyhow, for a few days.

In the orchard of Johnson Bros., Forest, is a Baldwin tree, 35 years old, which has a fondness for making big records. Its last year's crop was 20 barrels, but in 1908 it exceeded even this, yielding 26 barrels of apples, mostly of the first grade, selling altogether for \$84.

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POULTRY YARD

Winter Eggs Profitable

Mrs. A. Johnston, Brome Co., Que. Poultry is only a side line with us on our dairy farm. Here there is always plenty of work for the men with the general farm stock, so the care of the fowls is left entirely to me.

I endeavor to make a profit out of them from winter eggs. Our poultry house is a cheap open fronted building and we practise dry feeding all together. A mixture of equal parts of whole corn, oats and wheat is scattered in the litter morning and night, about two small handfuls being given to three birds. At noon a dry mash of crushed oats, two parts, and cracked wheat, one part, is given in troughs nailed to the wall. Water, or milk when we have it, is before them constantly. Twice a week they are given green cut bone. As they get milk frequently, meat foods are not so necessary.

With this system of feeding, the birds are kept constantly busy and I find the busy hen to be the laying hen. In this section of Quebec, there is never any trouble in disposing of winter eggs at good prices. In summer eggs will drop to 12 cents a dozen. This is when most of our neighbors are getting eggs. We prefer to get them when they are 35 to 40 cents and more a dozen.

Mashes for Hopper Feeding

M. A. Jull, Poultry Expert for H. C. The majority of dry-mash men are in favor of the dry-mash method, especially where laying fowls are kept in large numbers. There is much less labor in the dry-mash method. The fowls may be kept in a healthier condition on dry mash than with wet mash. If wet mash is used, it must be fed with very great care, although with small flocks many by-products may be disposed of to good advantage in the wet mash. The principal thing in dry-mash feeding is to have the dry mash thoroughly mixed and to feed it in a hopper that will prevent any waste.

One good dry mash which is found to give satisfaction is:

- By measure—4 parts bran,
- 1 part shorts,
- 1 part ground oats,
- 1 part ground barley,
- 1 part corn meal,
- 1 part beef scraps,
- 1/2 lb. salt to one bag of mixture.

This is a very good ration, being largely composed of bran which is one of our best foods, and having the other heavier foods in good proportion.

FOR SALE AND WANT ADVERTISING

TWO CENTS A WORD CASH WITH ORDER

IF YOU WANT Barred Rock or White Leghorn Cockerels write Maple Leaf Poultry Yards, Brighton, Ont.

PURE BRED FOWLS GIVEN AWAY FREE in return for new yearly subscriptions to Farm and Dairy. A club of four new subscribers will be given a pair of pure-bred standard fowls. Write Circulation Manager, Farm and Dairy, Peterboro, Ont.

FOR SALE—Thorough bred Barred Rock cockerels; bred from 300 egg striders; \$1 each. Mrs. William Hardell, Bayville, Ont.

ELM GROVE FARM

FOR SALE—A few good Cockerels, of the following breeds: Rose Comb Brown Leghorns, Single Comb White Leghorns, Single Comb Black Minorcas, Barred Rocks, at \$1.00 each. J. H. RUTHERFORD, Box 82, Caledon E., Ont.

Another good mash may be made of:

- By weight—4 parts wheat bran,
- 2 parts ground oats,
- 3 parts corn meal,
- 2 parts wheat middlings,
- 2 parts ground alfalfa,
- 2 parts beef scraps.

This ration provides for green food in the mash, and if this ration is used, the alfalfa must be well cured; otherwise it may do a great deal of injury to the laying stock.

These are not the only rations which are used in rearing laying hens, but are two which have given satisfaction, although the proportion of the ground grains may be varied if thought advisable. If green bone can be procured at a reasonable price beef scraps may be omitted altogether from the mashes. If beef scraps are used, the poultryman should see that they are of good quality. Beef scraps are preferable to beef meal.

Notes on Poultry Housing

Mrs. Annie L. Jock, Chateaufort, Que.

Cleanliness and abundance of air and light in the house are important requirements, along with plenty of fresh, cool water and a variety of food, to success with poultry. We have a small poultry house built in an old orchard for winter use.

We now use small colony houses which are so moved to new locations during the winter. The chickens are hatched in these houses in the spring and usually go home to roost. A coating of lime, with a little dissolved copper sulphate and kerosene in it to prevent the germs of disease and mites from increasing, is given these houses in early spring, and again at midsummer.

When the poultry are housed in the fall, it is well to have the roosts of the house low at first. Roosts, not more than two and a half inches in diameter make good roosts. These should be painted with kerosene, in which is a little kerosene only. The latter does not evaporate but hardens on the rooks and destroys any insects with which it comes in contact.

Grading Eggs for Sale

For ordinary purposes a satisfactory grade of eggs will be found sufficient to satisfy the demands made on the producer. viz.—New laid selects and No. 1. Another grade of common stock may, for a time be marketed, but they must not be sold under the brand of the Canadian Poultry Producers Association.

New laid selects—To consist of strictly new laid eggs not over five days old, weighing not less than 24 ozs. to the dozen. Clean, of uniform size and color, packed in substantial neat cases, having clean fillers.

No. 1.—To consist of new laid eggs, not over five days old, weighing not less than 21 ozs. to the dozen. Clean, packed in substantial and neat cases with clean fillers.

Common eggs, not covered by the foregoing grading, must not be marketed under the brand of the Association.—F.C.E.

Where "Systems" Fail

There are individuals who think they can tell how profitable a cow is by her looks, how much milk she can produce and how rich in butter-fat. Other claim to have the same superiority ability regarding the producing proclivities of laying hens. Perhaps there never will come a time when some one will not be ready to claim such distinction. Experience and common sense should prove the absurdity of either proposition. Nevertheless, there exist advertised "systems" whereby a perfecting the highest layers and even estimating the number of eggs a hen will lay during a year.

If people did not patronize these "systems" they would not be advertised. Each year they are taking on some suckers.

There is no man living who can judge accurately by eye what the record of a hen or cow will be. He may hit the mark occasionally—he cannot very well help it. But it takes the trap nest and Babcock test to tell absolute results. There is no getting around the reliability of these methods, and there is no "system" or scheme possible which will provide like knowledge of the productive qualities of hen and cow. When it comes to guessing, one man's guess is about as good as another's, and neither can be depended upon.

Poultry Pointers

The busy hen is the laying hen. Plan to have lots of litter in the house this winter.

Have you laid in a supply of grit for the winter? A load of coarse sand makes good, cheap grit. Get it now.

The young cockerels are still running with the pullets in many flocks. Separate them and prepare them for sale. Likewise the old hens which are not getting to be carried over this winter. They should have been sold long ago.

It is not necessary to have the pullets in the basement to keep them warm. Give them a dry, light house and they will live and lay as they never will in that damp basement.

Nothing is gained by having a male with the laying flock all winter. It much better to keep the sexes separate. You will get more eggs and better eggs.

One Hundred Dollars in Gold.—As a substantial winding up of the campaign which they have been carrying on for more and better poultry during the past summer, Gunn, Langlois & Co., Montreal, are offering three prizes of \$50, \$30 and \$20 for the three best shipments of poultry to reach them between December 15th and 16th. The shipment must consist of 12 turkeys, and one of the following: 24 chickens, 12 ducks or 12 geese. It is to be understood that the company

can purchase all shipments at current market prices. This competition is open to farmers only. The poultry must be packed in cases containing twelve birds. See their advertisement on this page of Farm and Dairy and write them for further particulars.



This is Profitable Poultry Raising

Every egg is virtually a bird in the hand when your poultry raising is backed by expert knowledge that eliminates failure and assures the greatest of money-making success. This knowledge you cannot get second-hand out of a book. It must come to you first-hand from experts who are making big money raising poultry and who know how to advise and help you. This help you get in the home course of Poultry Raising conducted by the International Correspondence Schools of Scranton.

Every phase is covered—from selecting eggs to marketing for profit. The subjects include: How to select most profitable breeds; feeding; marketing eggs and poultry for profit; natural and artificial brooding; natural and artificial incubation; laying hens; combination plant; poultry appliances; economics of poultry; squabs, etc., management; turkeys; water fowls; ducks, etc.

Additional value of this course is found in the fact that the experimental plant of the I. C. S. is the largest poultry farm in the world—the celebrated Famous Poultry Farm—where experiments of every kind are made for the benefit of those taking this course.

The I. C. S. Course saves time, saves money—insures success. The season is here. Here is the money-making way to—

For full particulars write to-day to: INTERNATIONAL CORRESPONDENCE SCHOOLS, 1750 Scranton, Pa.

REWARD, ONE HUNDRED DOLLARS

POULTRY PRODUCERS

We will pay top market price at time of delivery, and a prize of

\$100.00 IN GOLD

Divided First, Second and Third, for the best 12 Turkeys and 12 other barn yard fowls delivered between the 12th and 16th December

JUDGE.—Professor Frd. C. Elford of McDonald Agricultural College.

Write for particulars and entry blanks

Gunn, Langlois & Co., Ltd.

MONTREAL, QUE.

CANADA'S LEADING PRODUCE AND POULTRY HOUSE

Interesting Comparisons

Editor, Farm and Dairy.—During the season of 1910, there have been such noteworthy variations in the average yield of cows month by month in different testing associations that it occurs to me you will be interested in some of these comparisons given in the following table:

ONTARIO—LOW AVERAGES	
	Lbs. Lbs Milk Fat
April, Wallace.....	583 19
May, Brooklin.....	647 22
June, Camalachie.....	747 24
July, Cornith.....	711 21
August, Spencerville.....	556 19
September, Dalmency.....	515 20

ONTARIO—GOOD AVERAGES	
	Lbs. Lbs Milk Fat
April, East Oxford.....	1114 35
May, Peterborough.....	1044 33
June, Black Creek.....	1162 38
July, Warsaw.....	1030 30
August, Central Smith.....	993 33
September, Trewwin.....	951 32

May I point out that the high yields almost invariably are found where some attention has been paid to dairy records thereby enabling owners to cull out such cows as do not pay; this is naturally followed by better feeding, and breeding to a pure bred sire of decided dairy type.—Chas. F. Whitley, in Charge of Dairy Records.

Farmer's Institute Conference

A conference of members of Farmers' Institutes and of Farmers' Institute Clubs has been called by the Superintendent, Mr. George A. Putnam to be held in Toronto, Thursday and Friday, Nov. 17 and 18. The meeting is intended primarily to assist Institute officers and lecturers and officers of Clubs in making their work more uniform and effective during the coming season. The Convention will be held in the Temple building.

The meeting it is thought should result in increased activity among the Institute officers and members, and will be the means of inducing farmers in many sections of the province to form local clubs. On account of the Provincial Horticultural Exhibition from Tuesday to Saturday, Nov. 15th to 19th, return tickets will be issued of 83 miles of Toronto, can be bought for single fare, plus 25 cents. Delegates from greater distances may receive reduced rates on the standard certificate plan.

A most interesting programme has been prepared. Copies may be had on application to the Superintendent, George A. Putnam, Toronto, Ont.

Asked to Let the Tariff Alone

Editor, Farm and Dairy.—In view of the evident determination of the Canadian manufacturers to use all of their influence to keep the tariff at a high level, it is up to us farmers to have our say in the matter.

That the farmers of Canada should let the tariff alone was the opinion expressed by Mr. R. J. Younge, of Montreal on the occasion of the visit of the Canadian Manufacturers' Association to Regina last month. Such a condition of affairs would suit the protected interests to perfection. Continuing Mr. Younge said: "The differences between the manufacturer and the farmer are only on the surface. At heart, all are protectionists because any study of actual conditions would show that some tariff is necessary if industries of all kinds including farming are to be developed in this country. Canada is thriving as never before. No one is really suffering through the tariff, therefore go carefully about altering it."

FARMERS INTERESTED

No class of people in Canada are more vitally interested in tariff questions than are the farmers. Farmers are the largest buyers of all kinds of manufactured goods and hence are most affected by a protective tariff.

The manufacturer is enabled by means of our tariff to charge an average of 25 per cent. more for his goods than he could without the tariff. The price which we can ask for our products however, is not affected by our tariff. The production of agricultural produce in Canada is greatly in excess of home consumption. Therefore the price of our products is determined almost altogether by the price which we can get in the foreign market in competition with the world.

To ask a class of people so vitally interested in tariff questions and so greatly affected financially as is the farmer to let the tariff alone altogether, or in other words to leave it in the hands of the Canadian Manufacturers' Association, is ridiculous in the extreme. The modern farmer is a keen business man. He will not be content to leave "well enough" alone. If he finds that by changing the tariff, his business and the prosperity of the country in general will be increased, he has a perfect right to make his own heard.

PROSPERITY DUE TO NATURAL CAUSES
The fact that the farmers of this country are fairly prosperous in spite of the tariff, which makes us pay fully one-fourth more for everything we have to buy is due to the fact that we have more country with all kinds of undeveloped resources. It is the opening up of these resources that accounts for our prosperity; not the protective tariff as the Manufacturers' Association would have us believe.

An industry which cannot survive without a protection of 20 or 30 per cent. instead of being a benefit to the country is a positive injury. There are many articles on which reduction in tariff would be of most decided benefit. Individually or through our various organizations we should do our utmost to impress on our legislators at Ottawa the fact that we want tariff reduction and that we will have it.—L. K. Shaw, Welland Co., Ont.

