

Issued Each Week—Only One Dollar a Year

VOL. XXVIII

NUMBER 25

# FARM AND DAIRY

## RURAL HOME

PETERBORO, ONT.

JU. 24. 1909

Grindale J. H.  
C.E.F.



AN ORCHARD AT THE ONTARIO AGRICULTURAL COLLEGE THAT IS KEPT WELL CULTIVATED. Cultivated orchards usually far outclass those kept in sod. The severe drought of last year told heavily against sod culture. Fruit was much superior where cultivation had been practised as the soil moisture was conserved to supply its needs. It is only in districts where the rainfall is heavy and the humidity in the atmosphere is sufficient to prevent excessive evaporation that sod culture is advisable. This condition is the exception. Most orchards would be benefitted by constant cultivation throughout the season until about the middle of July, when it should be stopped and a cover crop sown.

DEVOTED TO  
BETTER FARMING AND  
CANADIAN COUNTRY LIFE



Issued  
Each Week

# FARM AND DAIRY

&

## RURAL HOME

Only \$1.00  
a Year

FORMERLY THE CANADIAN DAIRYMAN AND FARMING WORLD

Vol. XXVIII.

FOR WEEK ENDING JUNE 24, 1909.

No. 25

### Handling of the Hay Crop

R. E. Gunn, Mgr. Dunrobin Stock Farm, Ontario Co.

It is essential to have two things in view in handling the hay crop on a large farm; quality of the product and speed in handling. This article will not touch on the methods of curing and the time to cut, but it will deal with the second essential as suggested, speed in handling.

When we have decided that it is time to commence haying operations we get out to commence. Having tried various kinds and sizes we find a medium geared six-foot cut the most satisfactory. We always have half a dozen knives already sharpened and we can depend on our mower being in good shape for we follow the rule of putting every machine in good order after each job is finished. The use of seven foot mowers is all right except that we have to work a little short on horses during the haying owing to our mares nearly always being with foal in May and June.

We start the mower as early in the morning as possible and cut as much as we can handle from day to day. When the sun is on the grass sufficiently to dry up the dew we start the tedder. The tedder is kept going until early in the afternoon when we start the side delivery rake, putting the clover up into light windrows for the night. Next day these are tossed about with the side delivery rake until they are dry enough to come in. In a very short time, with the assistance of hay loader, and horse fork in the barn, the hauling is accomplished. When one field is cleared another is always ready to be teded and raked. We try to keep all our men concentrated on this very important work of saving the hay crop. We consider a well saved hay crop means full milk pails, thrifty cattle and horses during the long siege of the following winter.

With the judicious use of hay tedder and side delivery, combined with good drying weather, any of the hay crops, alfalfa included, can usually be handled without the old fashioned

and laborious method of putting the hay in cocks. When rain is imminent, however, and the crop is down and not dry, coiling is the only alternative to prevent a considerable loss of feeding value. Rain, we all know, hurts the hay crop, but more hay is injured in an average year by becoming bleached in the sun and having all the natural juices burnt out of it, than is injured by rain. Sun is necessary, but sun-burn is not. Get the hay into windrows as soon as possible, and while the hay is in the swath, keep the tedder going after the dew is off.

Timothy, we cut a little more on the green side and ted a little more than we used to. We find it makes a better hay that is more acceptable to the stock. Of course, if we grow hay for sale, we would no doubt follow the general practice of letting it ripen before we put the mower in the field.

### Summer Management of Corn

Walter Thompson, Kent Co., Ont.

Our corn is planted in hills or squares in order that we may cultivate it both ways with a two horse cultivator. I always harrow my corn about two days after planting and keep on harrowing it once or twice a week until the corn is up two or three inches. One need not be afraid to tear out a few stalks or pull out a few hills; there will be plenty left. I would prefer about three stalks to

### Care of Wounds

Dr. H. G. Reed, Hutton Co. Ont.

The man who has a badly wounded animal on his hands will always consult his best interests by securing competent veterinary treatment, yet in many cases the injury is so slight that the owner is justified in resorting to home treatment. Wounds are divided into four classes; incised, punctured, lacerated and contused.

An incised wound is one made with a clean cutting instrument. The tissues are divided evenly and smoothly without any tearing or bruising of the parts. Such wounds are usually easy of treatment and unless the incision is very deep need only be made perfectly clean and kept so by the regular application of some disinfectant such as carbolic acid when the healing process will take place readily and quickly.

### PUNCTURED WOUNDS

Punctured wounds are made with a more or less blunt instrument and are usually of a serious character, especially if the puncture is comparatively deep and likely to have injured some of the deep seated structures such as arteries, nerves, veins or any of the internal organs. A wound of this nature will never heal without the formation of pus, and it is of the utmost importance to see that any pus that forms has a free chance to escape. If not allowed to escape it will increase in volume and set up a vast amount of local inflammation and very soon serious consequences will result.

### LACERATED WOUNDS

A lacerated wound is one in which the tissues are torn asunder in a rough and uneven manner. In such wounds pus will always form and they should be kept clean and healthy till the healing process is established, which will not take place so readily as in a clean cut wound.

A contused wound is one in which the tissues are bruised without the skin being broken. If the contusion is only slight the inflammation will subside by the application of heat and by fomentation or poultices, but if the contusion is severe and very deep seated, inflammation will likely result if the utmost care is not exercised. It often happens that even in the case of trivial incised wounds grave complications such as erysipelas or tetanus—lock-jaw—set in for want of a little precaution. All dirt or any foreign bodies should be carefully removed and the parts dressed as already described.

### "CALK" WOUNDS

Special care should always be taken when a horse is wounded by cutting his foot by treading

### GOOD ROADS—HOW CAN THEY BE SECURED?

Good roads would do more to improve conditions of life on the farm than any other one improvement that could be secured. Every person who lives in the country has to use the roads. Everybody, therefore, is affected by their condition.

It is about 10 years since the Ontario Government set aside \$1,000,000 to encourage the building of better roads. The government offered to defray one third of the expense of constructing these roads providing the counties would pay the other two-thirds. Only a few counties have taken advantage of this offer. As yet, the \$1,000,000 has not nearly all been used. Why is improvement so slow?

Recently, an editorial representative of Farm and Dairy visited Hillside Farm, owned by Mr. Benjamin Rothwell, of Ottawa, a former warden of Carleton county. Mr. Rothwell is one of the most progressive and successful farmers in his section. He has given considerable thought to this matter of good roads.

"Last year," said Mr. Rothwell, "I visited the State of Ohio and found that great progress was being made there in the construction of good, stone roads. I was informed that this was due to a bill that had been passed by the Legislature by which the State agreed to defray one half the cost of building stone roads where the counties would pay 25 per cent., the townships 15 per cent. and the property owners, living beside the roads to be improved, 10 per cent. This law seems to me to be a good one. Why should we not have a similar law in Ontario? Our provincial government should never feel the amount that it would be called upon to contribute. By disposing of some of its mineral concessions the money could be raised without casting a burden on any person. Farmers need good roads more than anything else. Farm and Dairy can help us by bringing this matter forward for discussion."

What do the readers of Farm and Dairy think of this suggestion?

a hill and would rather have only two to have four or five. This is for a crop of ears; of course, more would be required were the corn to be used for a silo.

I would like to cultivate corn every week if I could until it gets too much for the two-horse cultivator. Failing in this I cultivate as often as possible. We sometimes cultivate when the corn is over the horse's back. By making use of a short whiffletree, a careful man and steady horse will not drag down many stalks; and should the horse nip off a few leaves it will do no harm.

moisture such as fomentation or poultices, but if the contusion is severe and very deep seated, inflammation will likely result if the utmost care is not exercised. It often happens that even in the case of trivial incised wounds grave complications such as erysipelas or tetanus—lock-jaw—set in for want of a little precaution. All dirt or any foreign bodies should be carefully removed and the parts dressed as already described.

on it with the shoe of the other foot making a wound which is ordinarily called a "calk" because of its having been made by the calking of the shoe. Care should always be taken to see that none of the hairs have been forced down inside the top of the hoof, or if they have, they should be carefully removed as many a simple wound of this kind has developed into a serious condition because those hairs set up inflammation inside the wall of the hoof. Intense lameness and great suffering invariably result from such wounds and the animal is rendered unfit for work for some considerable time with, in many cases, a veterinary bill to pay, all because a precaution that could not have taken ten minutes to perform was neglected by the owner.

#### PUNCTURED FOOT

In the not uncommon case of the sole of the hoof being punctured by a nail, after the nail has been removed the opening made by it should be rimmed out to a considerable size in order to allow any pus which forms to escape. If this is not done in many cases pus will form, and not being allowed to escape, inflammation is soon set up and a bad case of under-sole is the result in which possibly the whole sole will have to be removed before recovery can take place. In such a case the horse would have to be off work for weeks or possibly months and all because of a little want of precaution on the part of the attendant.

### Methods of Silo Construction

T. H. Binnie, B.S.A., Carleton Co., Ont.

Do not on any consideration build a square or oblong silo. The walls of such a silo are not strong enough to stand the pressure caused by the great weight of the silage; and the amount of silage lost in the corners will amount, in a few years, to a considerable value. The best shape is circular. A silo should be more than twice as high as it is wide. Do not build a silo too large in diameter as the amount of silage spoilt from day to day will more than pay the interest on the cost of an extra smaller one. The main qualities of a silo are that the walls shall be strong enough to withstand the pressure and it shall be air tight. To get this, the first step is to build a good, solid foundation, commenced below the frost line.

#### STAVE SILOS.

Perhaps the simplest and easiest style of silo to be built is the stave silo. It should be made from two inch narrow plank properly bevelled, and held together by strong iron bands. The staves, after bevelling so that when fitted together they will form a circle of the desired size, are placed on end, on a solid foundation and properly fitted. These are strengthened and held in place by strong iron hoops which are so made that they may be tightened or loosened at will. Doors should be built at intervals from the top to the bottom so that the silage may easily be got out. It is not necessary to put a roof on this silo, but it is much to be preferred. This style of the silo should be kept well painted, both inside and out. If properly built and taken care of a stave silo is durable, rigid and airtight.

#### CONCRETE SILOS.

The site built of stone or cement has a bright future before it. The method of construction is much the same as the ordinary wall of stone or cement, but the walls should be strengthened by iron bands built right into the wall. Construct the walls from one to two feet thick at the base, tapering to about half that thickness at the top, depending upon the size of the silo. The iron bands should be complete circles and should be closer together at the base than at the top of the silo because the greatest pressure is at the bottom. Line the inside of the walls with a coat of rich cement so that the action of the acids

of the silage will not eat into the wall and injure it. This coating need not be thick as it is only to keep the acid away from the walls that it is applied. With doors properly placed, with a good roof and proper construction, a silo of this material should last forever.

#### LOCATION.

Whatever material is used in the construction we should place the silo in such a position that we will have as little handling of the silage as possible for it is very heavy stuff to cart about. In choosing the location, we have two points to consider. The silo must be so located that there will be very little difficulty in filling it and it should also be handy for feeding. No one cares to carry silage the length of the barn before he gets it to the cows. We should also choose a place that will be dry and not water-soaked for if the water gets into the silage it will soon spoil it. If your silo is built of wood it will soon decay if the boards become water-soaked. After the site has been chosen, build your silo very carefully so that it will be airtight and strong and you will be handsomely repaid for your trouble.

### Summer Cultivation of Corn

E. E. Wismer, Essex Co., Ont.

After the corn is up, we make a practice of dragging it with a light harrow. When it is about three inches high, we start cultivating it with a Cockshutt two-horse cultivator. The first cultivation is a light one. Then in about a week, we cultivate in the opposite direction (our corn being planted in hills) and cultivate deeply. In succeeding cultivations, we set the cultivator shallower and shallower, so as not to injure the rapidly forming roots. We cultivate by means of the two-horse cultivator until it is not possible to use it longer without injuring the corn.

When the corn is shooting out in ears, we make use of the one-horse cultivator setting it very lightly to stir up the soil in order that it may conserve all the moisture possible. Hag weed is the worst weed that we have to contend with. It takes a lot of cultivation to keep it in check in our corn fields.

### Road Making in Ontario

A. W. Campbell, Deputy Minister of Public Works, Toronto.

The present system of pathmasters and statute labor so general in Ontario is not a thing of which our people should be proud. In order that the work of road construction may be carried on sys-



An Oxford County, Ont., Road near Ingersoll

tematically and at a reasonable cost, it is essential that there be an efficient plan of management. The great defect of statute labor, with its large number of pathmasters rotating in office from year to year, is that it is utterly without system. There is no responsible head to direct the work, no one who can be held accountable for mismanagement. It is impossible to improve and construct all the roads of a municipality in one year; it is a work extending over many years,

and as such requires a plan and supervision which will reach into the future. This can only be accomplished by having a permanent head over this work; a road superintendent whose tenure of office will be similar to that of a municipal clerk or treasurer.

#### ABOLISH STATUTE LABOR.

It is desirable that statute labor be dispensed with, and that all the energy available be placed on a cash basis. By this means the road superintendent can demand from all employed by him, a reasonable day's work. He can perform the work where it is most required, taking up the worst pieces first, or the most heavily travelled sections, bringing them to a permanent condition, and steadily extending the work year by year. The cost of road construction is largely dependent on the cost of labor, and the amount of work performed, and it is not an uncommon thing to see an efficient road superintendent take hold of a road system and by careful management reduce the cost by one-half. This system has been adopted already by a number of municipal Councils, and they would not think of reverting to statute labor again.

#### SPENDING \$2,000,000 ANNUALLY.

The amount expended annually in Ontario upon country roads, in money and statute labor, is more than \$2,000,000. The expenditure is made too, with little or no attempt at a broad supervision, with the result that a large proportion is actually wasted and much of the remainder turned to poor account.

A careful examination of the methods pursued will disclose that, owing to faulty administration, careless and inexperienced supervision, and the improper influences which are brought to bear upon those in charge, our system of roadmaking is incompetent, utterly unjust and extravagant, and is almost solely responsible for their poor condition. No civilized country ever reaches its highest state of development without a good system of common roads. Bad roads are a source of a heavy economic waste. The impassable condition of country roads at certain seasons of the year tends to disorganize commerce and to throw the railway service into confusion.

#### CITIES MUST HELP.

An obligation rests upon the urban portions of the Province to assist in securing good country roads. All must bear a share of the cost.

In maintaining good streets and allowing the farmers to use them free of cost, the city has not discharged its obligation. The hauling of produce to the city and the hauling of merchandise back to the country in exchange demand good roads for economy's sake.

#### FIFTEEN COUNTIES UNDER ACT.

County road systems have in the present time been established in 15 counties, comprising over 40 per cent in area of the Province, to which the Highway Improvement Act is applicable. The counties operating under this Act have assumed an average of about 12 per cent. of the road mileage in each county, the total now amounting to 2,800 miles of road.

County Councils can do, and are doing, the work more cheaply than Township Councils. On the account the Act applies only to a "county" road system.

County systems of highways, where they have been established for two and three years, and the results are becoming apparent, are giving splendid satisfaction. The cost is found to be much less than extreme opponents are urging. In the great majority of cases roads are being built at an outlay not exceeding \$1,500 a mile.

The purpose of the Act is to have the county assume the entire maintenance of the more heavily travelled roads, while the townships will thus be able to give more attention to the rest.

#### PROVINCIAL AID.

An increased expenditure will no doubt be made, but this will be fully covered by the Gov-

ernment grant. Township Councils will thus be able to devote greater attention to the roads of less travel, many of which are now neglected because heavily travelled roads (which will be taken over by the county) are absorbing all the possible civic better attention from the County Councils and the remaining roads receive better attention from the Township Councils.

**That Pest! The Sow Thistle**

*Hy. Glendinning, Ontario Co., Ont.*

The perennial sow thistle has become widely spread. It has taken possession of many farms. Their owners, apparently, are at a loss to know how to deal with the pest.

In the summer of 1908 fields were to be seen in which the crop would not pay for the cutting.



Large Sized Tile should be used in place of Deep Roadside Ditches.

The depth and width of this ditch is indicated by the man standing in the bottom. Ditches are sometimes deepened through knolls to get fall, but carry, even in spring, only a small flow of water. In such cases a large size tile drain may be used, and the ditch filled in. The road is thus made safe, the cleaning of open ditches done away with, and a permanent work made.

In many cases this would apply to every cultivated field on the farm. During harvest, millions of seeds were distributed by the wind from these farms to other sections.

In districts where this weed is prevalent a serious problem confronts our farmers. If they clean one or two fields in one year the land is immediately reseeded from the adjoining fields. To secure labor to effectually clean the farms in one or two years is out of the question. Some plan that is more effective than that employed in the past is necessary.

**ABUNDANT ON DAMP SOILS**

This plant is most abundant on damp soils on which is grown grain crops, and in new meadows. Underdrainage is a great assistance in getting rid of Sow Thistle. The drains remove the large amount of moisture from the soil in which the plant delights. A short rotation of three or four years will soon clean a farm. On farms that are practically overrun with sow thistle so as to smother out all grain crops it is a good plan to turn these fields to pasture. It is not always possible to seed these fields down with timothy and clover as the young plants of clover and grass would be smothered by the thistles. On most of such land will be found some natural grasses such as blue grass, red top and white clover. These along with the thistles will make pasture for cattle and sheep. The soft green leaves of the thistles are eaten readily by all kinds of stock. Land that has been well stocked and pastured for three years will be completely rid of the thistles. Natural grasses will have taken possession of the land.

**Alsike Clover Seed Production**

*S. H. Stuart, Essex Co., Ont.*

Twenty years' experience in the production of alsike clover seed have taught us many things, that go to prove that old maxim, "Experience counts for a great deal." Experience has taught us that in order to succeed in alsike, one must have clean land free from all plants except alsike. The alsike must be kept short either by pasturing or by clipping with the mower. This is very es-

sential for when it goes much to straw, there is not likely to be much seed and it is the seed, not the straw, that counts.

It requires judgment to tell just how long to pasture the alsike or how low to clip it. Any one, however, with ordinary intelligence, will soon be able to tell the right stage. Should it head out when too short, cut the alsike across the furrows. It can be gathered when quite short. Some may say that it is hard work to gather it when short, but the way to success is never easy. There is money in the alsike crop, far more than the average farmer is aware of. One should not be easily discouraged. If you fail with alsike try again and you will surely win. Care must be taken to cut the clover at the right time. Two or three days too soon, or as many days too late, will make the difference between success and failure.

ment of apples from his dealer containing Spies, Baldwins, Spitzenbergs, Jonathans, or other good varieties. He naturally feels satisfied with his bargain and orders from the same party next year. This time he gets Phoenix, Stark, Gano, Ben-Davis or other inferior sorts. He consequently becomes disgusted with the apples, the dealer, and the section whence they come.