Unsoundness of the Horse

(Continued from page 4)

A bony growth upon the surface or among the small bones, on the inner, lower part of the hock joint, or may involve the true joint higher up. A bony growth appearing upon the outer part of the joint is called a "jarde". In spavin lameness the horse starts on lame and improves or recovers with exercise. Bog, or so-called "blood" spavins, are soft, fluctuating distensions of the capsular ligaments (synovial or joint oil sacs) of the hock joints, and give a bulging appearance to the front of the part involved. Curb appears as a bulging, calloused enlargement upon the rear portion of the hind leg, just under the hock joint, involving the tendons and ligaments and sometimes the bone of the part. Crooked or sickle hocks are most prone to curb which follows undue strain when at play or work. Actual unsoundness, implicating the hock joint and objectionable conformation, rendering the joint liable to contract disease or become unsound, should be carefully avoided in the selection of breeding stock and work animals.

OTHER UNSOUNDNESSES

CHOREA, SHIVERING, OR ST. VITUS DANCE is considered a hereditary disease and also constitutes unsoundness in work horses. It is commonest in nervous, tall, narrow animals. The disease is most readily detected when moving the horse from one side to the other, or in backing out of the stall. The leg is jerked up once or twice at these times and the tail and muscles quiver momentarily. The symptoms disappear when the horse is exercised. "Stringhalt" (skin to chon) is the term applied to the exaggerated jerking up action of the hind leg seen in some horses. The trouble in some instances is remedied by operation (peroneal tenotomy).

ROARING. (laryngeal hemiplegia) is

characterized by noisy breathing when the horse is exercised. It constitutes unsoundness in both work and breeding horses.

HEAVES. (emphysema of the lungs), indicated by double bellowslike action of the abdominal muscles as the horse breathes; cough also is present. Like roaring it is an unsoundness of the breeding animal and work horse.

VICES such as cribbing, winducking and weaving are best discovered when the horse is in the stall and although not certainly hereditary are highly objectionable and detrimental unsoundnesses.

All the prize grain from the Canadian National Exhibition has been sent to the fourteen agricultural representatives in the Province, who will distribute it in half-bushel lots

among representative farmers in their sections. These men will sow the grain, and next year will return to the representatives an equal quantity, and this will be handled on to other farmers.

The Ontario Agricultural and Experimental Union will hold its next annual meeting at the Guelph Agricultural College, Jan. 10, 11, and 12. Formerly the meeting has been held at the Ontario Agricultural College, it is now to be held at the time of the Short Course on Seed and Stock Judging. A better opportunity than ever before will be given at the forthcoming convention for bringing out the results of the cooperative experiments in agriculture that are now being conducted on about 5,000 farms throughout Ontario.

It Does More Work For You

Because the feed opening will take larger charges of hay, shorter the compound leverage work is greater, because the sweep is shorter enabling the plunger to give more strokes in a given time, the Dain Pull Power Hay Press has much greater capacity than a push power press.

With the Dain the horses never complain of heavy draft. The ingenious equalizing device shifts the weight so that the load is always moderate. There is no pitman or other high obstruction for the horses to stumble over. There is no heavy rebound, no whipping of the tongue to mar the horses' necks more, as with pitman-presses. The simplicity of the compound leverage construction reduces the draft to the lowest degree. The Dain is the easy hay press—easy on horses, easy on men.

You can set the Dain Pull Power Hay Press quickly anywhere as it does not need to be level. Because it delivers the bales towards the horses and away from the stock, it can be set at the centre, or any part of the stack. Thus we do not have to fork the hay so many feet as with presses you have to set at end of stack. You stand up all the time you are tying, too.

Three men with the Dain can do as much work as five with ordinary press

Dain Pull Power Press

The Dain has no delicate mechanism—no toggle joints—to get out of order. Neither will exposure to the weather cause it to warp, shrink or swell out of shape. It is practically all steel construction. The Dain is good for more than a lifetime of steady, satisfactory service.

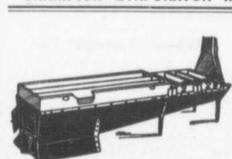
Now, what is your name? We want to know, in order to send you a catalog explaining our hay presses fully. Please tell us on a post card right away.



Dain Mfg. Co. Ltd.

103 Dain Avenue
WELLAND, - ONT.

"CHAMPION EVAPORATOR MAKES THE BEST SYRUP"

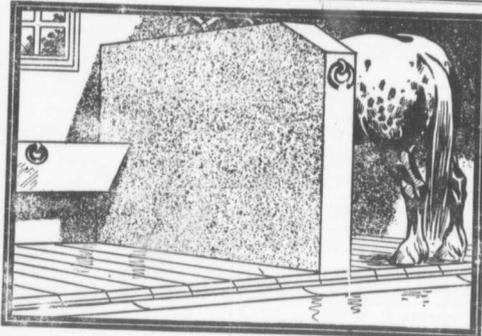
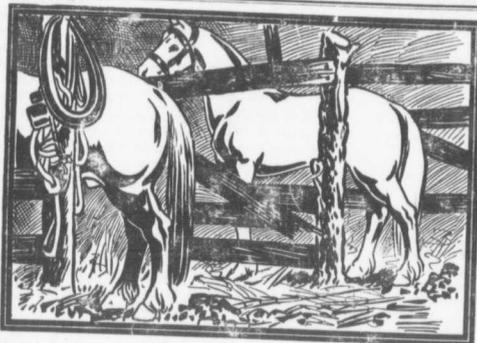


"CHAMPION" EVAPORATOR

Now is the proper time to give your Maple Syrup business serious consideration. By placing your order at once you can have your evaporator all set up before the cold weather reaches you. This insures taking care of the first run of sap, which is the most profitable. All up to date Syrup Makers use the "Champion Evaporator." Write for booklet.

THE GRIMM MFG. CO.

58 Wellington St., MONTREAL, QUE.



Which of These Pictures Represents Your Stable ?

IF your stable is of wood, you'll do well to tear down those old, decrepit and unsanitary stalls and mangers and build new ones of Concrete.

In fact, to be properly ventilated and sanitary the entire stable—inside and out—should be built of Concrete.

Because of the continual dampness which prevails in the stable, lumber soon rots away and requires almost constant patching and repairing, besides the expense of renewing it every few years.

Lumber, too, because of its absorbent nature, soon becomes impregnated with the odors and filth of the stable and forms a prolific breeding ground for disease germs of every kind. Then rats will infest a timber-built stable and another dangerous source of disease is developed.

To build your stable of Concrete is to have it as modern as it is possible to make it.

Concrete stables are cheaper than lumber, viewed from the standpoint of ultimate cost. They are germ-proof, free from vermin, durable, sanitary, fireproof, and are easily kept clean.

There is no insurance necessary on a Concrete stable. No agent could figure out the risk, because there is none. This assurance of security is more valuable than the saving of expense. There is little satisfaction in receiving a cheque from an insurance company to compensate you for loss. Concrete positively defies destruction.

The cost of a Concrete stable is less than you think and is more than made up by its lasting durability.

If you would know something of the possibilities of Concrete, fill out the coupon and send it to us. By return mail we will send you free a copy of our new illustrated book, "What the Farmer Can Do With Concrete." This book is just off the press and is

priced at 50c, but we intend to distribute them free for a while and charge up the expense to advertising.

"What the Farmer Can Do With Concrete" gives you complete instructions for the construction of almost everything you can think of in the way of farm utilities, such as stables, mangers, feeding troughs, and so forth.

There is nothing technical or hard to understand in this book. It is written in plain, simple language, easily understood by the layman. It tells you how to mix and use concrete, make the necessary preparations, forms, molds and the like, so that you can do much of this work yourself or have it done under your direction.

Sign and mail this Coupon now, because if there is any possible way of lessening the cost of farm construction and at the same time adding to its value and durability, you certainly ought to know about it.

Clip the Coupon, or use a Postal—mail it to us now and you will know promptly.



FREE—Our new illustrated book,

"What the Farmer Can Do With Concrete."

Tells you how to use Concrete in constructing:

Barns	Feeding Floors	Poultry Houses	Stalls
Cisterns	Gutters	Root Cellars	Steps
Dairies	Hens' Nests	Silos	Tanks
Dipping Tanks	Hitching Posts	Shelter Walls	Troughs
Foundations	Horse Blocks	Stables	Walks
Fence Posts	Houses	Stairs	Well Curbs
			Etc., etc., etc.

Canada Cement Co., Limited

71-80 National Bank Building, Montreal

You may send me a copy of "What the Farmer Can Do With Concrete."

Name

Address

FARM AND DAIRY

AND RURAL HOME

Published by The Rural Publishing Company, Limited.



1. FARM AND DAIRY is published every Thursday. It is the official organ of the British Columbia, Manitoba, Eastern and Western Ontario and Bedford District Quebec, Dairymen's and of the Canadian Holstein, Ayrshire, and Jersey Cattle Breeders' Association.

2. SUBSCRIPTION RATES. \$1.00 a year, strictly in advance. Great Britain, \$1.20 a year. For all countries except Great Britain and Great Britain, add 50 cents for postage. A year's subscription free for a club of two new subscribers.

3. REMITTANCES should be made by Post Office or Money Order, or Registered Letter. On all checks add 50 cents for exchange fee required at the bank.

4. CHANGE OF ADDRESS.—When a change of address is desired, send both the old and new addresses must be given.

5. ADVERTISING RATES quoted on application. Copy received up to the Friday preceding the following week's issue.

6. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles.

CIRCULATION STATEMENT

The paid subscriptions to **Farm and Dairy** exceed 5,000. The official circulation of each issue, including copies of the sent subscribers who are but slightly in arrears, and some of the copies from 5,500 to 10,000 copies. No subscription is accepted for less than the full subscription rates. Thus our mailing lists do not contain any dead circulation.

Severe details of the circulation of the paper, showing its distribution by counties and provinces, will be mailed free on request.

OUR PROTECTIVE POLICY

We want the readers of **Farm and Dairy** to feel that they can deal with our advertisers with our assurance of our advertisers' reliability. We try to admit to our columns only the most reliable advertisers. Should any subscriber have cause to be dissatisfied with the treatment he receives from any of our advertisers, we will investigate the circumstances fully. Should we find reason for the withdrawal of our advertisers are unreliable, even in the slightest degree, we will discontinue immediately the publication of their advertisements. Should the circumstances warrant, we will expose them through the columns of the paper. Thus we will not only protect our readers, but our reputable advertisers as well. In order to be entitled to the benefits of our Protective Policy, you need only to include in all letters to advertisers the words, "I saw your advertisement in **Farm and Dairy**." Complaints must be made to us from the date within one week from the date of any unsatisfactory transaction, with proofs thereof, and within one week from the date that the advertisement appears, in order to take advantage of our guarantee. We do not undertake to adjust trifling differences between readers and responsible advertisers.

FARM AND DAIRY

PETERBORO, ONT.

THE PRICE OF MILK IN CITIES

The city consumer is quite right when he feels that any undue increase in the price of milk is a very real hardship, and it leaves permanent results in the impaired health of many children of the poor whose usual supply on account of the increased price was to be shortened. Milk dealers in Toronto have announced their winter price to be eight cents per quart for unskimmed and nine cents for bottled milk.

It may be that this price is unduly high to the consumer, but it is certain that the consumers are not getting too much. Let anyone acquaint himself with the value of fresh milk cows, the high cost of feed and labor, and the abundance of both of which it takes to care for the dairy cow, also consider the exceedingly perishable nature of the product, and they will not consider the \$1.65 per can that the producer receives one whit too much.

The whole matter of Toronto's milk

supply, as the Globe puts it, needs careful consideration from its economic aspect. Decent roads leading into the city and the more general use of auto trucks, trolley cars and a less exorbitant charge for the carriage of milk into the city and empties back to the farm, would in all probability enable the retailers to lower the price to the consumer one cent a quart and still make fair returns.

IGNORANCE NOT BLISS

It is quite proper to be wise to the danger to health that attends the drinking of water not known to be absolutely pure. Over 25 persons that attended the Orono fall fair recently were stricken with typhoid. Five of the victims have since died; others are in serious danger. Each of these typhoid victims had partaken of water drawn from a well at the local hostelry.

The greatest care should be taken in regard to all water used for drinking, culinary or dairy purposes. The wells and other sources of water supply not above suspicion are legion. We ought to ask ourselves serious questions concerning our wells and about any water used for drinking or brought into contact with things we eat. Only recently eleven cases of typhoid fever in Toronto were traced to one dairy that supplied milk to the city.

When there becomes a general appreciation of the untold suffering and the imminent danger to human life caused by impure water, people will not be caught unawares by polluted water, as has been altogether too common in the past.

LONG TERM LEASES THE BEST

Why are Canadian farms that have been rented for a few years almost invariably to be found in a run down condition? In older countries, England for example, where almost all of the agricultural land is farmed by tenants, the soil is in a higher state of fertility than is the soil on most of the best farms in the older settled parts of Canada. Our system of renting farm lands is at fault. Short term leases are the rule, they should be the exception.

A farmer cannot reap the full benefit of improved cultivation and fertilizers in one or two years. At least four years are necessary to get out of the soil all that is put in. Crop rotation is essential to good farming, and the shortest rotation advisable for general farming extends over three years. This plan of cropping, however, is not encouraged by a short lease. No one can blame the tenant for not improving his farm when he knows that he may not hold it long enough to get the full benefit of his industry.

In England or Scotland rents are frequently made for terms of 50 or even 100 years. Long term leases are invariably the rule. Then it is to the advantage of the tenant as well as of the landlord to keep the land in good till. The remedy for our run-out, rented farms lies with the landlord. All should bear it in mind that long term rents are the best from every point of view.

THE PATRON'S PROBLEM

Some equitable basis for the payment of milk should be adopted by each and every factory. The pooling system, or paying for milk by weight, regardless of its quality, must forever stand without one sound argument to support it. There is nothing just about the system. It is grossly unfair. It places temptation in the way of the producer, which, as records show, is irresistible on the part of many. Under the pooling system no encouragement is given patrons to produce milk of quality; these manufactured is of poorer quality and year by year reports of the dairy instructors have shown that more pounds of milk are being required to make a pound of cheese.