**GROWERS SHOULD GET TOGETHER**

The growers should unite in the different sections and endeavor to produce only a few of the leading varieties for their section. There would then be no disappointment such as that referred to. Business would go on smoothly and the demand would increase each year. Convince the public that a reputable article is being grown and put upon the market honestly and in the very best condition. With this aim in view growers will be well repaid for their extra trouble and will take more pleasure out of their business.

The people demand an attractive package. They demand quality of fruit rather than quantity, and for this they are willing to pay a much higher price. Few people would begrudge paying five cents for a couple of apples. In the larger cities, a large quantity of our apples are sold in this way, upon the streets. This price would mean \$3.75 a bushel box of 150 apples or about \$11.25 a barrel. A good price for Ontario apples under present conditions is about \$2.50 a barrel. One can readily see that the retailer could afford to pay better prices to the grower, for good varieties graded, and neatly packed. Such fruits cannot be obtained, in any quantity, in Ontario, under prevailing conditions.

The best plan then of coping with these conditions and meeting the demands of the market is to specialize in fewer varieties that we could do justice to. Eventually the best strains of these varieties would be selected. Growers would be encouraged to breed them up to the highest state of perfection.

**AN EXCELLENT EXAMPLE**

As an example of specialization, the Hood River Valley, Oregon, fruit growers may be mentioned. They have made a specialty of growing Jonathans, Spitzenberg, and Newtown Pippin apples and Hood River Valley strawberries. They receive two to three times the prices for their fruits that Ontario is receiving for her fruits, despite the fact that they are shipping the greater bulk of their fruits to New York and Old country markets right past Ontario's door. You may ask the reason for this difference in price and demand. Ontario can produce and produce in abundance fruits of certain varieties in certain districts that would compare very favorably with the very best that Oregon can produce; yet we must take a lesson from them in regard to specialization and marketing. The secret is that they have devoted their whole attention to these few varieties and have stuck to them. Of course, they had up-hill work at the start. It required a good deal of expensive advertising. Many carloads of the very choicest apples wrapped in neat papers bearing the Hood River brand, were handed out at the largest exhibitions and others were distributed among interested parties. To-day, we find that buyers and shippers from all parts of the world, come to Hood River long before the fruits are ripe and buy their entire crop. One can readily see the great satisfaction this gives to the growers, when you compare it with the worry and trouble and usual disappointments connected with the handling of many varieties.

*(Continued next week.)*

**Fewer Varieties of Fruits**

*M. S. Middleton, Ont. Agr. Coll., Guelph*

With all due respect to the plant breeders and nurserymen, one cannot help noticing the excessive number of varieties of fruits, which are being grown commercially in Ontario. This is one of the greatest mistakes in the fruit-growing industry to-day.

Numerous varieties not only handicap the grower, but also the packer, the shipper, the retailer and the consumer. The grower cannot give his best attention and close observation to variety details, where so many different varieties are grown. Consequently many of the best sorts are often improperly handled. The packer cannot afford time to study the small quantities of different varieties in order to show his products to best advantage. Each variety has its different characteristics, so that a special study as to the best methods of culture and marketing is very essential. The shipper cannot load straight carloads of any one variety. Every shipper or manager of any fruit-growers organization, who ships dispose of mixed lots or varieties. The retailer has neither the means nor the desire to handle mixed lots. Consequently he looks out for the best selling varieties. Lastly, the consumer, through ignorance of the different varieties frequently gets "sold." Thus, one year he may receive a consign-

ment of apples from his dealer containing Spies, Baldwins, Spitzenbergs, Jonathans, or other good varieties. He naturally feels satisfied with his bargain and orders from the same party next year. This time he gets Phoenix, Stark, Gano, Ben-Davis or other inferior sorts. He consequently becomes disgusted with the apples, the dealer, and the section whence they come.

Good feeders feed their dairy cows when they are dry as well as when they are milking. A dairy cow when dry puts on flesh in parts where they cannot be seen. A beef animal puts flesh on, on parts of the body where it can be seen.—  
A. G. McKennie, Oxford Co., Ont.



**FARM MANAGEMENT**

**Alfalfa Silage for Summer Feed**

A great many subjects of vital interest to the dairymen are discussed in *Farm and Dairy*. I would like to hear if any of my fellow subscribers have tried the following plan: When you have but one silo and feed the corn ensilage all winter by time pasture is ready how would it do to put a first cutting of alfalfa in the silo to be fed out in July, August and September? We are up against the proposition in this section of feeding our cattle at least 10 months out of the 15 each year.

The system I have mentioned would keep the silo practically occupied the year around. By the time alfalfa was fed out the last of September, the silo would be filled with corn. I think I saw an article in *Farm and Dairy* some time ago about Judge Clute experimenting on these lines, and I have noticed nothing since you can give me any information?—M. E. M. Trenton, Ont.

Your correspondent refers to a possible practice that will probably be much more common in the near future than it has been in the past. The usual advantage of alfalfa is the first cut of alfalfa, and not infrequently of the earlier blossoming fields of red clover is quite a problem with quite a few farmers to-day. The silo affords the best solution. Either alfalfa or red clover may be cut and fairly easily ensiled even though the weather be so uncertain as to render hay making exceedingly risky. Making alfalfa hay is quite difficult even under the most favorable weather conditions, it is quite impossible when rain falls every day or so, as it is not infrequently the case in June.

There are two or three points to be observed in making alfalfa or clover ensilage. The material has to be run through the cut box. This is somewhat difficult, especially if the material is all wet from dew or rain. It should be ensiled when at just the right stage of maturity, that is when not over 10 per cent. of the plants are in bloom in the case of alfalfa and when many bright yellow buds show signs of ripening in the case of red clover. The stuff should be cut in either case when fairly free from rain or dew, then allowed to wilt for a few hours before ensiling. Cutting with a blower will be found rather difficult. The chain elevator will prove more satisfactory. The blower pipe is likely to give trouble by plugging up. This is more especially the case when the forage is damp.—J. H. Grisdale, Agriculturist, C.E.P., Ottawa.

**Mammoth Clover for Seed**

I have a field of Mammoth red clover which is just being mowed. The first crop going to harvest early, and perhaps stand a show for a second crop for seed, but has been told that the seed comes in the first crop. The clover is about 16 to 18 inches in length now. What is your experience in handling this variety of clover, and about what should it be cut to expect seed?—E. B. H., Hastings Co., Ont.

Seed from Mammoth clover is obtained from the first crop and is usually cut about the 15th of July or first of August. It does not produce a second crop the same season.

If this clover is commencing to bloom on the 14th of June, it is doubtful if it is the Mammoth variety. The Mammoth red clover is the latest of all our clovers.—H.G.

**Water-lime vs. Cement Cisterns**

Is water-lime manufactured now and where can it be got? I wish to use it for my cistern, as the water is better than that from a cement one.—J. H., Dufferin Co., Ont.

Water-lime is lime burned from a certain kind of limestone and is hardened under water. It has been superseded largely by Portland cement, which is manufactured by grinding

marl, chalk or lime stone with clay and water so as to make a mortar or the whole mass; then it is burned in a furnace until it verities or melts after which it is ground into the powder that makes the Portland cement of commerce. Portland cement is much stronger than water-lime. There will be no difference in the taste of water from a cistern made from either of these after the cistern has been in use for a few weeks.—H. G.

**Some Rather Plain Words**

Editor, *Farm and Dairy*.—Some one must have trod on Mr. Came's toes pretty hard from the sarcastic strain in which he writes in your issue of June 10th. He seems out of humor. He should not feel so hard toward we Ayrshire men because we have the reputation of being the best sometimes say in writing in your issue, but he can look at any mixed herd of cattle in Canada and by using his powers of observation he will know which are frames and which are cows.

It would appear that Mr. Came has missed his calling. I don't know what he is doing, but he should be lecturing on agriculture. He does not know how to make his manure pay 80 per cent. of the cost of feed. Every one will not think as I do, therefore all will not keep Ayrshire cattle. But there is nothing in Canada for all, and if we cannot find the good ones now that the Government has instituted the Record of Performance tests, we are to be pitied, not blamed.

The man thing in dairying is to get a few good cows of some registered stock, then test them and build them up, not forgetting to feed and in a few years you can raise the average of about 3,000 lbs. of cows now, to twice or three times that amount in a season.

A thing of beauty is a joy forever and as I love my little herd of Ayrshires (all babies) and my matured cow in the bunch and think that two years ago I was milking nine or 10 head of cows (?) and not getting as much milk as I am now from five. I begin to think I am true. There are grade cows that give milk as well as pure breeds, and if you haven't the registered stock, get into a cow with a good reputation and know what your own cows are doing. A good milk record enhances the value of a cow even if the government does not guarantee it.

In conclusion I would ask Mr. Came if he won't try to get his neighbors to improve what stock they have and stop throwing stones at an honest Ayrshire cow.—F. I. Lear, Northumberland Co., Ont.

**Eastern Ontario Live Stock and Poultry Show**

The Executive Committee of the Eastern Ontario Live Stock and Poultry Show met in Ottawa on June 11th Show which is to be held at Ottawa on January 17th to 21st, 1910.

In the Dairy Department there are to be classes for Shorthorns, Ayrshires, Holsteins, Jerseys and Guernseys, and Grades. In each of these classes there will be three sections: cow, 48 months and over; cow, 36 months and under 48; heifer, under 36 months. The prizes for each section will be, 1st, \$25; 2nd, \$15; 3rd, \$10; 4th, \$5.