There are three methods other than that of the pooling system any one of which is greatly to be preferred to the pooling system. These are to pay according to the "straight percentage of fat," the "fat plus the estimated casein," and the "fat plus the actual casein," as determined by the Hart casein test.

Dairy authorities have never agreed as to which is the more correct method of the two most commonly known, the straight fat and the plus two method. And on that account, the general adoption of a system of paying for milk according to quality, has been sadly delayed. A mere handful only of the factories make any pretense at dividing proceeds on a basis other than that of the pooling system.

Casein is known to have definite value in cheese making. It is right that it should be considered. Actual work with the Hart casein test shows that in general the casein content of the milk increases as the reading of fat increases. Hence paying for milk according to its fat content is to a great extent taking account of its casein content.

Until some system is devised whereby official testers will be appointed to do all the work of testing, it is not at all probable that the casein test will be adopted in cheese factories generally. The Hart test is comparatively a delicate one and it requires more time and knowledge than the average maker for some years to come will be able to devote to it. Payment on the straight fat basis is the simplest method that can be recommended. It is decidedly progressive, and has been extremely helpful to the dairy interests where it is in vogue, and until the day dawns when official testers will become a part of the scheme of our great cheese industry, payment according to this basis should be adopted.

The question of dividing proceeds is one of vital concern to patrons. It is their problem, and largely theirs alone. At the forthcoming annual factory meetings, progressive patrons will serve their own interests and the best interests of the industry if they agitate and carry through to a successful conclusion the adoption of payment for milk according to its fat content.

The motorists, who are ready to accept, and by deputation have asked for, a substantial tax, based upon the power on Autos. of their automobiles, if that tax shall be applied in increasing Provincial aid to counties for road construction, should be granted what they ask in this regard. The license or tax on automobiles should amount to a figure that would more nearly represent the damage they work on highways. To anyone who can afford an automobile, a tax of \$25, \$50, or even more, would not be burdensome, and it would result, if applied to the cause of good roads, in greater justice to all. The low cost of the present tax or license, amounting to \$4, is little short of a burlesque.

Did you ever notice that in summer nature hides and smooths over the unsightly conditions that so often prevail around so many in Winter farm outbuildings. A dilapidated barn or a tumble down snake fence may be picturesque when seen in the shade of trees and surrounded by green fields. It is much different in the winter months, is it not? Then those things stand out in all their ugliness. Winter is the proper time to have a look around the farm and see where improvements are needed in buildings, fences, and so forth.

Bill board advertising detracts so much from the beauty of a rural landscape that it should be discouraged.

Bill board advertising detracts so much from the beauty of a rural landscape that it should be discouraged. The advertising agents of some pushing concern may add a few dollars to your income if you allow them to put large sign boards up in your fields, but these will detract much more than their earnings from the value of your farm.

We regret that the table computing the sums lost, from herds of various numbers, when the inefficient cream separator for any cause is doing inefficient work, was not inserted in the creamery page of **Farm and Dairy** Nov. 3rd, as announced. It is published this week and should receive the careful consideration of every **Farm and Dairy** reader who has a cream separator in use.

Our old subscribers generally understand that we cannot furnish the post office address of a contributor, and we

Our old subscribers generally understand that we cannot furnish the post office address of a contributor, and we Correspondents make this explanation now largely for the benefit of new subscribers. Naturally the publishers of a magazine cannot be made a clearing house for the enormous volume of correspondence which would accumulate but for this rule. To aid those, however, who from time to time want more light on certain subjects, we suggest that they send their inquiry direct to the editor, who will try to handle it in a manner helpful to all, perhaps securing further details from the original contributor.

Use Farmers' Money to Make More

Now, that the fall seedling is done people are hanging time to talk again, and even to do a little thinking. A man whose eloquent manner was bad—he made too many gestures and his voice was harsh and uncultivated—got me in a corner one day recently and unburdened himself of his summer thinking.

"Why don't you write something about the banks? I tell you what it is, young man, we people in the country and the smaller towns have got to look into this banking question. One morning when I was milking I thought of a thing about the banks that knocked me all of a heap. Before that time I had always thought these places with lots of money, where a man could go to get his sale notes discounted, or, perhaps, if his name was good, to borrow a hundred or so to tide him over till he sold his wheat. But do you know what these banks really are? They are chronic borrowers. They have branches in every part of the country to borrow money from the farmers at a low rate of interest. Of course, the security is good, but they are simply borrowing from us every time we make a deposit. That's exactly what putting money in the bank does. We go around swelling out our chests and being proud that we have money in the bank, when we are simply lending it out at a low rate of interest.

"They get us to lend them all our spare cash and then they send it away where it helps to build up the big cities. They take it away from the small places where it should be used to improve the farms and to build up local industries. Now what are we going to do about it?" As I couldn't solve the difficulty for him off-hand I promised to pass it along to someone who might be able to give a satisfactory answer. I have no comment to make. I am simply putting this on record as a phase of country thinking. There are many more who think as this man does.—Peter McArthur, in Saturday Globe.

Selecting a Brood Sow

R. H. Harding, Middlesex Co., Ont.

The price of hogs the past two seasons will no doubt cause farmers to dip into the industry a trifle stronger notwithstanding the fact that the packers slaughter prices in a most cold blooded way as soon as opportunity affords itself. For that reason many sows have been spared the slaughter and have of late been selected for breeding.

Care needs to be taken in selecting the young pig that is intended for a brood sow. The selection should be made before the pigs are put up to finish, as it will not improve the sow to be on forced feeding but will more likely injure her in making the selection. It is sure to get one with 12 or more teats so as she will be able to suckle at least 12 pigs if that many arrive in safety. Look for one with legs and feet well placed and bone of good quality, not too round. It is important that the legs be such as will carry the sow along sprightly after she has attained full size and heavy weight.

The brood sow should have a straight even back, not too broad, but with ribs well sprung, with a long deep side—flat rather than oval, with bottom line out about even with the spring of rib. The shoulder should be smooth and blended gently into the neck and side, projecting slightly wider than the side in order to give plenty of room for the heart and lungs to perform their necessary functions. This is important because if we have a hog with a weak constitution it cannot be expected to produce good vigorous or profitable feeders. A face broad between the eyes is an

indication of a good feeder. I prefer also in a sow a good thick coat of silky hair rather than thin curly or woolly stuff as I believe it denotes a better quality of meat. I like a sow also with the flanks and hams well let down. Long legs are not a necessity on the brood sow as she is not intended for travel.

In selecting for length be sure to get it between the shoulder and ham. A great many hogs are almost as long from the shoulder forward as they are backward.

Having selected a sow along the lines suggested, next in order will be to feed her liberally on bone and muscle forming foods rather than on fattening foods as it is important to develop her well without making her too fat if the best results are to be obtained.

A Simple Method of Water Purification

A level teaspoonful of chloride of lime should be rubbed into a teacup of water. This solution should be diluted with three cupsful of water, and a teaspoonful of the whole quantity should be added to each two gallon pail of drinking water. This will give 4 or 5 parts of free chlorine to a million parts of water and will in 10 minutes destroy all typhoid and colon bacilli or other dysentery-producing organisms in the water. Moreover, all traces of the chlorine will rapidly disappear.

This method of purification has been tested with Toronto Bay water inoculated with millions of bacteria. Every germ has been destroyed and it has been unnecessary to boil the water. This method should be very valuable for miners, prospectors, campers, and those living in summer resorts where the condition of the waters might not be above suspicion.—G. G. Nasmith and R. R. Graham, Laboratory of the Provincial Board of Health, Toronto

Prayer of a Horse

By order of Acting Police Commissioner Bugher, who as First Deputy Commissioner has charge of the traffic squads, New York, there has been posted in every stable and other places, where police horses are kept a neatly printed card bearing this "Prayer of a Horse."

POLICE DEPARTMENT

NEW YORK

To thee, my master, I offer my prayer:

Feed me, water and care for me, and when the day's work is done provide me with shelter, a clean, dry bed and a stall wide enough for me to lie down in comfort. Talk to me. Your voice often means as much to me as the reins. Pet me sometimes, that I may serve you the more gladly and learn to love you. Do not jerk the reins, and do not whip me when going up hills. Never strike, beat or kick me when I do not understand what you mean, but give me a chance to understand you. Watch me, and if I fail to do your bidding see if something is not wrong with my harness or feet.

Examine my teeth when I do not eat. I may have an ulcerated tooth and that, you know, is very painful. Do not tie my head in an unnatural position or take away my best defence against flies and mosquitoes by cutting off my tail.

And, finally, oh! my master, when my useful strength is gone do not turn me out to starve or freeze or sell me to some cruel owner, to be slowly tortured and starved to death. But do then, my master, take my life in the kindest way and your God will reward you here and hereafter. You may not consider me irrevocable if I ask this in the name of Him who was born in a stable. Amen.



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Here is a chance to win a fine animal free of cost. This animal is bred by one of the best breeders in Canada. Send in your subscriptions to Farm and Dairy at once, as this offer will be taken up in a short time. Sample copies sent on application to:

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Increase flow of milk, and once installed they are automatic. WATCH THE RESULT. WILL PAY FOR THEMSELVES in a short time.

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100 acres of land convenient to Railways in Northern Ontario's great Clay Belt for each settler. The soil is rich and productive and covered with valuable timber. For full information as to terms of sale and homestead regulations, and for special colonization rates to settlers, write to

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Add 20 to 30 lbs. of the REMUABLE AND INCREASE your crop yield by 25% by applying 200 lbs. of this phosphate per acre. It is the soil water to each ton of manure. Write for free Booklet telling of all our products.
Direct, Leading Agricultural Experiment Stations confirm this, and show that it shows. Address: THE FARMERS GROUND ROCK PHOSPHATE CO. TORONTO, ONT.

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EUREKA
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Creamery Department

Butter makers are invited to send contributions to this department, to ask questions on matters relating to butter making and to suggest subjects for discussion. Address to Creamery Department.

Qualifications of a Manager*

Robert Crickmore, Oattonowa, Minn.
The manager of a creamery should be all records at all times to report and to one else could do as well without unnecessary duplication of work and trouble. The manager of a cooperative creamery should be the best man available from among the stockholders because all things being equal there is no man more interested than one who has a personal and financial interest in his business. A buttermaker usually is not a permanency and has trouble enough of his own without assuming those of the management. In some cases he needs to be managed. The manager's sole qualification should not be that he is a good fellow. He should be some common sense and sense enough to use it. There are always one or more such men in each association. He should be fairly well acquainted with book-keeping and know how to figure accurately. It is not absolutely necessary to have a business college graduate, although the should not count against him. Some of the most successful managers had no practical knowledge to begin with.

OTHER QUALIFICATIONS

He should not be thin-skinned, as the average creamery patron is not always considerate of the other fellows' feelings. If there is a drop in test from one month to the next the manager is to blame, but if it goes up he is not to be blamed for it. He should listen to all complaints and then forget some of them. He should be courteous to the patrons and to the travelling fraternity and able to solve the numerous propositions put up to him by the smooth butter solicitors as they come decked in various garbs and their name is legion.

He should know how to test milk or cream so that he can show the dissatisfied patron that his test was right. He should buy all supplies and should consult with the butter-maker in regard to which salt, cut, color or color the latter can do

*Part of an address at the National Creamery Buttermakers' Convention, Chicago, October 25, 1910.

the better work with. He should mix with other managers and butter-makers as much as possible, because there is always something to learn. He should attend all meeting of his county creamery or dairy organizations, State and National, if possible. The average creamery manager does not draw a princely salary, usually from \$100 to \$150 per annum and that will not allow much for travelling expenses. He should take and read dairy and creamery papers and keep posted.

A man new at the business will not have all of these qualifications, as they must be acquired at a cost of time and experience. After a man has arrived at the efficient stage of the game he should be paid somewhere near what he is worth, as it takes time to educate a new man and costs money to correct some of his unavoidable errors of judgment.

A new manager—I guess some of us have been there: We were going to be economical and make a record. We bought cheaper coal because it was just as good, and all coal is black anyhow. The grates burned out because of clinkers, besides it took more time to fire, and the butter-maker could not put in two places once and something suffered in consequence. Then the different offers of the solicitors were a nightmare. We did not know at first that a higher premium did not always result in a higher price per pound net. We divided shipments with two or more houses, not realizing that one good house—and there are lots of those—will do better with all of the goods as a long line is better than a short one. All of this experimenting is costly and usually to a great extent unnecessary.

Loss from Poor Skimming

A study of the losses of butter fat in separating milk, due to imperfect skimming, caused either by an inefficient separator, unfavourable conditions, vibration from the bowl be-

No. of Lbs. Milk	Over Fat	1 P. C.	2 P. C.
1	6.000	0.60 lbs.	1.20 lbs.
5	30.000	3.000	6.00 lbs.
10	60.000	6.000	12.00 lbs.
15	90.000	9.000	18.00 lbs.
20	120.000	12.000	24.00 lbs.

ing out of balance or in a bad state of repair or improper turning, is of great importance to cream producers. A fall is here indicated in the consideration of creamery patrons, showing the less in butter fat and the value of the same figured at 25c. a pound of butter fat.

With a herd of 100 cows (an average herd) the difference between a loss of .02 and 10 per cent. butter fat in the skim milk is a loss of \$120.00 a year. Many separators, if tested, will be found to be wearing as much and sometimes more than 1-10th of 1 per cent. in the skim milk. A separator to do good work must be set level and solid, turned up to fall speed indicated on the handle and running smooth.

Dairy Notes from P.E.I.

The total amount of milk received by the cooperative dairy associations of Prince Edward Island during the year 1909 was 47,192,987 lbs., an increase of 11,496,415 lbs. over the milk received during the previous year. Of this, 35,373,553 lbs. were made into cheese and 11,819,451 into butter. The value of the cheese made in 1909 was \$375,591, and of the butter \$127,001. The net value to the patrons from the milk made into cheese was \$300,043, and from that made into butter \$99,864.

The number of patrons shipping milk to cheese factories in 1909 was 3,706 as compared with 2,909 in 1908. The patrons of creameries number 621. The average weight of milk contributed per patron in 1909 was 10,906 lbs.; and the average returns per patron, \$116.15; and the net return \$52.42.

The cooperative dairy work has shown a substantial recovery in the year 1909. Cooperative work on the coast and in the north is being done since 1900. The most encouraging feature of the season of 1909 is that 810 patrons were added to factory lists.

Creamery Meeting at Guelph

Again there is extended a cordial invitation to creamery men and others interested in trying to meet together at the Dairy School, Guelph, on Thursday, Dec. 8th, at 1.30 p.m. At the meeting last year no set addresses were delivered; the whole time was given up to discussing the various points to meet with general approval. Therefore no set programme will be adhered to, but the following subjects are probably of interest. Creamery men are invited to come prepared to discuss any or all of them.

PROGRAMME

- Mr. John H. Scott, President W.O.D.A., chairman.
- Short review of creamery instruction work, 1910.
- Defects in our butter during the past season. Suggestions for improvements. (A special invitation is extended to butter buyers to attend and assist in this discussion.)
- Anything further to be said regarding the grading of cream.
- The best system of caring for cream on the farm.
- Suggestions as to how creamery men may assist in improving the quality of the cream supply.
- Can the expense for hauling cream be lessened and still improve the quality of the butter?
- Are the cream scales used in creameries for weighing Babcock test

Per Cent.	Butter Fat	Loss in Skim Milk.
0.4 P. C.	0.6 P. C.	0.9 P. C.
2.40 lbs.	3.60 lbs.	4.80 lbs.
80.60	80.50	81.20
12.00 lbs.	18.00 lbs.	24.00 lbs.
\$3.00	\$4.50	\$6.00
\$4.00	\$6.00	\$8.00
\$5.00	\$7.50	\$10.00
\$6.00	\$9.00	\$12.00
\$7.00	\$10.50	\$14.00
\$8.00	\$12.00	\$16.00
\$9.00	\$13.50	\$18.00
\$10.00	\$15.00	\$20.00
\$11.00	\$16.50	\$22.00
\$12.00	\$18.00	\$24.00

- What differences are shown in figuring cut evaporation on the consideration of creamery patrons when the pipette or scales are used?
- Is the pasteurization of cream practical and profitable in Western Ontario Creameries?
- What is to be done as well for Creamery Managers to adopt, so far as possible, a uniform system of factory bookkeeping?
- Over reading or under reading the Babcock test.
- Maker's certificates.

On December the 7th at 1.30 p.m. there will be a cheese meeting at the Dairy School, Guelph, which will be held instead of the usual district meetings. The programme for this meeting will be given on the cheese page of Farm and Dairy next week.

Prof. H. H. Dear will give a short address at both meetings. F. Hens, Chief Dairy Instructor for Western Ontario, will give a short report on Cheese and Creamery Instruction work for 1910. Mr. A. Pitman, Director of Dairying; Mr. Geo. H. Barr, Chief Dairy Division; Mr. G. C. Publow, Chief Instructor Eastern Ontario; Prof. R. Harcourt and Prof. S. F. Edwards, of the Dairy School of the W.O.D.A., the Dairy School Staff, the Dairy Instructors and others will be present and take part in the discussions.

Cheese Department

Cheesemakers invited to send contributions to this department to ask questions on matters relating to cheesemaking and to suggest subjects for treatment. Address letters to The Cheese Maker, 127 Montreal.

Mr. Ayer Replies to Mr. McKim

Editor, Farm and Dairy.—I note Mr. McKim's reply in the issue of Dairy of Oct. 27th to my letter inserted in the issue of Sept. 22nd. The trouble with Mr. McKim's reply is, that he started on a wrong basis. A farm that will only keep 20 cows, and the other necessary stock, is not worth \$10,000. In proof of it, I will sell Mr. McKim, or anyone else, a farm that is now wintering 36 head of good cows, eight head of young stock, and a bull for \$10,000. There is feed enough on the place to winter 30 head, with the necessary horses. This farm is situated near a creamery where the average price is over \$1.00 a cwt. Thirty-six cows at \$60 each give an income of \$2,160, instead of \$1,200 which Mr. McKim would get from his 20 cows. At \$1 per cwt. of milk, \$80 each, we would have for the year \$2,880.

The ninety-cent figure which I used for cheese in my last letter was merely illustrative of what could be done if the very worst came to pass and in contrast with what is being done with our cows. As to the "farmer being ground by the middle man," it is a well known fact that none of the large produce firms, for the past three years have made six per cent. on the capital used in their business. I was born on a farm, have a son on a farm, and a son in my own business, and notwithstanding what Mr. McKim says, I think I can give a fair and intelligent view of the conditions. Many a city man is turning to the farm for profit, for pleasure and for health. There are enjoyments and pleasures in farming and in country life which a city cannot afford.—A. A. Ayer, Montreal.

The Fat and Casein Test

Payment of milk at these factories by weight alone is obviously unjust. Payment for milk by the straight fat test or by the fat plus two test gives the patron more nearly what his milk is worth for these factories. That milk should be tested for both fat and casein is now advocated in Bulletin No. 197 of the University of Wisconsin as a result of extensive experiments carried on by S. M. Babcock, E. H. Ferrington and E. B. Hart. Experiments were carried on with the milk of 50 herds to determine the variation of casein in milk, the relation of casein to fat content, and the relation of percentage of fat in milk to the quality of the cheese.

It has been argued by those advocating the straight fat test, first, that an increase in the fat content

of milk is accompanied by an equal increase in the casein content; secondly, that high testing milk makes a cheese of straight fat test a fair criterion of the value of the milk for cheese making.

QUALITY OF CHEESE

These experiments show that, while as a general rule an increase in fat is accompanied by an increase in casein, it is not always so, and that the quality of the cheese depends more upon the sanitary conditions of the milk than on the fat content. If all milk were kept under the same conditions of sanitation, high testing milk would give a better quality of cheese, but the difference in quality would not be sufficient to make a high testing milk with a low casein content equal to a milk testing somewhat lower but with a high casein content.

It was found that the variation in casein in milk from one sample varied from .3 to .5 per cent., and that in milk from all sources the variation was from 1.8 to 2.8 per cent. It is evident, therefore, that the casein content of milk varies to almost as great an extent as does the fat content, and as casein has an equal value pound for pound in cheese and equitable basis for payment of milk at these factories is by the combined milk and casein tests.

COST OF CASEIN TEST

One of the chief arguments against the introduction of the casein test has been that the cost of operating the test is excessively high. A six-bottle machine will cost \$30 and a 30-natron tester \$40. In a factory for making the test for one year would be \$2.50 or the total cost of the first year including tester would be \$32.50.

In taking composite samples, potassium dichromate must be used as a preservative. If the samples are kept with this preservative for more than seven days, an accurate test cannot be made. Two seven-day tests in a month, however, would measure accurately the cheese producing value of milk delivered.

The conclusions arrived at by these experiments are (1), that the only just way of paying for milk at these factories is by the combined fat and casein test; (2), that this test is not so expensive and that the apparatus used in making the test should be found in every factory; and (3), that composite samples for the casein test should not be kept more than seven days if correct results are to be obtained.

Quantity Only Considered

J. J. McGill, Secretary Cavan Cheese Factory, Durham Co., Ont.

Four years ago, the Cavan cheese factory was run as a creamery and we paid by weight. Some patrons would receive as much as 20 cents a cwt. more than others for their milk, but as the butter fat was the same price to all there were no objections. Since starting to make cheese, we have always paid for milk by the pooling system. A few of the patrons are in favor of paying by test, but at an annual meeting, the majority never favored this method of paying for the milk. They think that it would cost a little more for extra help.

I am not a patron myself. If I was I would certainly say pay by test. It would be fairer to all. If the quality of their milk, it would have a tendency to induce them to grade up their herds and keep a better class of cows. They would send a better quality of milk to the factory in order to secure a higher test. To the cheesemaker this would mean a better quality of cheese and more of it.

Criticism of Canadian Cheese

P. D. MacNamara, Trade Commissioner, Manchester, E.O.

The best information obtainable is convincing that Canadian cheese, which has come up so far this season, has arrived in splendid condition. The boxes from Brockville and west, there have arrived in good sound shape, marks and weights properly stencilled. Those from Quebec, however seem to be made of inferior wood, or possibly do not fit the cheese so well as those coming from the west, and in consequence do not reach this market in as good a condition, being mostly broken and roped.

Notwithstanding that the handling of cheese in all cases is alike, there can be but little excuse for the Quebec cheese boxes reaching this market in a broken condition other than the fact that the boxes themselves are of inferior quality. By reason of the boxes being broken there is a greater whist the cheese in transit. Importers have to stand this loss themselves, the steamship company standing upon their bills of lading, and in cases of dispute throw the blame upon the deck authorities, hence there is no redress for the loss.

Quebec cheese makers are also not particular in having weights stencilled, the majority of cheese coming from the eastern districts being marked in pencil. This causes great trouble through differences in weights received and those invoiced.

HEATED CHEESE

The first two months of this season the quality of Canadian cheese was everything that could be desired, since then there is some cause for complaint of cheese coming on the English market in a heated condition. This may be attributed to shipment through their bills of lading, and in cases of dispute throw the blame upon the deck authorities, hence there is no redress for the loss.

This fault is especially noticeable in cheese coming in on "through bills of lading" from country points, and this could be avoided to a great extent if the cheese was shipped immediately upon reaching country stations and in such a way as they would get to Montreal not having to wait two or three days in a hot shed before being loaded on to the steamships.

LOSS IN WEIGHT

The most serious complaint made by the importers of Canadian cheese is one of loss in weight. Cheese arriving here frequently show a loss above that already allowed of over time the importer has to bear, exporters covering themselves by the "weighters' certificate," and it is thought only fair that some arrangement should be made whereby a certain percentage should be allowed importers to cover the shrinkage which

occurs from the time of the public weighing in Montreal, and the time the cheese is landed at English ports. The rules governing New Zealand c.i.f. transactions is for an allowance of two and a half per cent. over government graders' certificate of weight, provided that the shipment is made 14 days after the weights were taken to cover this loss. It is suggested that Canadian exporters could follow this with advantage.

The co-operative society of Quebec cheese makers has been formed with the aim of having our cheese judged, classed and paid for according to its real value. Our cheese is classified before the sale by a competent and reliable judge. It is then sold by auction and the result has been since the beginning of the season, that our finest has obtained at least the highest price paid for the best Western at the sale of the different boards. These establish the market value for Quebec cheese. This system will be, we hope, a powerful inducement for our makers to improve their manufacture and for the farmers to be more careful of their milk.—Aug. Trudel, Montreal, Salesman for Co-operative Society.

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Note its clever construction. The funnel is detachable. As the strainer into the slant towards the milk, it passes direct to the opening in the pail. All dirt falling in to the opening is caught on a deep metal shelf inside the funnel—not on the sides—thus milk and dirt never come in contact. You can strain any quantity of cheese cloth for straining. Capacity 4 quarts, no extra cost. Will be ready to receive, no Price, \$1.00. Inside it is easily cleaned.

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MISS SELINA LUE

MARIA THOMPSON DAVIES

(Continued from last week.)

Miss Selina Lue, generous and tender of heart, keeps the grocery at River Bluff. she feeds the five babies whom she cares for in soap boxes, in the rear of the store. Her friend, Cynthia Pave, learns that she has taken a young artist, named Alan Kent, to board. They are introduced and Cynthia is annoyed at the young man's apparent assumption of instant friendliness, and leaves abruptly. Cynthia alone with Miss Selina, confides her fears that her beautiful home must be sold, and is taken to see Kent's pictures. Kent tells Miss Selina of her love for Cynthia and is partly overheard by Cynthia. Miss Selina gives a party to all her friends for Kent and Cynthia's friend from the city is one of the guests. Cynthia now loves Kent. Kent's father, who is wealthy, and from whom he has been estranged because of his painting, comes accidentally to the bluff in his car and takes Miss Selina and all the children for a ride. On his return he is reconciled to his son, and meets Cynthia.

"NOW, don't be bothered, mister," said Miss Selina Lue from the grocery steps, where she stood surrounded by all the small fry on the bluff, none of whom had ever before had the opportunity of such a close acquaintance with the mysterious, animal known as the "otermotok." The young man can go in on the next car and be back in no time with the monkey-wrench or whatever you need to fix it with. And you come right in and set here in the shade of the blackberry where you can get the river breeze. Bennie, set out the big chair, and, Ethel Maud, you and Luella run to the well and draw a bucket of fresh water and hand some in that new gourd hanging by the door. Just come over here and be comfortable, mister; I will admire to have you."

Miss Selina Lue's bustling, hospitable enthusiasm had the old gentleman out of the machine and seated by the grocery door before he knew it himself.

"Upon my word, madam, this is pleasant after the hot sun," he said in a booming voice, "very pleasant—d'you hear?—very pleasant!" and his brows drew up in an arch of amusement as Ethel Maud and Luella presented themselves before him with a dripping gourd held in two pairs of small hands, for not for worlds would either of them have relinquished a part in the presentation of the cooling draft.