The prize list for the Horse Department of the Show was revised. There will be four sections of three in the open class and one in the stallions. There will be stallions foaled previous to Jan. 1, 1908, stallions foaled in 1906, stallions foaled in 1907 and stallions foaled in 1908. The total amount of prize money for these sections is \$10,000. The prizes and classification for Clydesdales and Shire mares will remain as last year,

but both imported and Canadian-bred mares may be shown. A new class was added for Hackney mares, and again, with prizes of, 1st, \$30; 2nd, \$20; 3rd, \$10; and the prizes for Hackney stallions foaled previous to January 1st, 1907, were increased to, 1st, \$40; 2nd, \$30; 3rd, \$20; 4th, \$10. The horses in the Hunter Class will be shown under saddle instead of on the line. Exhibitors of Heavy Drought Horses will in future be allowed to show the same horses in both single and double harness. The balance of the prize list for the Horse Department will remain as last year.

The live stock judges for the next Show will be as follows:

- Beef Cattle: Robert Miller, Stouffville; Capt. T. E. Robson, Ilderton.
- Sheep: A. W. Smith, M.P., Maple Lodge.
- Swine: D. C. Platt, Millgrove.
- Bacon Hogs, (alive): Prof. G. E. Day, Guelph.
- Cattle and Sheep Carcasses: Prof. G. E. Day, Guelph.
- Bacon Hogs, (dressed carcasses): J. H. Grisdale, Ottawa; Geo. Gray, Hull, Que.
- Clydesdales, Shires and Heavy Drought Horses: John Garhouse, Highfield.
- Hackneys: Hon. Robert Beith, Bowmanville.

Standard-breds, Thoroughbreds and Hunters: Dr. J. G. Rutherford, Ottawa.

Arrangements were made to refund a portion of the freight charges on exhibits coming from a distance of more than 100 miles from Ottawa, and the following regulations were made to govern this:

Exhibitors of Horses, Cattle, Sheep or Swine whose shipping stations are more than 100 miles from Ottawa will be refunded, the difference between the amount actually paid for freight and the amount that the railway would charge for such rates. A car load of stock must consist of not less than 6 horses, or 8 cattle or 24 sheep or 24 swine. In mixed car loads 3 sheep or swine will count the same as one horse animal. Refunds on less than car load lots will be made at proportionate rates.

Farmers' Institutes in Eastern Ontario will be given the privilege of affiliating with the Show upon payment of \$5.00. This will entitle up to 100 of the members to free passes which will admit them to the Show during the full length of time the Show is held.

**Agricultural High Schools**

So great has been the success of the Branch Departments of the Ontario Department of Agriculture, that have been established in several of the counties and the teaching of agriculture in the High Schools where these branches are located, that other places are bestirring themselves and putting forth efforts seeking to have similar departments established in their counties. It is necessary before the Legislature will consider an application for an agricultural department in any county, that the County Council pass a resolution recommending that an agricultural department be established within their bounds.

Leading agriculturists and others interested in Durham County are alive to the advantages of this new departure in agricultural teaching, and are putting forth efforts seeking to have a department established in their county. With this object in view a strong deputation from Port Hope waited on the United Counties Council at Cobourg last week and asked that a resolution be passed by the County recommending that a Department of Agriculture be established at some favorable point in Durham County.

Have you forgotten to renew your subscription to *Farm and Dairy*?

**CRUMB'S IMPROVED WARRIERS STANCHION**

"My barn that was BURNED was fitted with Crumb's Warriner Stanchions. If it had not been for the ease with which these Warriner Stanchions were erected I should have had my stock trampled to death."—G. W. Glines, Berwickville, Mass.

WALLACE H. CRUMB, Box 125, Berwickville, Mass.

**Use This Loader and Hire No Men**

One man can build the load because the Loader pushes the hay forward on the wagon. This feature saves one man's wages, no other types of Loaders, every other type.

One man can load hay because the loader has a sliding door that can be opened from the inside of the wagon. This feature saves one man's wages, no other types of Loaders, every other type.

You can couple it in a few seconds to any bright wagon and uncouple it from the front. No cog gears, no crossed chains, no cog wheels, no cog teeth, no cog shafts to break, no cog teeth to wear, no rollers, chews, or cog teeth to wear and make trouble.

**Great DAIN Loader**

is a model of simplicity, and efficiency. It is light draft, easy to operate and substantially built of best material to stand hardest service. We have specialized on Hay Tools for a quarter of a century. The name Dain on a Mower, Reel, Loader, Sickle or Press guarantees best work, highest draft, most lasting steel, A. J. Dain's name on your dealer's tool shows the whole line.

**Handy Hay Book FREE**

Tell us your hay tool needs and we will send you our new book "All About Hay" containing information on how to make hay-growing more profitable and also a complete catalogue for DAIN MANUFACTURING CO.

BOX 263, PRESTON, ONT.

**WINDMILLS**

Towers Girted every five feet apart and double braced

- Grain Grinders
- Pumps
- Tanks
- Gas and Gasoline Engines
- Concrete Mixers

Write for Catalogues

**GOOLD, SHAPLEY & HUIR CO., LIMITED**  
BRANTFORD, CANADA

**LAND for SETTLEMENT**

Lands are offered for settlement in some cases FREE, in others at 50 CENTS per acre, in various districts in NORTHERN ONTARIO.

Write for information as to terms, homestead regulations, special railway rates, etc.

**DONALD SUTHERLAND,**  
Director of Colonization, Toronto

**HON. JAMES S. DUFF,**  
Minister of Agriculture.

## HORTICULTURE

### Oshawa-Bowmanville-Newcastle Fruit District

An excellent fruit district is situated near the north shore of Lake Ontario. Large quantities of apples and other fruits are grown and, during the past four years, large numbers of new orchards have been planted. Recently, a representative of Farm and Dairy spent two or three days with the growers in that district and found them enthusiastic over the possibilities of the district for fruit growing. Most of the orchards looked well and showed the results of good care and attention. That it pays to give the orchard proper care was pointed out by many of the growers. A well known apple buyer of that district, Mr. Quick, of Bowmanville, stated that the best apples that were harvested last fall came from orchards that had been well cultivated throughout the season, which was very dry for many weeks.

A good crop of apples is looked for in the district with the exception of Baldwin which seem to be bearing irregularly. In some orchards this variety will be very light, while in others where it did not bear last year, a good yield is expected. Mr. W. H. Gibson of Newcastle, told our representative that Spys will be generally good; Greenings, Russet, King, and Stark, heavy; Ben Davis, less than medium Pears and plums had a full show of blossoms. Raspberries and blackberries promise well. The strawberry crop will be fairly good, except for the fact that the rows are rather narrow owing to the drought last season. Jas. K. Alder, of the same place, stated that the crop in his orchard will not be up to the average. Mr. E. C. Beman, of Bowmanville, stated that the blossoming in his orchard was good and that the prospects for a crop are excellent for most varieties, Spys being particularly good, while Ben Davis is light. Mr. Elmer Lick, of Oshawa, also expects a good crop of apples, except in the case of Baldwins.

Our representative was told by Mr. Lick, who is the manager of the Oshawa Fruit Growers Limited, that that organization is in a flourishing condition, and that its members in general are more than pleased with the results of co-operation. Some five years ago, growers in that locality were receiving at the most 75 cents to \$1 a barrel for their apples, while those who became connected with the association are now realizing between \$2 and \$3 for their output. The members find co-operation to aid them in not only securing more money for their fruit, but also in the management of their orchards. Co-operation has taught them the value of proper pruning and spraying, good packing and so forth.

Many growers in the district are practicing thinning the fruit on the trees to get size and quality. A number of them gave their opinion of this operation to our representative, and an article on this subject will appear in an early issue of Farm and Dairy. Many other pointers were picked up on orchard cultivation, spraying, pruning, grafting and other lines of work that are necessary in the production of high grade fruit. These will be mentioned in opportunity permits in these columns.

### Culture of the Cherry

The cherry is one of our most acceptable fruits. On many of our farms a few trees are to be seen, and cherry picking time is one of the delights of farm life. Where it will grow successfully, the cherry

should be grown more extensively. It is one of the best fruits for home use, and can be made profitable as a sideline for market. From *The Canadian Horticulturist* the following article on its culture by Wm. Platts, Jr., Welland Co., is taken: "We prefer a clover sod for starting a cherry orchard. After you have cut your first crop of clover, plow the sod under thoroughly, cultivating it until the middle of October, then mark the ground out eighteen by twenty feet apart. We plant in the fall so that the ground will get thoroughly settled around the roots by spring, so that they get a good start before dry weather sets in.

"We think that a good one year old



Among the Cherry Blossoms  
Orchard of Wm. Platts, Jr., Welland Co.,  
Ont.

tree is the best to set out, because it makes a better start and is more sure to grow.

"We plant some vegetables or small fruits that take lots of cultivation between the rows so as to make a good growth each year, until the trees commence to bear well.

"We start pruning about the middle of March, keeping the trees headed low, and plow away from them just before they come in bloom. From this on keep the ground thoroughly cultivated, using the disc-harrow and the cultivator, until the crop is harvested.

"We generally have some good girls and boys to pick them and pay them fifteen cents a quart basket, using small step ladders, or standing on the ground, for being headed low. We sell the fruit to our nearest canning factory, which is located near Welland Ont., two and one-half miles from our orchard. After harvesting the fruit we spread manure, and then plow up to the trees for the coming winter."