"My, my, what a nice pair of little girls you have here! A very interesting family, all of them—d'you hear?—a very interesting family—and large—eh?"

"Lands alive, mister, this is all the children on the bluff; they don't none of 'em belong to me," said Miss Selina Lue, as she took the gourd from him and began to water the children one at a time, according to size.

"Now, that's too bad, madam—d'you hear?—too bad. Such a fine lot! But, bless my soul, I think you are lucky not to own a single one! I—I've got the most outrageous pig-head child myself and I—well, I just can't express myself about him; outrageous pig-head—d'you hear?—outrageous pig-head!"

"My, new, ain't it a pity!" said Miss Selina Lue sympathetically. "Did the poor boy take to drink?"

"Drink? No, madam, he did not!

He's everything a gentleman ought to be, and more, the pig-head—d'you hear?—the pig-head!"

"Couldn't you do nothing with him?" asked Miss Selina Lue with interest. "You have to make allowances for young men-folks; looks like jest they youngness goes to they heads. Where did he break out?" Miss Selina Lue seated herself on the step beside his chair, keeping a watchful eye on the children, who stood as close as possible to the red marvel and discussed its wonders in the highest-pitched voices at their command. As usual, her sympathetic and interested way had its effect of irresistibly inviting confidence.

"In a most unexpected—pig-headedness—left me and the business to go to the dogs and went trailing off

after moonshine—d'you hear—moonshine!"

"Well, now, I expect he thought you could take mighty good keer of yourself and the business too, you seem so strong for any age at all," said Miss Selina Lue soothingly. The old gentleman drew himself up in his chair and looked quite rejuvenated by the mention of his obvious youthfulness.

"Oh, I could pull the business through well enough, but it was his leaving it for moonshine nonsense—d'you hear?—moonshine nonsense!"

"Well, things do happen strange in this world, and it looks like they can't nobody weigh out anybody else's cake for 'em. Boys and fathers lots of times don't want to bite off the same slice of life." Miss Selina Lue's eyes had a far-away look in them and she spoke very softly.

"But what's a man to do? Build a great business and have a son come along and scorn it—d'you hear?—scorn it?"

"It might be that what a man thought was a great thing to do in life would look like small potatoes to his son. I certainly am sorrowful for you about being so disappointed in your boy and hurting as it is to me to talk about it, I want to tell you about how it was with Adoniram and Elder Millsaps, for maybe it will help you to get comfort." Miss Selina Lue paused as if the task was too great for her, then looked at the old gentleman gently and began again to speak.

"You see, Elder spoke Adoniram out in meeting and asked for prayers for him 'cause he wouldn't take to the farm 'cause he wouldn't take to leave to him. Looked like a plow-figer set heavy on him all over. After his father spoke him out and all the Twin Creek Circuit sestern and brethren got to stopping, when they met him, to exhort, Adoniram lit out and it was many a day' for they seen him again, if had the little horse-hair ring he made me and faith enough to hold him up everywhere. Lands alive, but it was funny when everybody went to the meeting-house to hear him speak when he come home! He had done studied and

found out all about recks and things and was in the government employ, and he had come home to tell all the neighbors that maybe they had a fortune in phosphate rich under their potato-patches and orchards. And all of them was a-cheering of him and the Squire a'calling him our leading citizen. It do seem strange how some folks after out the music for they loys after they have done fit the hard gift and don't need no cheering on, instead of starting 'em out on the road of life with a little whooping up in his eyes, they needs it. I am mighty glad I've got that night at the meeting-house to look back on, for he was blowed up by the first rock crusher that was set going."

The old man looked fiercer than ever, but the tips of his white moustache trembled and he drew his brows together as if in pain. "He's an ungrateful pig-head," he muttered, but a good part of the explosiveness was gone from his tone.

"Oh, maybe he ain't now," said Miss Selina Lue persuasively. "There's the case of Mr. Alan and his father. The poor old man's pretty nigh broke his son's head and is accusing for all the world like you say your boy is, pig-headed. But we excuse 'em."

"Mr. Alan?" The old gentleman sat up, but Miss Selina Lue failed to notice the spark in his eyes.

"Yes, that's a young man artist I've got boarding here with me. His name is Kent, but he is jest sich friends with everybody on the bluff that we all call him by his first name. His father is a big rich man, but it seems like with all his money he can't afford to let his son be happy and do the world good by painting beautiful pictures. He set a sedge all the goodness for everybody as see 'em. He never said a word about this trouble, but Miss Evelyn Branch told us about it, for she got acquainted with him last year, and she says she's the poorest boy grieved so over his father that I feel I could do jest anything to help make 'em up. He has painted some beautiful pictures to go in a hall for workmen to see how beautiful work can be painted about, and he hopes his father will see 'em and maybe forgive him for painting. I never close my eyes at night without musing at a sedge of prayer so soft that old man's heart." Miss Selina Lue's voice was deep with emotion and her eyes shone with wistfulness.

"Did he say his father was a hard-headed, old pig-head?" asked the old gentleman fiercely.

"No, indeed; he never!" exclaimed Miss Selina Lue hastily. "You don't know Mr. Alan! Why, he's jest that tender and good that you would know he loved his father hard. But how his father could not know him enough to trust him to do his man's work in the world, I don't see. Looks like a man must think his own life have been a grand success if he goes to a directing of his son's."

"And this Mr. Alan—er—er—you say he lives here? Been here long?"

"Long enough to git into the good feelings of every man, woman, child and puppy on the bluff, and to git Miss Cynthia to loving him enough to marry him as soon as he finishes the pictures and gits paid for 'em, which she wouldn't wait fer, but he thinks they better."

"Married?" the old gentleman exploded the word and lay back in the chair and fanned himself with the palm-leaf fan Miss Selina Lue had handed him when he came.

"Yes, Miss Jackson Page's daughter, and a blessed angel of light she is, too pretty and stylish for any one. It's jest one of the most beautiful and happiest things in the world, if it wasn't for the mortgage and the father."

(To be continued next week.)



"I will paint you with your manager-child in your arms."

The Upward Look

A Divine Command

"It is written, Be ye holy, for I am holy."—1 Peter 1, 16.

Often there is borne in on us the discouraging conviction that our life is proving more a failure than a success. Our defects of character stand out so conspicuously that we feel that they doom us to live a life far below the level that our soul tells us that we should attain. The consciousness of our own weaknesses overwhelms us and makes us feel that the unequal struggle against sin is hopeless.

There is great hope for us when we have reached this attitude of mind. It shows that we are beginning to give up trusting in our own strength and that we are ready to trust more in God. Well may we feel depressed and conquered when we look on our own helplessness. Well may we rejoice when we turn our eyes and thoughts away from self to God for we know that with God all things are possible: God can transform our weakness into strength and fill us with a power before which the difficulties which now appal us will disappear like the mists before the sun. We must believe this as otherwise we refuse to believe God's word.

God has told us to be holy. Does that word frighten, discourage us? It should not. God would not have told us to be holy if it were impossible of attainment. He has commanded us to be holy, we must obey our God's commands or deliberately remain in sin. We must know that God has promised to and that He will give us the power we need to enable us to become holy if we will but trust in Him and earnestly, constantly, determinedly ask Him for it. It is such a great blessing that God will not give it to us lightly. We must show Him that we desire it with all our heart. Then we will get it. Never yet has a man or a woman gone to God and asked earnestly for the better gifts and been refused. God often tests our faith but He delights to reward it when we persevere in our requests. It does not matter how hard our lot

may be, how weak we may feel ourselves to be, how strong a hold the Evil one may seem to have upon our dispositions, we can conquer all our difficulties if we will follow our divine leader, put our trust wholly in Him and strive to be holy because He is holy.—I.H.N.

OUR HOME CLUB

THAT FARMER'S WIFE

So much has been said about "The Farmer's Wife" I came to the conclusion it was being fairly well threshed on all sides, but yet can not resist saying something after I had read the article by "Mother," and the "Pastor's Wife," in the June 16th issue. It is true we are told time and again that the majority of the inmates of our asylums are farmers' wives, but truly "Philosopher" does not think it is just because they are farmers' wives. If he does I beg to differ with him. I think like "The Pastor's Wife" and "Mother" you have only to spend a few hours in the city to find out the "farmer's wife" is not the only one who has cares. True it may be they are of a different sort. Where, or how often, do you find a jealous husband in the city or on a farm. Do you think you find them in the city or on a farm. I have seen them when no matter how the wife felt, she must do her best to rob a paddie off to meet her husband on his return from work. Very often, not because they felt like the walk; but because she knew if she didn't he would be all out of sorts when he got home. I feel like calling such men great big babies, yet they are the elite of the city.

Where do the majority of our city cousins go for an evening's amusement? Down town of course. Sometimes they are bored; sometimes they are not, for as "Dot" says in one of her letters, "What will brighten our lives more than to hear good orators, etc." Those men who marry a second wife are a greater responsibility on their head than they ever dreamed of, also the wife, especially where there are children, as one thing is certain, no one can take the place of Mother. They should try and do the very next best possible. There are happy and unhappy homes no matter where we go. I am such a lover of the country, I fail to see why a farmer's wife, if she is treated as she should be, should ever regret she became a farmer's wife.—"Aunt Jane."

FARMERS SHOULD THINK

Oh, husbands and fathers on the farm wake up. What are you doing? Is it possible that all this talk in magazines and newspapers is true, that with your own hands you are driving your children to the city and your wives to the insane asylum, when the life on the modern farm should be almost ideal? Some time ago I referred in these columns to the fault of long hours, monotonous and no regular returns for labor being the trouble, but was soon contradicted by "The Son." I had said my say and intended to let it drop there, but after seeing so many letters on the subject, I felt I must speak again. I cannot agree with "Country Philosopher," however, but in the first and last case he is right. I would say the existing circumstances had not been given serious consideration before hand. It was not the farmer, but the man who was at fault and except for the work in isolation, the result must have been equally disastrous in a city home. For my part, I would rather undertake the care of a crying husband and another woman's children as far from the temptations of the city as possible. My advice to girls would be,—Beware of such burdens.

There is altogether too much truth though in some of the compliments. I

refuse to believe you are worse than other men, only you live so apart from that your eyes are often blinded and changes going on about you, or to understand the yearnings of your wife and children as they catch, shall I say, the inner life that must be fed.

You must keep in touch with the times if you would be a good companion. When you take your wife to the city observe her courteously the shop keeper treats her and try to imitate it when you get home. Never let her birthday or your wedding day anniversary pass without recognition, if boys. Watch how she appreciates your consideration. It is said a woman will do more for love than man will do for money. Prove yourself if this be true. Remember the farmer's home is the most important home in Canada to-day so you see how much depends on you. Sing and play games with your children in the evening and never be too busy to be interested in their pleasures or disappointments. Sometimes criticize, but often encourage them. They will understand you then. Last, but not least, do not grind the sweetness out of their lives to build a bank account or the largest house and barn in the neighborhood. Give them what they will appreciate far more and never forget to thank you for the memory of a happy home.—"Dot."

When soot falls on carpet or furniture from the stove or smoking lamp, sprinkle thickly with corn meal, let stand a few minutes, then sweep up carefully with a brush. If there are streaks on wall paper from the stove-pipe, hold meal in a cloth, and rub lightly over the paper. This is absolutely safe and sure.

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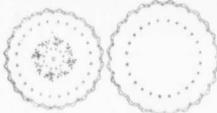
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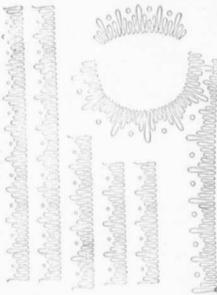
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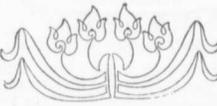
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Methods of Making Bread

(Continued from last week.)

When the recipe does not provide sufficient materials to make the desired quantity of bread, the amount of the various ingredients may be halved, doubled or changed in any way provided their relative proportion remains the same.

PREPARATION OF SPONGE. When the ferment is ready, put the rest of the sugar, salt and lard into a kneading-pan, bring the rest of the liquid to 90° F. and add it to the ingredients in the pan. Add enough strong flour to make a batter that will beat without spattering; add the ferment and beat until it looks smooth and elastic. This will probably take 15 or 20 minutes. Cover closely, and keep at a temperature of 70° F. until light and spongy. This will take from 9 to 10 hours.

PREPARATION OF DOUGH. When sponge is ready, stir in strong flour until too stiff to use the spoon, then mix in more with a stiff-bladed knife, or the hand, until the dough no longer sticks to the fingers. Turn the dough out on the moulting-board to knead, leaving the pan quite clean. The dough should knead without flour being put on the board or hands; if it proves sticky return it to the pan and mix in more flour, remembering that while too slack a dough makes for textured bread, too stiff a dough makes slow-rising bread which will dry out quickly. Knead lightly until the mass is elastic and velvety, the surface covered with a film of tiny bubbles, and a cut with a sharp knife shows the inside full of fine even bubbles and free from lumps or unixed portions. Grease the kneading-pan lightly with lard, warm both pan and cover if they are cold, out in the dough, cover closely, and keep at a temperature of 80° F. until rather more than doubled in volume, or until a gentle slap with the tips of the fingers causes it to fall in. This will take from 2 to 3 hours.

Knead lightly in the pan for a minute to get rid of the larger bubbles and return to rise a second time until double in volume. This will take from 1 to 2 hours. Divide into loaves that will half fill the bread bins. Knead each piece only enough to get rid of large bubbles and smooth the surface, and put it into a greased tin. Keep at a temperature of 70° to 80° F. until doubled in volume, when they should have a bold, nicely rounded appearance.

Bake an hour in a very hot oven. When done, the loaves should give a hollow sound when tapped on the bottom.