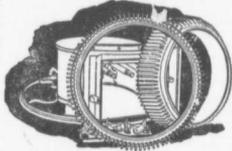
### Nova Scotia Model Orchards

There are now 32 "model orchards" in Nova Scotia that are managed under the direction of the provincial government. These orchards were established with the view of discovering what parts of the province outside of the well known fruit districts, the Annapolis Valley, are adapted to fruit-growing; what varieties are best suited to those parts; and, by illustration of the right methods of culture, to encourage those who are living where fruit may be grown to engage in the industry. The last report of Prof. P. J. Shaw, the inspector, states that these orchards for the most part, are in the hands of good men and that they are receiving careful attention and are doing well. In occasional issues of Farm and Dairy reference will be made to the progress of these orchards and to the lessons that have been learn-

## You Ought To Know About Steel Ribbed Fire-Pots

Any invention that will save you from ½ to ¾ in fuel, is a pretty important subject to the man who is going to put in a new furnace this summer.

The "Hecla" Fire-pot has three times the radiating surface of any other because it has 97 steel ribs fused in the castiron (count the flanges or pins in your present furnace). This increase in radiating means a corresponding increase in the amount of heat given off by the fuel. By actual tests extending over three years,



## The "Hecla" Furnace

saves from ¾ to ⅔ of the fuel.

Every one of the "Hecla" Furnace steel ribs radiates heat. They also throw off the heat so rapidly that the firepot never becomes redhot, cannot burn cut, and should be practically everlasting.

"We can't tell you all the points of "Hecla" Furnaces, here. Our new catalogue contains them, explains them and illustrates them. Suppose we, and you a copy—free?"

Clare Bros. & Co. Limited, Preston, Ont.

75

ed from them. The following letter from Mr. Jas. W. Mitchell tells of the methods followed and the work that has been done on the "model orchards" at Cook's Brook, Halifax County:—

"I keep the orchard cultivated until the first of July," writes Mr. Mitchell, "and then I sow a cover crop either of vetches or buckwheat, and leave this until the following spring. The trees are doing well. The Wealthy, Baxter and Stark apples seem to be the strongest growers. Ontario and Baldwin are doing fairly well, while Wolfe River is not so promising.

"In plums, the Yellow Egg and Lombard are fine strong growers and look well. Bradshaw and Damson are also doing very well. Pears are not doing as well as I would like. Bartlett is the best. We have two kinds of cherries, Montmorency and Wragg.

"There is one acre of ground in the orchard. The apple trees are 30 feet apart with fillers of plums, pears, and cherries one way. There are about 100 trees in all. The ground is a sandy loam and the orchard is well sheltered from the wind." From the report of Professor Shaw, the following general information regarding these orchards is taken:

"A strip of land eight or ten feet wide is plowed each spring along each row of trees and is kept well cultivated until July 1st, when it is sown with a cover crop to occupy the ground the remainder of the season. The land has received such application of manure or fertilizer as would be needed for a good crop of potatoes. The trees have been cut back or "headed in" for the first five or six years with a view to encouraging the development of fruit spurs at an early age, and the heads have been formed low. Most of the owners of these orchards have been pro-

vided with spray pumps which they generally use with good results."

"Cabbages Sprouts.—This is one of the best winter dishes. It is a variety of cabbage, the stem being covered with small close heads. Sow in the open in April preferably in a cold frame. Endeavor to get hardy, strong plants. Cultivate similarly to cabbage, good rich soil, well cultivated all summer. Towards late fall, denude the stems of their leaves, removing to a cellar or root house, before severe frost sets in.—A. V. Main, Lanark Co., Ont.

The bloom on cherries and plums has been exceptionally good; some varieties of pears, good, Flemish Beauty, light; fall apples, such as Colverts, Ribston, Blenheim, Jennesmith, very heavy; winter apples, such as Ben Harris, Baldwin, Kings, light; Stark, Golden Russet, Balfellow, R. I. Greening, full.—H. C. Bowen, Durham Co., Ont.

A valuable bulletin on vegetable pests has been issued by the Ontario Department of Agriculture. The first part on "Insects Effecting Vegetables" was written by Dr. Chas. J. S. Bethune, professor of entomology at the Ontario Agricultural College. The second part on "Fungous Diseases Effecting Vegetables" was prepared by J. W. Eastham and J. E. Howitt, lecturers in botany. The bulletin is a convenient manual for the identification of the ordinary insects and fungous pests that injure farm crops. The most practical remedies are described. All persons who grow vegetables should have a copy of this bulletin for reference.

Send reports of crop conditions and prospects for publication.

**POULTRY YARD**

**The Farm Poultry House**

Prof. F. C. Elford, Macdonald College

The poultry house on the farm might be either stationary or movable. The house that already exists on the average farm is stationary, so we will deal with that first. What has been said in reference to having the plant dry, large enough to allow for growth, convenient to the house, etc., all apply to the house itself. Its construction need not be elaborate. It need not be expensive, but it should be comfortable for the fowl and convenient to the manager.

In building a permanent house or in estimating the number of hens that an old house will accommodate one has to take into consideration the breed of the hens, the ventilation of the house, and the yard room. It was at one time advocated that each hen should have at least ten square feet of floor space. Then persons found out that they got along very well with eight or even six square feet. For three years we have been housing hens with less than four square feet of floor space to each hen and the results have been good. The hens at Macdonald College, are medium to small. Ventilation is good, and both summer and winter the hens are allowed to go outside. The smaller the space provided the more care should be taken that it is kept clean and fresh. If hens are fed in the winter time in a deep litter so that they will be required to scratch for the grain, they will do with less space than if fed mash or in such a way that requires no exertion on their part.

It will be seen that no absolute rule can be laid down for the size of house necessary. Other things being equal the flock with plenty of room should do better than the flock in cramped quarters. The size of the pen may also be provisional. I have seen good farm flocks of 100 laying hens do well in one pen. As a rule however, 50 hens will do better in a flock than will 100. In building a new house it is best to build a house larger than the present flock may require if it is the intention to increase.

**SUN LIGHT AND FRESH AIR**  
Every house should have plenty of sunlight and fresh air. Sunlight is our best disinfectant as well as the cheapest. The windows should face the south or north-east and be large enough to permit plenty of sunlight to enter. They should be placed so as to utilize the sun to advantage. Don't place the windows up near the roof, nor horizontally near the floor. Place them upright, going nearly to the ceiling as well as to the floor. A window placed in this position will expose more of the contents of the room to the sun than when placed in any other way. Usually about one-third of the front wall may be given up to glass. The sun should, in its daily course, see as many of the corners of the pen as possible.

The roosting quarters should be ex-

posed to the sunshine. The health of the fowl depends upon it.

The sun and fresh air will keep dry a house otherwise damp. A house that shows frost in cold weather and dampness when it thaws cannot be improved by closing the windows or putting in a double sash. Rather open up the windows and ventilate. Artificial heat is not necessary.

A straw loft is an advantage. If a hen house is not dry, good results cannot be expected. One can put

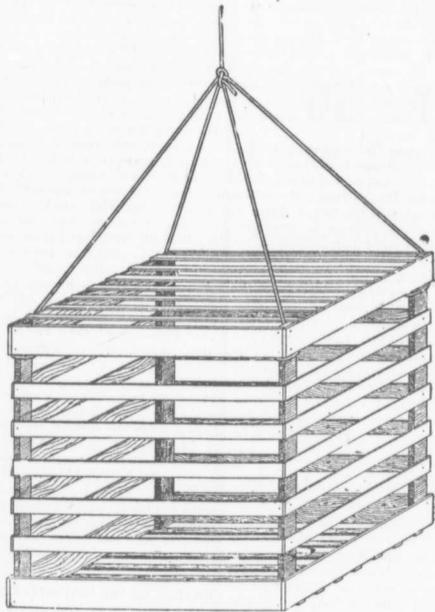
themselves in? Will not the road dust answer all requirements of a vermicide for hen lice?—E. B. Hutton Co., Ont.

The road dust answers the purpose very well without the sulphur.—F. C. E.

**Breaking the Broody Hens**

What method do you recommend for breaking up broody hens?—C. S. Peterboro, Ont.

The accompanying illustration



Convenient Coop for Breaking Broody Hens

cotton in part of the window, more or less according to climate. This will ensure a certain amount of constant circulation.

**CONVENIENCE**

A house that is inconvenient should not be tolerated. It is sometimes impossible to change the location of a house that has been placed in an awkward position, but any house could be arranged inside so as to lessen the work of attendance and cleaning. The door shall be on the nearest side. Have the furnishings movable and have things so arranged that they can be taken out at any time. This aids in cleaning. Have no unnecessary furniture either inside or immediately outside. Roosts should be on a level. A feed bin at the door is convenient; then the feeder need only open the lid and take what grain is necessary. Some houses are arranged so that who ever feeds the hens has first to go to the granary for the grain, thus making double or even treble the steps necessary. By having a barrel or box handy for the feed the men can fill it once a week, and a strict account can be kept of feed fed.

Next week we want to take up the subject of the movable colony house for farmers' use. The week after we shall probably deal with the flock best suited for the farm.

**Dust Bath for Fowls**

It is advisable to add sulphur to a mixture of road dust for the fowls to dust

shows a coop that answers very well. It is made two to three feet each way and is hung by a wire or rope to the ceiling of the hen house. Leave it about a foot from the floor and give it a swing whenever convenient. At the Macdonald College after the breeding season, when more hens become broody we use simply a pen into which we have put our male birds. As soon as a hen shows signs of broodiness she is put into the bachelors' hall. If any hen is left on the nest, a day or even less, or is thrown out and allowed to return there is hardly anything that will cure her until she is ready. All hens so confined should be well fed and watered.—F.C.E.

**Summer Care of Chicks**

J. Marry, Simons Co., Ont.

The hen will probably leave her chicks when they are six or eight weeks old. To keep the little chicks warm and to mother them at night, it is a good plan to make a frame, and stretch canvas across it. Sew pieces of flannel to the canvas from the under side. The chicks feel the flannel on their backs as they cuddle in; this contrivance also keeps in the warm air, and the chicks are protected from chills. The frames should be aired daily in the sunlight. Keep fresh, clean material for the chicks to rest upon at night.

Examine your chicks for head lice. These are their worst enemies. Head lice quickly kill the chicks unless looked after. Dusting powders have very little effect on head lice. The best remedy is to use common lard, adding one-twentieth part Peroseine oil. Rub this mixture on the entire head. For a chick a week or 10 days old one-quarter of a teaspoonful of the lard should be rubbed well into the down on the head. Apply the ointment first to the neck, work it forward to the bill, then smoothly down the neck from the bill. You thus smother the lice and they quickly die.

Coops should be cleaned twice a week or oftener. Apply kerosene or some other preventive to the coops to keep them from being overrun with lice in warm weather. Keep pure fresh water before your chicks and change it three or four times a day, if you wish them to grow.

Renew your subscription now.

**PERFECT**

**Steel Tanks**  
**You Can Bank On**

THIS GALVANIZED STEEL STOCK TANK is intended for watering stock, especially where water is supplied from a windmill. It is supported with angle iron frame work, dotted lines represent boards to be tacked on to protect the frame work is sent out punched so that anyone can nail boards to it. This makes a very satisfactory tank for the chicken, and one that is self-porting. Send for our Special DIRECT FROM MANUFACTURER Proposition at Macdonald. Address Dept. T.

**The Steel Trough and Machine Co., Limited**  
TWEED, CANADA

**Black Watch**

**Chewing Tobacco**

**The big black plug.**

2289

**Poultry Books Given Away Free of Cost**

Your choice of the following, for securing **Only One New Subscription** for this paper at \$1 a year:

- Diseases of Poultry
- Duck Culture
- Poultry Pocket Money
- Poultry Architecture
- Poultry Feeding and Patenting

Send us only **ONE** New Subscription at \$1 and we will send any of the above free of cost. Write for sample copies.

CIRCULATION DEPARTMENT  
**RURAL PUBLISHING COMPANY, Limited**  
PETERBORO, ONT.

# FARM AND DAIRY

## AND RURAL HOME

Published by The Rural Publishing Company, Limited.



**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, Dairywomen's Associations, and of the Canadian Hoteliers, Ayrshire, and Jersey Cattle Breeders' Associations.

**SUBSCRIPTION PRICE, \$1.00 a year, strictly in advance.** Great Britain, \$1.20 a year. For all other countries, except Canada and Great Britain, add 50c 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. Postage stamps accepted for amounts less than \$1.00. On all checks add 20 cents for exchange fee required at the banks.

**4. CHANGE OF ADDRESS.**—When a change of address is ordered, 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 subject. We are always pleased to receive practical articles.

### CIRCULATION STATEMENT

The paid subscriptions to **Farm and Dairy** exceed 7,000. The circulation of each issue, including copies of the paper sent to subscribers who are but slightly in arrears, and sample copies, varies from 5,000 to 12,000 copies. No subscriptions are accepted at less than the published rates. Thus our mailing lists do not contain any dead circulation.

Sworn detailed statements of the circulation of the paper, showing its distribution by countries and provinces, will be sent 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 to believe that any 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. All that is necessary to entitle you to the benefits of this Protective Policy is that you include in all your letters to advertisers the words, "as your ad. in **Farm and Dairy**." Complaints should be sent to us as soon as possible after reason for dissatisfaction has been found.

## FARM AND DAIRY

### PETERBORO, ONT.

TORONTO OFFICE:  
Room 306 Manning Chambers, 72 Queen St. West, Toronto.

### WINTER FAIR DAIRY FEATURES

Arrangements have been completed for the construction this year of a large addition to the Guelph Winter Fair. There is a matter in connection with this addition that must not be overlooked.

Two years ago, the dairymen's associations of Ontario and the Dominion dairy cattle breeders' associations placed themselves on record as being in favor of the holding of a National Dairy Show. General dissatisfaction was expressed with the lack of attention given to the dairy features at the Guelph Winter Fair. The need of an exhibition that would suitably advertise the great importance of the dairy interests of the Dominion was emphasized.

A committee representing the leading dairymen's and dairy cattle breeders' associations of Canada met and considered the matter. All the members of the committee voted unanimously in favor of the holding of a

National Dairy Show. Not receiving any assistance from the Ontario Department of Agriculture these dairymen finally informed Hon. Nelson Monteith, the then Minister of Agriculture for Ontario, that they would guarantee the financial success of the exhibition if he would simply permit the Ontario Dairymen's Associations to give it their support. Hon. Mr. Monteith refused even this modest request. He advanced as his main reason for doing so the argument that nothing should be done that would tend to injure the Guelph Winter Fair. He announced that the Winter Fair at Guelph was to be enlarged and intimated that the dairy features of that exhibition would be greatly improved.

With that understanding, the agitation for the holding of a National Dairy Show was allowed to drop. Next December the dairymen of Ontario and of Canada will have a chance to see how that promise has been kept.

There are many dairymen who do not believe that it will ever be possible to make a success of the dairy features at the Guelph winter fair. The Ontario Department of Agriculture and the directors of the Fair may rest assured that if there is not a vast improvement next December in the Dairy features of that exhibition, that the dairy interests will conclude that the holding of a National Dairy Show at some more central point than Guelph, has become an absolute necessity.

### JOURNALISM IN AGRICULTURAL COLLEGES

At gatherings formal or informal, that person is in demand who can say the right thing at the right time and in the right way. Most colleges recognize the value of training students in speech making, and to that end give more or less instruction seeking to train their students in the art of public speaking. The Ontario Agricultural College, at Guelph, has for years given attention to developing this art amongst those who leave her halls. The instruction given has long been felt to be far from what its importance would warrant. In the last annual report of the College the Professor of English urges the appointment of an assistant who would be competent to take charge of the public speaking classes, and to assist in the other branches of the English department. In view of the demands that are upon the graduates of this college, requiring that they be able to impart the information that they have gained in a competent and acceptable manner, this recommendation should receive the favorable consideration of the Department of Agriculture.

While it is important that experts in agriculture and others who have had the advantage of college training, be able to speak well, it is much more important that they be able to write well. There is a constant call for experts in agriculture who can put up their thoughts on paper in an acceptable manner. Composition is already taught at the college, but there is a wide difference between in-

struction in ordinary composition and in journalism. In view of this fact it would be well to have classes in agricultural journalism organized at Guelph. The Canadian Horticulturist in a recent editorial made this suggestion. It should be acted upon. Many graduates of the Guelph College become connected with the agricultural press. This fact should be considered when making any changes in the English department. Where so many embryo journalists are in training as at Guelph, courses should be given in the history and principles of journalism, newspaper administration, illustration, photography, the libel law, news gathering, reporting, editorial writing and so forth, besides the academic branches of the study. Should it not be deemed expedient to establish a full course in agricultural journalism at once we would suggest that a course of lectures be arranged preliminary to the establishment of such a course. Prominent men and editors from the agricultural press could be secured to give these lectures.

Any instruction that might be given in journalism, while it would prove invaluable to students who may become journalists, it would also be of great assistance to many who accept other positions in professional agriculture, not to mention those students who go back to their farms and who should be able to teach others by writing for the press. Classes in journalism in our agricultural colleges would work a mighty influence in the spread of the gospel of scientific agriculture. Various colleges in the States have come to recognize the value of such training and have organized Departments of Journalism. We may well fall in line and start this work in our own colleges.

### WE MUST GUARD OUR INTERESTS

How many of us have ever given much thought to what it costs for the power on our farms? It is estimated that the cost of keeping horses on the average 100 acre farm, where mixed farming is carried on as in the Eastern Provinces of Canada, requires the product of about one-third of the land. The pasture, hay, grain and straw produced on the land is needed to maintain the working horses, including the brood mares and the colts that are growing up to take the place of the worn out ones. These horses have to be attended to three times a day, in the way of feeding and cleaning, the year round and they generally occupy the best stabling on the farm.

The cost of keeping horses is one of our heaviest expenditures. If the pasture and other feed that is used for the horses were fed to our dairy cows, the profits on our farms would be greatly increased.

While we have not come to that stage where we can discard horses, are we doing all that we might to secure cheap power? In the operations of threshing and other heavy work, the horses have given way to steam and in some cases the steam has been superseded by electricity. The towns and cities are looking to electricity to supply them with power, light, and

in some cases, heat. Transmission lines are being run through many of our farming centres. They carry electric power by our doors. Why should we not secure some of that power? It could be used to advantage in the way of light, running separators, churning, washing, pumping water, grinding, filling silos, threshing and other work.

Many of us are asleep over our possibilities. We may wake up some day to find that franchises of all the cheap water powers of our country have been secured by the towns and cities where it is delivered to them at a cost as low as \$17 per horse power a year. We must impress upon our representatives in the legislature that we want some of that cheap power and it shall not be tied up in such a way that we cannot share it when required.