When baked remove at once from the pan, and stand on edge or across the top of the pans, that the air may get to all parts and cool it quickly.

HOM-MADE YEAST.

- 1 medium sized potatoes.
- 4 cup hops
- 1 quart boiling water.
- 1/2 cup sugar
- 1/2 cup flour
- 2 level teaspoons salt.
- 1 compressed yeast cake

Boil the potatoes, drain away the water, and mash potatoes, until free from lumps. Pour the boiling water, which may contain the water drained from the potatoes, over the hops and simmer 15 minutes. Measure into a 3 qt. bowl the flour, sugar and salt, and mix thoroughly. Strain the hop water, and add at once to the bowl, stirring rapidly all the time. Add the mashed potatoes and give the

whole a thorough beating. Cool to 70° or 80° F., and add one compressed yeast cake soaked in 1/2 cup of warm water for 1/2 an hour. Keep at a temperature of 70° F. for 3 or 4 hours, stirring down as often as it comes to the top. Bottle and keep in a cool place. Do not cork it tightly at first.

(Continued next week.)



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SEMI-FITTED COAT, 6524



The short coat will be worn throughout the entire season. This model is exceptionally smart and will be found available for all seasonable materials. It is just as pretty for the separate jacket as it is for the coat suit. It can be made in the length illustrated or longer, and either with cut-away or straight fronts. Material required for medium size is 4 1/2 yds. of material, 27 in. wide, 2 1/2 yds. 44 in. wide or 2 1/2 yds. 52 in. wide, with 1/2 yd. of velvet for the collar. The pattern is cut for a 34, 36, 38, 40 and 42 in. bust, and will be mailed for 10 cts.

GIRL'S DRESS, 6521



The dress trimmed with buttons at the front yet closed at the back is new and greatly liked this season. This model includes a dainty chemise that can be made from any contrasting material and the tucks over the shoulders give becoming breadth. Material required for 10 yr. size is 3 1/2 yds. 24, 4 1/2 yds. 27, 5 1/2 yds. 36, or 2 1/2 yds. 44 in. wide, or 2 1/2 yd. of any width for the belt, 1/2 yd. 18 in. wide for trimming. The pattern is cut for girls of 8, 10 and 12 yrs., and will be mailed for 10 cts.

TUCKED OVER BLOUSE, 6515



The over blouse is laid in tiny tucks and cut with short kimono sleeves is smart. This model is distinctive, being trimmed with a shaped trimming portion, yet so simple that it can be made without any trouble whatever. The kimono sleeves do away with all the fuss of fitting the sleeves to the armholes, and reduce labor to the minimum.

Material required for medium size is 3 1/2 yds. 36, or 1 1/2 yds. 44 in. wide, with 1/2 yd. 18 in. wide for the trimming. The pattern is cut for a 34, 36, 38, 40 and 42 in. bust, and will be mailed for 10 cts.

TUCKED OR GATHERED SKIRT, 6519



The full skirt skirt to give the effect of a tunic is one of the very new ones. As this model can be made either with a slight train or in walking length, it is adapted both to simple occasions and to those of more formal nature. All the fashionable trim materials will be found appropriate. Material required for medium size is 7 1/2 yds. 34, 27 or 36, or 4 1/2 yds. 44 in. wide. The pattern is cut for a 22, 24, 26, 28 and 30 in. waist, and will be mailed for 10 cts.

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TORONTO CANADA**

MARKET REVIEW AND FORECAST

Toronto, Monday, November 7.—Chargers are again brought against the C. P. R. in connection with the feeding of cattle in transit. The latest 153 head of cattle sent out from Winnipeg been fed at White River 10 to 12 lbs. of hay each and after that absolutely no feed till they reached their destination, Toronto, 43 1/2 hours afterwards. The case is still under consideration, and it will be interesting to see the outcome of it.

Kelowna, B. C. has been awarded the first prize of \$1,000 at the first Canadian National apple show recently held, for a cartload of Jonathans. Out of a possible score of 1000, the judges awarded 970 marks to the winners.

Farmers are interested, as well as city dwellers in the recovery in Sheldon, the Montreal get-rich-quick schemer. Sheldon's assets, according to latest figuring will realize about \$1,000,000. It is at any rate, and the liabilities are \$1,000,000. The moral to be deduced is keep clear of such allurement and stick to the ordinary well-travelled road of commerce. It is at any rate, the safest plan for the farmer.

Business is reported brisk in all quarters.

Call money in Toronto rules at 5 1/2 to 6 per cent.

WHEAT

Wheat prices are still above export level and seem likely to remain so whilst foreign lands are enjoying good harvest. All the European grain centres have fallen on the decline and holders on this side of the water are correspondingly disappointed. On the Winnipeg market the following quotations are in effect: 89 1/2c; December, 88 1/2c, and January at 87 1/2c.

On the local market, dealers quote as follows: No. 1, Northern, 90c; No. 2, 89c; No. 3, 88c, at lake ports, for immediate shipment. No. 2, Ontario winter wheat, 85c to 86c, at level, f.o.b. On the farmers' market, fall wheat is selling at 84c to 86c, and goose wheat at 83c to 84c a bushel.

COARSE GRAINS

The trade in most coarse grains is strong and prices are firm. Local dealers quote as follows: Canadian western oats, No. 3, 35 1/2c; No. 3, 34c a bushel at lake ports; Ontario oats, No. 2, 32c to 33c outside; 36 1/2c on track, Toronto, Malting barley, No. 2, 41c to 42c; feed barley, 40c; a bushel; American corn, No. 2, yellow, 57 1/2c; No. 3, 57c, on track, Toronto; rye, 16c; peas, 8c to 8 1/2c a bushel.

On the farmers' market oats are selling at 30c to 39c; barley, 50c to 60, rye, 60c to 70c; peas, 8c to 9c; buckwheat, 54c to 56c a bushel.

Montreal wholesale prices are as follows: Canada western oats, No. 3, 36 1/2c to 37c; No. 2, Quebec white, 36 1/2c to 36 3/4c; No. 3, 35 1/2c a bushel; American yellow corn, No. 3, 56 1/2c to 57c; western barley, No. 4, 48c to 49 1/2c; feed barley, 47c to 47 1/2c a bushel.

POTATOES AND BEANS

There is a firmness in the potato market, which shows no signs of weakening. The demand is very active and the supplies not overabundant. Wholesalers at present quote 65c to 70c a bag out of store, and 50c a bag in car lots.

On the farmers' market potatoes are selling at 50c to 60c.

In beans the local market is steady with prices ranging from \$1.90 to \$1.95 a bushel for primes, and to \$2.10 a bushel for three pound pickers.

On the Montreal market wholesalers quote potatoes in car lots, 75c a bag, and 85c to 90c a bag in a jobbing way. Beans are quoted at \$1.72 a bushel for three pound primes. Trade in potatoes in Montreal is steady.

DAIRY PRODUCTS

There is plenty of butter coming into the market but prices hold firm, owing to the great demand. Wholesalers quote as follows: Choice creamery prints, 26c to 27c; choice separator prints, 23c to 24c; choice dairy prints, 22c to 23c; ordinary quality, 17c to 18c a lb. On the farmers' market choice dairy butter is selling at 22c to 23c.

Prices are unchanged in cheese and large cheeses are quoted by dealers at 12c and twins at 12 1/2c a lb.

In milk and cream the butter market is fairly steady and choice township butter is quoted at 23c, and seconds at 22c to 23c a lb. Cheese, Swiss, is firm with easterns quoted at 11 1/2c and westerns at 11 1/2c to 11 3/4c a lb.

HIDES

The following quotations are given, by dealers for hides: No. 1, steer and cow skins, 10c; No. 2, 9c; No. 3, 8c; a lb. and sheepskins, 45c to 50c; tallow, 6c to 6 1/2c a lb. On the farmers' market the following are quoted: Sheepskins, \$1 to \$1.50; lambskins, 50c to 55c; horsehides, \$2.75 to \$3; calfskins, \$1 to \$1.50 a lb.

HAY AND STRAW

There is not an overplus of hay and straw visible yet at the market, and what is there is sold at good prices. Local dealers are quoting No. 1 timothy at \$12 to \$12 1/2 a ton, and No. 2 at \$10.50 to \$11.50 a ton on track, Toronto; straw, 85.50 to \$7.50 a ton on track.

On the farmers' market, choice timothy is selling at \$17 to \$20 a ton; clover and clover mixed at \$15 to \$17 a ton; straw in bundles, \$15 to \$17; and loose straw, \$5 to \$9 a load.

In Montreal, wholesale dealers give quotations for hay and straw as follows: No. 1 timothy, \$11 to \$11.50; No. 2 timothy, \$10.50; clover mixed, \$7.50 to \$8.00 on track Montreal; No. 1 baled straw, 85c to \$5.50 a ton on track Montreal.

There is a good trade in shipments of hay to Alberta and British Columbia going forward in Montreal, and prices are being realized for even second quality going.

EGGS AND POULTRY

There is a steady demand for eggs and poultry, and the supply of the latter article being large but prices are firm. Dealers quote selected lots at 25c to 30c a dozen, and cold storage eggs are firm. Dealers quote as follows: Chickens, 10c to 12c a lb.; fowl, 10c to 11c; turkeys, 17c to 22c; ducks, 12c to 13c a lb.; dressed 10c to 11c; geese, 12c to 13c a lb. On the farmers' market, new laid eggs are selling at 35c to 40c a dozen; chickens are selling at 12c to 14c a fowl, 12c to 14c; turkeys, 17c to 18c; geese, 12c to 15c, and turkeys, 20c to 22c a lb.

Montreal prices for eggs are as follows:



Waterous Portable Sawmill

No. 0 Wooden Saw Frame, specially designed for diameter. Furgol Steel Mandrel, 7 1/2 inches diameter. Friction bearings. Substantial carriage can be returned or rigid from 5 to 10 times as fast as feeding speed. Carriage will accommodate good size logs. Standard carriage for rack feed is 16 feet 11 inches long; rope feed 17 feet 6 inches long. Frame with six-inch eye-bolts, and iron pin-stringers, edges bound with heavy iron. Log seats built on patent type, and are fitted with our patent upper and lower steel hook feet, operated by overhead single-acting ratchet networks, having large ratchet wheel. Split steel setting and holding Pauls, designed to eliminate lost motion and permit a set of 1-16 inch. Stocked with 1 1/2 inch diameter and 16 foot long. Carries pinions which operate at knees and is fitted with heavy cast iron hand-wheel for hand setting. Track 54 feet long. This is one of the finest portable sawmills made. It will pay you to send for a card today, which describes it, as well as many others in detail. Drop us a track today.

The Waterous Engine Works Co., BRANTFORD, ONT., Limited

Selects, 27c to 28c; straight receipts, 25c; choice quality in case lots, 23c to 23 1/2c; a dozen.

Prices for poultry are about the same in Montreal as in Toronto.

HONEY

Trade is active in honey and prices remain the same. Strained honey, in 60 lb. tins is quoted at 10 1/2c to 11c a lb., and in 5 lb. and 10 lb. tins at 11c a lb. No. 1 white clover, \$2.15 to \$2.50 a dozen; buckwheat honey, 7c.

Trade in honey in Montreal is active as in Toronto. Buckwheat honey is quoted at 6c to 7c a lb.; white clover, 7c to 8c; comb honey, 14c a lb.; and buckwheat honey at 12c a lb.

HORSE MARKET

There is no marked change noticeable in prices or in the demand for horses. The following quotations are given: Drafters, \$200 to \$270; general purpose horses, \$180 to \$230; drivers, \$170 to \$220; expressers, \$200 to \$250; servicially sound horses, \$60 to \$90.

LIVE STOCK

The stock yards have presented a fairly animated appearance during the past week, but there are signs of a falling off in the shipments from the west, owing to the threatened cold weather. There have been many shipments of feeders from the west during the past week. Many farmers have purchased as many as they can handle and the tendency of prices for both butchers and feeders is lower. Milch cows are about the dearest proposition in the market at the present time and good animal will fetch a splendid price; lambs are higher in price and hog prices are slightly lower than last week. Following are dealer quotations:

Export cattle—choice, 86c to 86 1/2c; medium, 85.50 to 85.90; ordinary quality, 84.50 to 85c a cwt.

Butcher cattle—choice, 85.00 to 85.80; medium, 85 to 85 1/2c; ordinary, 83.00 to 84.25.

Feeders—85.25 to 85.60. Canners—\$1.50 to \$5.25. Stockers—\$1.25 to \$2.00.

Milch cows—choice, 16c to 86c; springers and medium milkers, 85c to 84c; calves, 83.50 to 87c.

Sheep—eves, 84.50 to 84.85; wethers, 83 to 83.40; lambs, 85.50 to 85.90.

Hogs—f.o.b., 86.90; fed and backed, 87.25. Trade Bulletin's London cable reads choice—Canadian bacon, 56c to 57c.

PETERBORO HOG MARKET Peterboro, Nov. 7, 1910.—Dunlop hogs delivered in England last week totalled 44,000. The delivery of hogs on the local market is lively and quite the following figures: Canadian bacon, 56c to 57c; hogs for this week's shipments: f.o.b. country points, 86.90 cwt.; weighed off cars, 87.25 cwt.; delivered at abattoir, 86.90 cwt.

MONTREAL HOG MARKET

Montreal, Saturday, Nov. 5.—The market here for live hogs is steady at the recent decline, and there is a good demand from all sources for the offerings on this mar-

ket. Everything this week was cleared up at prices ranging from 80 to 88 cwt. for selected lots weighed off cars. Dressed hogs are also lower in price but meeting with a good demand at the decline. Fresh killed abattoir stock is quoted at from \$11 to \$11.50 a cwt.