Niagara Falls is the principal power of our country but we have many fine rivers and streams running through some of our best agricultural districts. They represent thousands of horse power that is going to waste daily. As farmers we must keep our eyes on these streams and make sure that we secure our share of the power they will be made to produce in the course of a few years.

### AN AGE OF PROGRESS

Competition year by year has forced us to change out methods of farming. The man who shuts his eyes and refuses to adopt the improved methods soon falls behind. In no case has this shown more clearly than in the development of farm machinery. The development of our country in all industrial lines advanced the price of labor. Instead of hiring men as of old, we are compelled to have the latest and best machinery if we hope to make a profit from our farms. Farm machinery not only has enabled us to perform our work more expeditiously and at less cost, but the work done is of better quality.

The drudgery that used to be inseparable with farm work has been done away with. It has been reduced to less than most other occupations requiring manual labor. The use of farm machinery has developed our intellectual faculties and has made us better managers. In many cases one man performs the labor that used to be accomplished by a half dozen men or more, and he does it with comparative ease. We must expect still further improvements. Electricity will soon be playing an important part on many farms. This is an age of progress. We cannot stand still.

Dr. S. B. Sinclair, formerly Vice-Principal of the Ottawa Normal School, has been appointed by the Board of Governors of McGill University, to the position of Head of Teachers, of Macdonald College, Que. Dr. Sinclair is familiar with rural conditions, having spent his boyhood days on the farm and has had experience as a rural school teacher. He is an honor graduate of Toronto and Chicago Universities and holds Ontario Public School Inspector's and High School Masters' Certificates. He has had a very useful and honorable

field  
exp  
clai  
his  
broa  
We  
has

Prac  
A  
W  
wh  
artic  
formu

29495

Repr  
Why i  
if desir  
at temp  
be put i  
haust m  
as show  
plugged  
keep wh  
hand pu  
Another  
noiseless

(A.A.) Le  
up, not  
up 7 inches  
ed, sufficient  
back at 150  
reduced to  
steam (C)  
steam (C)  
keep lower t  
when elevat  
with this

career as a leader and worker in the field of education. Farm and Dairy expresses its appreciation of Dr. Sinclair's record, worth and work. In his new position, his field will be a broad one and his influence large. We wish him success in the charge he has assumed.

**Practical Pasteurization of Whey**

Frank Hens, Chief Dairy Instructor, Western, Ont.

A large number of cheese factories in Western Ontario will pasteurize whey during 1909. The object of this article is to give some practical information regarding different methods

of pasteurizing. Patrons and makers, generally, recognize the benefit of proper pasteurization, in increased feeding value of the whey by even distribution of the fat, better condition of the tanks, sweeter whey for calves and pigs, easier washing of cans, checking yeasty flavor, and numerous other ways. From data secured during 1908 the following may be of interest:

Average per cent acidity of whey going in patrons' cans, whey pasteurized, 1.12 per cent; when pasteurized, 150 deg. to 160 deg., .4 per cent.

Average per cent of fat in whey going in patrons' cans, whey not pasteurized, 1.12 per cent; whey pasteurized, .22 per cent.

Total fat returned per ton of cheese (20,000 lbs. whey x .09 per cent, equal to 18 lbs.) (20,000 lbs. whey x .22 per cent.

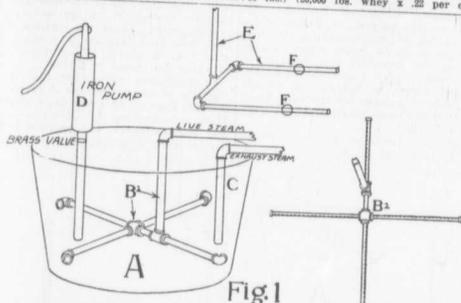


Fig 1

Represents conditions where only one ground tank, close to boiler, is used. If desired, and the whey ejected directly from the vats, delivered to elevated tank at temperature of about 125 deg. One of the systems of pipes shown elsewhere can be put in and whey heated to 155 deg., with live steam. When engine is in use, exhaust may also be used in ground tank. (a) Tank. (b) 1/4 inch live steam pipes plugged and holes drilled as shown, holes turned same angle. Either system will keep whey in circulation and assures even heating. (c) Exhaust steam. (d) Iron hand pump with brass valve. Leather valves wear out quickly with hot whey. (e) Another method of arranging live steam pipes in tank. (f) Noiseless heater. Four noiseless heaters may be placed on (b) if desired instead of elbows.

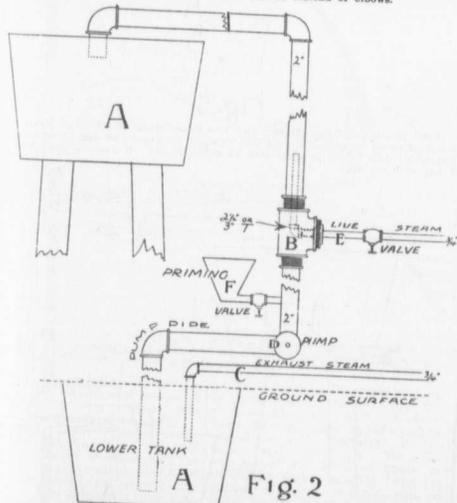


Fig 2

(A.A.) Lower and upper tank. (B) 3/4 inch or 1 inch T. (C) Exhaust steam, 1 1/2 inch, not 3/4 inch, as shown in cut. (D) Pump or ejector. (E) Live steam turned up 3 inches inside T. (B) as shown by dotted lines. When pump or ejector is started, sufficient live steam is turned on through (E) to deliver whey in elevated tank at 155 deg. (F) Priming valve for pump. Pump pipe two inches, the T (B) steam (C) will be heating whey in lower tank while pump is running. Exhaust keep lower tank in as good condition, T (B) instead of tank, but would not when elevated with this system than any other. Using an ejector instead of pump with this system works well.

**Another Infringer Nailed**

**SHARPLES SEPARATOR CO.**

John Deere Plow Co. and Deere & Webber Co.

**Sued For Infringement Of DE LAVAL DISC GREAM SEPARATOR PATENTS**

For the information and caution of all whom it may concern announcement is made that THE DE LAVAL SEPARATOR CO. has brought suit in the UNITED STATES CIRCUIT COURT against the SHARPLES SEPARATOR CO., for infringement of LETTERS PATENT No. 743,428 by the manufacture and sale of cream separators containing DISC bowl construction covered by the claims of said letters patent.

And that similar suits have been or will be filed as quickly as possible against the JOHN DEERE PLOW CO. and the DEERE & WEBBER CO., who are jobbing such infringing SHARPLES separators to dealers in the Western States.

Attention is pertinently called in this connection to the recent hypothetical advertising tirade of the SHARPLES concern against DISC separators. We have known for some time that they were getting ready to bring out a DISC machine and thus moving up in line with more modern DE LAVAL imitators and would-be competitors. We have but now, however, been able to obtain one of these new DISC machines and the necessary evidence of infringement. The facts speak for themselves and require no further comment.

In addition to the above suit the DE LAVAL COMPANY now has infringement suits pending against the STANDARD, IOWA, PEERLESS and CLEVELAND Separator Companies and the Wm. Galloway Co., all covering the manufacture or sale of INFRINGING DISC SEPARATORS, which infringement applies equally to machines being made by different ones of these manufacturers and sold under their own and various other names by several "mail order" and other concerns, as well as to EVERY USER of any such infringing separator bought of ANY of these parties.

To avoid any possible misunderstanding and dispel the pretense of some of these concerns that their machines are similar to the DE LAVAL it is proper that we should add that none of the patents sued upon involves the DE LAVAL "SPLITTING" FEEDING DEVICE or its combination with the IMPROVED DISC construction utilized in the up-to-date DE LAVAL separators and that none of the machines is in any degree equal in efficiency, all-around practicability and durability to the IMPROVED DE LAVAL machines of to-day.

We have for years patiently stood the appropriation by would-be competitors of abandoned, discarded or patent expired DE LAVAL inventions and types of separator construction, but have now determined to put a stop to the more brazen utilization of LIVE patents.

There are STILL OTHER infringers of DE LAVAL patents who will be held accountable in due course.

**THE DE LAVAL SEPARATOR CO.**

173-177 William Street MONTREAL

14 & 16 Princess Street WINNIPEG

equal to 40, whey not pasteurized, 18 lbs.; whey pasteurized, 44 lbs.

Difference in total amount of fat returned per ton of cheese (20,000 lbs. of whey, 44-18 equal to 26) 26 lbs.

Value of fat for feeding per ton of cheese (20,000 lbs. whey) allowing 5c a lb. of fat (18 x 5 equal to 90c) (44 x 5 equal to \$2.20), whey not pasteurized 90c.; whey pasteurized, \$2.20.

Difference in feeding value of fat alone per ton of cheese (20,000 lbs. of whey) \$2.20 - 90c equal to \$1.30.

If the value of fat for feeding is considered greater than 5 cents a lb., the difference in feeding value of pasteurized over unpasteurized whey increases in proportion or if 10 cents and 20 cents a lb. of fat be allowed for feeding value the difference in favor of pasteurized whey for fat alone would be \$4.00 and \$5.20 respectively a ton of cheese (20,000 lbs. of whey).

**AVERAGE FAT CONTENT OF WHEY**  
The average per cent. of fat in whey when drawn off vats is about .23 per cent. It is shown that where the whey is not pasteurized, very little fat lost in cheese making is really available for feeding purposes as most of it rises to top of whey in tanks and whey is drawn from underneath. Where proper pasteurization is practiced, however, practically all the fat is evenly distributed in the whey and each patron gets a proportionate amount.