EXPORT BUTTER AND CHEESE

Montreal, Saturday, Nov. 5.—The making season of "nineten-ten" is rapidly coming to a close. The great bulk of the factory-closed at the beginning of this month, many of them with possible going into butter making. In some cases, they are left that the November make will be less than last year, but on the whole it is believed that there is no total loss of output for this month. The total increase, however, will not affect the market one way or the other. Prices have continued steady and unchanged this week, with a great margin in the prices paid for coloboro and Pictou, but the top prices paid for white at any point was 10 1/2c, and most of the cheese made at the various boards in Ontario fetched only 17c. The demand from Great Britain has been very low, but reduced considerably. This week's total, being the smallest for several years past. The receipts of course are steadily falling off and in a few weeks will practically cease, but so far this fall they have indicated a steady increase over the output for the same period last year, in spite of the fact that the entire province of Quebec has been decidedly short.

The butter market is closing somewhat firmer this time with prices slightly higher than last week. In some cases, it is due to the rapidly decreasing receipts and the fresh receipts; the trade is finding for low prices ruling this month. Finest creamery has been selling on this market in round lots at 22 1/2c; 50 boxes unsold; 152 boxes, 23c but a general advance is expected at week, and it is doubtful if anything will be obtainable under 26c a lb. for finest.

CHEESE MARKET

London, Oct. 29, 1910.—Exports of cheese: Hadding, 10 1/2c to 11 1/2c.

St. Hyacinthe, Que., Oct. 29.—352 boxes butter sold at 22 1/2c; 50 boxes unsold; 152 boxes cheese sold at 19c.

Strirling, Nov. 1.—747 boxes offered. All sold at 10 to 15c.

Campbellton, Nov. 1.—755 boxes boarded; 490 boxes sold at 11c; balance at 10 to 14c.

Woodstock, Nov. 2.—250 colored offered; 11c to 11 1/2c no sales. The board adjourned for the week.

Madoc, Nov. 2.—449 boxes offered; all sold at 10 to 15c.

Pictou, Nov. 4.—Seventeen factories boarded; 1145 boxes, all colored; all sold at 11c.

Kemptville, Nov. 4.—259 boxes offered. The highest bid was 4c; 230 white, 77 colored.

Napanee, Nov. 4.—110 white, 70 colored. Colored sold at 11 1/2c, white refused at 12c.

BREEDER'S DIRECTORY

Cards under this head inserted at the rate of \$4.00 a line per year. No card accepted under two lines, nor for less than six months, or 25 insertions during twelve month.

ONE 2 YR. STALLION by Champion Right Forward, Imp. One 2 yr. filly by Barron Beau, Imp. Yearling stallions and fillies by that greatest sire, Acme Imp. mostly all from imported mare. Three Tomp 3 year old sires received—E. M. Holby, Manchester F.O., and G.R.H. Station; Myrtle, O.P.R. L. D. Phone.

CLYDESDALE HORSES, SHORTCORN CATTLE—Large number of fine blood bred, reasonable—Smith, Nichols, breeders and importers, Columbus Ont.

CLYDE HORSES, SHORTCORN CATTLE—Young stock for sale all times—A. F. Redmond, Peterboro, Ont.

RIGDELADE HOLSTEINS.—For full particulars in regard to stock and prices, address Dr. Walker, Uxias, Ont.

SUNSHINE HOLSTEINS.—Young stock, all ages—M. Montie & Son, Stanstead, Quebec.

SPRINGBROOK HOLSTEINS AND TAMWORTHS—High-class stock, choice blood. Present offerings, two year old fresh and bred—J. M. G. Taylor, 1115 Elm. Tamworth boars from Imp. stock, ready to weigh—A. C. Hallman, Breslau, Ont.

YORKSHIRE AND TAMWORTH BOGS—Plymouth Rock and Oxford Fowl—A. Dimes, 434 Parkdale Ave. Ottawa.

ORMSBY GRANGE STOCK FARM, ORMS-TOWN, P. QUEBEC.—Importation and breeding of all breeds of a superior quality. Special importations will be made.—Duncan McEsharan.

HOLSTEINS

Homestead Holstein Herd

Headed by the great young sire Dutchland Colantra Sir Abbecker. Dam and sire's dam average 7 days...

EDMUND LAIDLAW & SONS Box 254 Aylmer West, Ont.

HOLSTEINS

If you are wanting HOLSTEINS, any age, either sex, write...

Do you want a first class Cow or Heifer bred to a first class bull? Francy Red's Admiral Ormsby heads our herd...

LAKEVIEW HOLSTEINS

Several bull calves sired by 'Count Ransburgh Payne de Kol', and one ready for service...

RIVERSIDE HOLSTEINS

Eight bulls, 6 to 9 months old, sired by Sir Hectorie Pouch Holstein and Prince De Kol Pouch...

LYNDALE HOLSTEINS

We are now offering for sale a 13 month old son of 'Ootou' L. Kol Fretzer's Paul...

EVERGREENS HOLSTEIN HERD

Offers 4 most to 4 yr. old daughters 'Velstra', Triumph (Imp.)...

"LES CHENAUX FARMS"

HOLSTEINS—Winners in the ring and at the pall. Gold Medal herd at Ottawa Fair...

RIVERVIEW HERD

Offers Bull Calf born February 14th, 1910. Sire Sir Aaggie Beets Segis...

HOLSTEIN CATTLE For near country, bred to a pure bred. Illustrated Descriptive Booklets Free...

HOLSTEINS FOR SALE

All ages, at half their value; the producing kind. JAS. MOTHERAL, Box 99, DRUMBO, ONT.

Dr. Bell's Veterinary Medical Wonder cures inflammation of lungs, bowels and kidneys...

AYRSHIRES

CHOICE AYRSHIRES Are Bred at "CHERRY BANK" A few young bull calves for sale...

"La Bole de la Rochees" Stock Farm Here are kept the choicest strains of AYRSHIRES...

AYRSHIRES Ayreshires of the right stamp for production, combined with good type and quality...

BURNSIDE AYRSHIRES Are Well Known. They are the best imported and home bred stock...

AYRSHIRES—PRESENT OFFERING A few good cows from 6 to 10,000 lbs. milk per month...

SPRINGHILL AYRSHIRES Imported and home bred stock of ages for sale Stock show with great success...

ONLY BULLS—AYRSHIRES One calved July 6, 1910, sired by Leannessock Royal Monarch...

MISCELLANEOUS TANWORTH AND BERKSHIRE SWINE—Boars and sows for sale...

TAMWORTH AND SHORT HORNS FOR SALE Several choice young Sows sired by Imp. Grade Breders...

MAPLE VILLA STOCK FARM We are now offering three bull calves from extra good cows...

FERNDALE'S GLYDESDALES AND HOLSTEINS We are now offering for sale a number of bulls from 4 to 9 months old...

HAMPshire PIGS Ready to SHIP At \$12.00 each. These are prize winners with pedigrees...

London, Nov. 6.—Six fairweights offered 883 cases of colored cheese...

GOSSIP

WINTER FAIR ENTRIES—Exhibitors at the next Winter Fair are reminded that entries should be made...

POULTRY AT THE WINTER FAIR—Over 600 exhibitors competed for prizes in the poultry department...

SALE OF SPRING VALLEY HOLSTEINS The dispersion sale of the Spring Valley Herd of Holsteins was very successful...

CRUMB'S IMPROVED WARRIERS STANCHION Prof. E. G. Helyar of Mt. Herma School, Mt. Herman, Mass., writes: We could not get along without Warriars Stanchion...

WANTED A Pure Bred Poland China Sow from six to eight weeks old, with pedigree...

COINS AND STAMPS Thousands of coins and stamps that appear ordinary to you command premiums...

ROYAL MONEY & STAMP CO. 150 NASSAU STREET, NEW YORK CITY

BERKSHIRES WANTED Farm and Dairy would like to purchase three or four pure bred, young Berkshire Sows...

8250: Rose Butter Girl, to Proctor Griffin, 1910; Minnie Evergreen, to G. H. Manhard, 1910; Bideau May, to Leslie Warren, 1910...

Over and Over Again

There is nothing that counts in the business world so much as systematic repetition. Telling the same thing over and over again, is a way of fixing that fact in the minds of readers...

It has been truly said that the mind of the average reader is changeable. As a people we are inclined to worship the spectacular and give credence to statements that we hear always...

Breeders of pure-bred dairy cattle who are out to make a success and to attain satisfactory results owe it to themselves to use the live stock advertising columns of Farm and Dairy...

A. Bushfield, 437; Nanuet Gerben, to W. J. Scott, 655.

SUBJECTS FOR DEBATE An indefinite variety of subjects which are coming up for debate before the Minnesota Farmers' Clubs, is indicated by the following...

HOLSTEIN-FRIESIAN NEWS

Farm and Dairy is the official organ of the Canadian Holstein-Friesian Association, all of whose members are members of the paper. Members of the Association are invited to send items of interest to Holstein breeders for publication in this column.

A. C. Hardy of Brockville, Ont., in a recent letter to Farm and Dairy, states that he has just bought a Standardbred, a well marked bull calf, a son of King of the Pontiacs, out of Pontiac Ariet breeding, which he states can hardly be equalled by any bull in Canada.

MR. HIGGINSON'S DISPERSION SALE

The 90 head of Holsteins offered at Wm. Higginson's sale realized \$12,497, or an average of \$138.4 per head. The herd bull, Sir Pontiac Clothide Korndyke, 8190, brought the top figure, being sold to John Hutton, Cardinal, Ont., for \$550. The other best priced cow, Netherland Queen Jane, sold for \$300 to J. W. Allison of Chester, N. Y. Ten cows sold for over \$200, and 21 cows sold for over. Only four of the animals offered sold for less than \$50.

The highest prices realized for females were as follows: Netherland Queen Jane, \$300, to W. P. Gibson, Chesterville; Althea Posch, \$275 to G. G. Gates, Merrickville; Jewel De Kol Agrie, 238, to W. F. Bell, Britannia, Ont.; Queenie L., \$220, to Gordon H. Manshard, Manhard, 415; Netherland Min, \$220, to M. E. Woodworth, 21; Mrs. F. Bell, Britannia, 20; Allison of Chester, 19; J. W. Allison of Chester, 18; J. W. Allison of Chester, 17; J. W. Allison of Chester, 16; J. W. Allison of Chester, 15; J. W. Allison of Chester, 14; J. W. Allison of Chester, 13; J. W. Allison of Chester, 12; J. W. Allison of Chester, 11; J. W. Allison of Chester, 10; J. W. Allison of Chester, 9; J. W. Allison of Chester, 8; J. W. Allison of Chester, 7; J. W. Allison of Chester, 6; J. W. Allison of Chester, 5; J. W. Allison of Chester, 4; J. W. Allison of Chester, 3; J. W. Allison of Chester, 2; J. W. Allison of Chester, 1.

Five of the 21 males offered realized \$100 or over, the highest price being paid for the herd bull, Sir Frederick De Kol sold for \$100 to J. G. Gates, Merrickville; Sir Abbecker Pontiac Korndyke, \$130, to B. Rothwell, Ottawa; Inka Korndyke Abbecker, \$100, to G. G. Gates, Merrickville; Vronka Pontiac Korndyke, \$125, to George Couch, Smith's Falls.

Other buyers were in addition to those mentioned were: George Herbat, Alfeldt; W. B. Allison, Dunbar; H. S. Kinlock, Martin; Wm. E. J. Marley, Oxford Mills; E. Gill, Morrington; H. Taylor, Scotland; S. G. Carle, Chesterville; F. W. Witte, Athens; John Willoughby, Smith's Falls; S. Hollingsworth, Athens; N. N. Nasse, Nerepis, N. B.; J. H. Tweed, Russell; Malcolm McCrae, Lochiel; Chas. Grohan, Inkerman; A. Kennedy, Winchester; H. H. Harris, Ontario; Wilbur McKinstry, Chesterville; Mrs. W. E. Hopkins, Ottawa; Wm. Durant, Chesterville; Arthur Graham, Hultbert; B. H. Lyons, C. Campbell, Vernon; Wesley Johnston, Chesterville; J. Black, Winchester; W. R. Dowler, Ottawa; R. A. Heron, Billings Bridge; W. Burnie, Ventnor; J. Payne, Brantford; Wm. Meldrum, Finch; J. B. Carcandian, Russell; Robt. Johnston, Inkerman; Allan Tossant, Hultbert; W. A. Beckstead, Beckstead.

THE WARD SALE OF HOLSTEINS

The auction sale of property of the late George Ward, on October 29th, was a great success. Attendance was large, including buyers from a distance. Bidding was brisk. Auctioneer, J. A. Atlas of Brantford as usual proved himself capable of holding the attention of the large crowd. Highest prices were realized. The interest of the buyers was centred principally on the Holstein-Friesian cattle, which were in excellent condition. The following is a list of the animals sold:

To R. J. Kelly, Tillsonburg, Ont.: Nierop Abbecker Lass, 1 yr 4 mos., \$250; Maggie Lass Abbecker, 1 yr 7 mos., \$250; Hester's Besse Queen, 3 yrs, 9 mos., \$200; Bessie Queen, 7 yrs, 5 mos., \$195; Roxie Mercera Abbecker, 11 mos., \$170; Lady Mildred Posch, 8 yrs, \$155.

To C. E. Smith, Scotland, Ont.: Maggie Clark, 3 yrs 7 mos., \$215; Maggie Fort, 7 mos., \$155.

To Mark and Dymond, Dundas, Ont.: Ellen 3rd of Avondale, 9 yrs., \$200; S. Gray, Sprigatone, Ont., Roxie Posch, 3 yrs, 3 mos., \$200; W. Chesnut, Scotland, Ont.: Victoria Posch De Kol, 2 yrs, 3 mos., \$200; H. C. Cherry, Garnet, Ont., Eileen Eunice Fairfax, 18 days, \$95.

To W. Howarth, Hartford, Ont.: Wiesenthal's Pride, 8 yrs., \$85; W. E. Hambly, Rockford, Ont., Queen Fortale, 4 mos., \$70; J. W. Richardson, Hartford, Ont., Adeline Mildred Favorit, 7 mos., \$50; W. J. Bailey, Naber, Ont., Gano's Favorit Brat Boy, 3

yrs., \$120; W. Chesnut, Eglinton, Ont., three grades, \$105, \$100 and \$97.

HOLSTEIN-FRIESIANS AT CHICAGO

Dairy shows can always depend on the Holstein-Friesian breeding a support consistent with their number. Since this black and white Holstein breed is representing a foremost position in commercial dairy in many regions, and making substantial strides in the world, it has made some notably high grade work, it has been at the chief state fairs, and its large and uniformly creditable exhibition at the fifth National Dairy Show, held in the Columbus in many respects a fit conclusion to its impressive public appearances. Backed by practical men, who seem to be more interested in the progress of the breed than in popularizing striking individualities, of the Holstein-Friesians are making a steady gain in public favor wherever dairying is attracting attention. They stand the test of the most severe and practical utility at the National Dairy Show. Their effort was not their best by any means, but it stood comparison with some of the other breeds geographically; it was suggestive of the wide distribution of the breed, entries coming from New York, Indiana, Illinois, Wisconsin, Ohio, Iowa, Minnesota and Colorado. Awards were made in acceptable fashion by J. A. Mitchell, Washington, D. C.

Of the nine aged bulls, Sir Beets (Carnopolis) Netherland, with quite a distal angle and consistent showing record to approach that of the best of the breed, was the type which is now in high favor. He has a level back, plenty of substance and is pleasing to the eye. Sir Gwan's Lass has less femininity in his make than that in his name. Indeed he was as good an illustration of breed character as the ring contained a low set, smooth shagreened straight backed bull with an especially fine combination of the two colors, and a third, and next to him a coarser sort with a good top.

THE FEMALES

It is customary for the females to out-breed, and this was shown at the fair. The rule here, from the aged cows down to the junior heifer calves the cardinal merit of the breed was shown in splendid average strength. Eleven entries in the aged cow class were driven down to six, and a preliminary examination by the judge, and few judges with a large abdomen, a 73 inch under, square and of fine texture, and milk veins of marked prominence, readily assumed premium position. Next to her stood a big bodied, dense cow with a fair udder, the third prize entry. A class of smaller and more refined females, mostly assumed premium position. A class of smaller and more refined females, mostly assumed premium position. A class of smaller and more refined females, mostly assumed premium position.

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SUMMER FEED FOR HOLSTEINS

The unusual drought prevalent this summer in many portions of the States where dairy husbandry is an important part of the farm economy, has caused a drop in milk production of many Holstein-Friesian herds, and consequently the results of our trials and experiments have been of more than time to time, sharply brings to my notice the difference in production between each variety and the other were not prepared for such a contingency. Owing

to the physical conformation of the North American continent, there will always be more or less drought during the summer season; and the increasing value of farm lands and interest on the investment account the necessity of insuring against loss from their effects as far as it may be possible to do so.

With lands low in value, a light crop will pay interest upon the investment, but when they are of high value, the largest possible crop must be secured. Even under favorable conditions pastures will not give nearly the feed value that the same lands will produce as meadow, though, of course, the matter of labor is eliminated; but when under dependence in placed upon the pastures and they fail, the results are little short of disastrous. It is generally admitted that for health's sake cattle need the freedom of the pasture, also, there is no feed in May and June can quite take the place of fresh green grass. In my own experience, those breeders and dairymen are most successful who provide only sufficient pasturage for the early months of the average season, providing either silage or soiling crops to supplement the pastures when they begin to fail.

Corn is mostly used for the soiling crop, and when well on towards the end of the season a maximum of digestible nutrients. But as a soiling crop it is needed before it is mature, as a rule, and while it is in its immature condition deprives itself of what would constitute a valuable feed, and falls far short of supplying the needs of his cattle. I speak from experience having tried silage of all kinds before it was known that corn silage could be fed as well in summer as in winter. Corn silage, fed from mature corn, goes far towards making the drought problem and wise breeders plan to have sufficient drought to last through an ordinary drought.

Even silage from mature corn is, however, not a properly balanced food, and clover or alfalfa hay and a little straw must be fed with it. Alfalfa is better than clover to mix with corn silage, and alfalfa is it is possible to omit the bran or the hay, as alfalfa will grow almost any of the varieties will grow almost anywhere in the United States; while it is nearly drought proof, alfalfa is a Holstein-Friesian breeder who has not done so a larger should try it in a small way; if he can make one acre a success, he can try a larger field. Corn is an drought-resistant crop; and if the moisture in the ground be conserved by about two inches of loose dirt mulch, it is surprising how little rain is required to make a good crop. In times of drought and when the corn has grown too tall for the two-horse cultivator, a fine tooth sickle or walking cultivator will go far towards irrigating the fields—Malcolm J. Gardner, Supt. of Advanced Registry.

GOSSIP

J. F. Parsons & Son, Barnton, Que., recently shipped 52 head of Ayrshires to Brandon, Vermont. These cattle were of all ages. They went to Chase & Beaman, Forest Park Farm, Brandon. This is the largest shipment of purebred Ayrshires, and in fact of any breed, ever made from Quebec into the United States.

At the last Canadian National Exhibition (Toronto), the Aspinwall Mfg. Co. of Jacks-on, Mich., who have a fine spinners branch at Guelph, Ont., were for the second time awarded a bronze medal on their exhibit. This firm manufactures potato machinery exclusively and their reputation for quality and work is well known.

IMPROVING QUALITY OF BUTTER

If there is one article of food more than another that people like to have good, it is butter and many of the centralizing creamery plants have now adopted the practice of grading the cream they receive from the farmers and paying for it according to quality in order to improve the quality of the output. The results have proved most satisfactory. Many farmers who were shipping poor cream are now producing only the highest grade, and the manufacturers in consequence are turning out better butter, and thus are able to pay the farmers better prices.

The principle and the fact whether the farmer sells his cream or makes his butter himself and sends that to market. To get the best price his butter should be of the best quality, and it is impossible to get good butter from poor cream. But many farmers do not realize the extent to which

the quality of their cream depends upon their separator. To do through skimming the hand separator should have more at least than it usually receives. It cannot skim clear unless run with a steady motion and at its rated speed. To do its best work it must be in perfect balance, all because everything well lubricated with this, it must be kept well lubricated with oil of absolutely first class quality.

The difference between the right and the wrong oil in a separator means in the end the difference between good and poor butter, and, realizing that thousands of dollars are involved for thousands of farmers in every part of the country, the Imperial Oil Company, Limited, of Montreal, has devoted special care and attention to the production of an oil exactly adapted to the special needs of separators. A heavy oil inevitably clogs and gums the fine bearings, with the result that they wear and out, and the machine loses its balance and proper speed. Standard Hand Separator Oil, as the Imperial Oil Company's special product is called, feeds freely into the closest bearings and yet possesses sufficient body to give perfect lubrication. Experts are recommending its use for hand separators of every make.



KEEP ALL THE REMEDY USED ALL OVER THE WORLD

To Bring Him Back to the "High-Stepping" Class

For Spavin, Curb, Splint, Ringbone, Soft Bunches, All Lamenesses

Horse dealers have made thousands of dollars by buying lame, Spavined Horses, curing them with Kendall's Spavin Cure, and then selling the sound animals at a handsome profit.

You can do the same with your own horses. Here is one man who saved his horse and his money by using Kendall's.

Oak Bay Mills, Que., Dec. 15th, 1909
"I wish to inform you that I have used Kendall's Spavin Cure with good success on my horse. It is the only that it cures quickly and well." Yours truly,
\$1. a bottle - 60¢ for 4. A copy of our book - "A Treatise On The Horse" - free at dealers
Dr. B. J. Kendall Co. - Eosburg, Pa., U.S.A.

NITSIDE FARM FOR SALE

One of the best farms in Western Ontario, beautifully situated in a bend of the River Nith, Henshem Township, Oxford Co. In a beautiful location, up-to-date buildings, good fences, fine orchard of all kinds of fruit; four miles from busy town; Paris; one mile from country P.O. A fine chance for an old country farmer to invest in a Canadian home, as it will stock and implements with farm tools. Apply to E. Martin, Canning P.O., Oxford Co., Ontario.

LEARN WIRELESS & R. R. TELEGRAPHY
Shortage of fully trained operators is a constant 8-hour law and extensive "wireless" work. We operate under direct supervision of Telegraphers Office and postively place all students, when qualified. Write for catalogue. NAT'L WIRELESS & R. R. TELEGRAPHY INSTITUTE, Philadelphia, Memphis, Danvers, Ia., Columbia, S. C., Portland, Ore.

PEDLARIZE FOR FIRE-PREVENTION

BE READY for fire, by all means. Provide every possible means for putting it out. Equip your house, your barn, all your buildings, with water-buckets, chemical extinguishers—hose and water pressure if possible. **But pay even more attention to fire-prevention!** Build, or remodel the buildings you have, in such a way that fire will have the least chance to harm them. **Lessen your fire risk—especially if you live in a frame house.**

The Average Frame House Is A Fire-Trap

Fire did \$56,000 damage in Canada every day of 1908! More than sixty per cent. of that great loss was on frame buildings! Naturally. For, even in the cities, with their up-to-date fire-fighting outfits, firemen count the ordinary frame house a "goner" once the flames get a real start. The frame-house on fire is tinder-box—its inmates are lucky to escape with their lives—even in the cities. How are you fixed today to fight fire in your dwelling?—in your barn?—in your wagon-shed? If fire started in your kitchen tonight, would you and your folks get out alive?

If your barn caught, would your stock be saved? And, even if you were lucky and only the buildings suffered, would insurance repay you for your losses? You risk a very great deal if you live in a frame house; or if you have anything valuable in a frame barn. Yet you can do much to prevent fire. And you can, easily and cheaply, practically insulate every room in your house so perfectly that—if fire does start in any room—the fire can be confined to that room alone. Pedlarizing will do that, and more.

Pedlarizing Reduces Fire Risk Fully 80 Per Cent.

"Pedlarizing" is sheathing any building, inside and out, with Fireproof sheet Steel—in the several forms illustrated by the pictures here. For the roof, Oshawa Steel Shingles, guaranteed to make a good roof for 25 years or a new roof free. For the outer walls, Pedlar Steel Siding—surfaced to imitate brick, cut stone, dressed stone, etc. For the ceilings and sidewalls of the interior, Pedlar Art Steel—more than 2,000 beautifully embossed patterns. A balloon frame of cheap lumber, with the necessary trim, flooring, and some

furring, and these Pedlarizing materials, make a stunner, handsomer house than any frame building ever was; and make the building eighty per cent. less liable to fire damage than the usual type of brick building. Such a structure is practically fire-proof. There is nothing about it to burn except the furnishings, floors and doors. Yet such a building is most economical in first cost, and cheaper than even a brick building in final cost, because it will outlast one.

Fire-Prevention By Pedlarizing Costs But Little

Whether you are erecting a new house or barn, or you think of repairing an old one, you will do well to inquire well into this Pedlarizing proposition. Consult with us first, and then with your builder or architect. Hold no prejudice against sheet steel for interior finish because it is comparatively new; don't think there is anything cheap-looking about Pedlar Siding for outer walls; don't imagine wood-shingles are cheaper than Oshawa Steel Shingles. Let us tell you the reasons for your choosing this practical, most economical and most effective way to prevent fire and to minimize fire-damage to the lowest degree. Let us

make it plain to you that many of the so-called "fire-proof" buildings in the big cities are not so well-guarded against fire as a frame-skeleton plated with Pedlar steel in the way we have outlined here. Any fire-insurance agent will inform you on the difference in the rate as between a frame house and a Pedlarized house. You will then see that this one item alone saves a good slice of the cost of Pedlarizing. Yet such a construction as we have suggested above is actually cheaper by twenty per cent. than an ordinary frame building! Nor does it require experts to erect it. Consult us for full details. Write us to-day.

Pedlarizing Does Much MORE Than Fire-Proof

Protects against dampness

And this same dead-air space, formed by the studding, makes a perfect barrier to dampness penetrating from the outside. Oshawa-shingled roofs are rain-tight, as well as fire-proof and lightning-proof; and they are so ventilated that, although water-tight (guaranteed for 25 years) they will not sweat on the under-side as common shingles must.

Cattle thrive better in Pedlarized barns. You save on feed, too, by Pedlarizing; for the stock do not have to eat so much for bodily warmth's sake. You see, Pedlarized buildings are easier to keep warm in winter. The sheer sheet steel that arms them against fire also helps bar out the cold. Pedlarizing makes houses wind-tight. In fuel saved alone you regain your outlay.

You are welcome to Handsome FREE Booklet No. 9, Price Lists and Full Information

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Oshawa Shingles protect any roof perfectly. Good for 100 years. Guaranteed for 25 years. Cost little



Pedlar Steel Siding armors a building against fire and wet. Handsome enough for any place. Many patterns.



Pedlar Art Steel Ceilings adorn and protect. Cannot crack. Seams invisible. Hundreds of new styles ready.



Pedlar Art Steel Side Walls are sanitary. Washable. Beautiful to look at. Easily put on. Fireproof.



THESE pictures but faintly suggest the merits of my Pedlarizing Specialties. Please send for full details.

G. H. Pedlar