It is also shown that the acidity of whey is very much less where pasteurized. Some factories deliver the whey with an acidity not greater than .23 per cent., which is practically as sweet as when drawn off vats. It is to be regretted that up to the present time this season large quantities of whey has been run down the drain at some of our factories. Owing to the scarcity of hogs the patrons have not taken away their allowance. This will no doubt soon right itself but

in the meantime it is very difficult for factory men to handle this surplus, and good results from pasteurization cannot be obtained where quantities of whey are in the tanks from day to day.

#### WHEN TO HEAT

Heating should begin as soon as whey is drawn, to check development of acidity and so far as possible the growth of other germ life. The temperature should be raised to 155 degrees. A temperature much over 160 degrees causes albumen to coagulate and thus whey becomes slimy. From data secured it is shown that, say, 200,000 lbs. of whey in average covered tank if heated to 155 degrees will remain above 150 degrees from 45 minutes to one hour. Above 140 degrees from one hour to one and one half hours, and above 130 degrees from two hours to three hours and twenty minutes, delivered in patron's can after twenty hours, from 100 degrees to 120 degrees. The tank should be covered to maintain temperature and economize steam.

From experiments made during last winter it is shown that with coal at \$4.00 a ton the cost of pasteurizing, heating to 155 degrees, will be from 50 cents to \$1.00 a ton of cheese (20,000 lbs. of whey) or an average cost of 75 cents, depending on size of boiler, location of tanks, method followed and experience.

The illustrations in this issue of Farm and Dairy show five different systems of heating whey (tank cover also shown). Any of which can be arranged to suit nearly all conditions.

In any of the systems shown, one tank, either upper or lower, preferably upper, should be large enough to hold one day's whey. Tanks shall be as near boiler as possible. To install, outside of cost of tank, pump or ejector and delivery pipe, practically all of which are always in use) it

should cost from \$5.00 to \$15.00, depending on the distance that the steam has to be carried.

#### Make Good Bodied Cheese

Some cheesemakers are inclined to make a rather soft cheese during the winter and spring. This is done for the purpose of getting a good yield when prices are high, but when warmer weather comes, it is advisable to make a good bodied cheese that will stand the summer weather conditions.

#### Problems Concerning the Maker

Editor, Farm and Dairy.—In carefully noting Mr. Nimmo's remarks regarding cheesemakers' wages, in Farm and Dairy on June 10th let me say that I am quite in harmony with him on the subject. I believe in co-operation of makers along the line not so much in fixing wages but in fixing the necessary qualifications of the maker. No maker should be engaged unless he has proved himself capable of putting up the very finest quality of cheese, no matter what wages are asked.

Quality should be the consideration first, last, and all the time. In or-

der to get this we must have the co-operation of both makers and patrons. The maker cannot make the finest quality of cheese no matter how skillful he is unless he gets the finest quality of milk. To get such milk every care should be taken in every detail from the feeding of the cow to the shipping of the cheese.

I am very proud of the fact that in our factory this year the patrons have done away with taking the whey home in the cans. The habit of taking whey home in the cans is a disgrace to the cheese industry to the Lindsay district. Makers should unite and not be responsible for any off flavor, where the whey is returned in the can. But then you say the maker has the right to return the milk. However, these are conditions that are impossible for the maker to grapple with. There are bacteria in such milk that increase very rapidly after heat is applied. They work also while the cheese is curing.

In conclusion let me say that the majority of makers receive at present no more than an ordinary day's wage. They get nothing for their worry and responsibility. Let patrons and makers unite in every way to improve

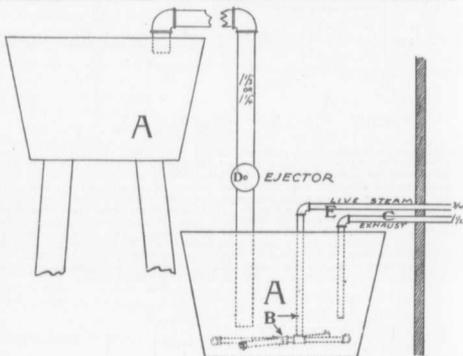


Fig. 3

(A.A.) Lower and Upper Tanks. (B.) Live steam pipes; (C.) Exhaust steam; (D) Ejector or pump. If ejector is used heat to about 125 deg. to 130 deg. in lower tank. Ejector will then deliver to upper tank at about 155 deg. If pump is used, heat to 155 deg. in lower tank.

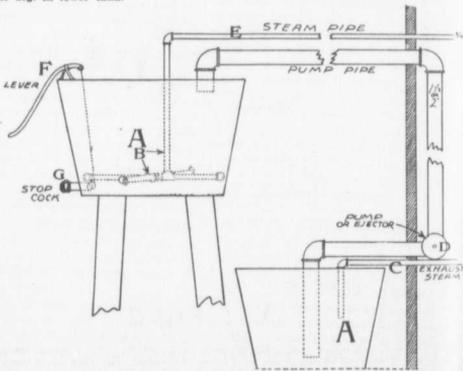


Fig. 4

(A.A.) Lower and upper tank. (B.B.) Live steam in upper tank instead of lower. (C.) Exhaust steam. (D.) Pump or ejector. (E.) To close valve inside of tank to prevent leaking. Can be put on any tank. (G.) Stop cock (B.E.) can be put into lower tank if desired.

## Manitoba to Vancouver Votes on Cream Separators



We recently offered a souvenir to every farmer in Western Canada who told us how many cows he has, and what cream separator he owns. Answers came in great numbers. Over half who answered own cream separators. Over half who own separators have the world famous Sharples Dairy Tubular. Four times as many own Tubulars as own the most popular machine of any other make.

Tubular popularity is the result of Tubular simplicity. These two pictures tell the story. The upper picture shows all there is Sharples Dairy Tubular bowl. 52 disks used inside one of the bowl machines disgusted farmwives are discarding for Tubulars, most, if not all, others combined, is one of Canada's leading industries. No. 253

29 Yrs  
The Sharples Separator Co.  
Toronto, Ont. Winnipeg, Man.

It is desirable to mention the name of this publication when writing to advertisers.

Canac  
rons  
wage  
ron a  
Merri  
terbor

#### Meth

F.  
Critic  
on the  
in Fas  
doubly  
is seem  
ject, to  
test its  
abandon  
turn to  
thod—  
paying  
This  
most ev  
unfair t  
courages

loca  
mat

7

Canada's greatest industry; the patrons giving the makers a good living wage and the maker giving the patron a good honest service.—W. H. Merrill, North Harvey factory, Peterboro Co., Ont.

**Methods of Payment for Milk\***

F. H. Hall, Geneva, New York  
 Criticism of the method of payment on the "fat content" basis as outlined in Farm and Dairy last week was doubly unfortunate in the fact that it seemed to those ignorant of the subject, to imply defects in the Babcock test itself; so that any change meant abandonment of all testing and the return to the old "weight-of-milk" method—the worst possible method of paying for milk for any purpose.  
 This method is detrimental to almost every dairy interest; and is most unfair to those who should be most encouraged, the producers of fat-

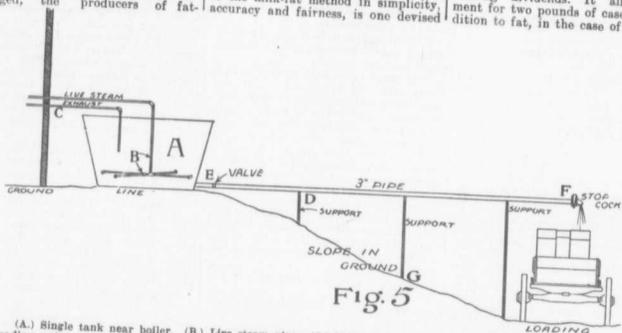
infrequently downright criminality in lowering the fat, either by skimming or by dilution. Cheese made from milk of low fat content can not be of highest quality, so that, ultimately, both reputation and sale of the product are affected and dairy interests generally suffer.

**OTHER METHODS BETTER.**  
 The fat and other solids in milk though they may vary somewhat in their relations one with another, have limits of variation, that, if the fat be known, the others can be very easily determined or can be calculated with visible some modifications or adaptations in methods of payment based on fat determination, any one of which is greatly preferable to the weight-of-milk method. Probably to the milk-fat method in simplicity, accuracy and fairness, is one devised

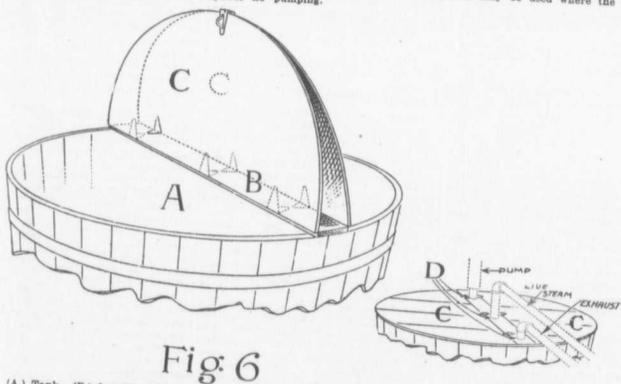
ed in this way differ so slightly from those secured by the milk-fat method that it is difficult to see wherein the disadvantage in the use of an additional test, the lactometer, is more than the method has, however, the general advantages of the milk-fat method in paying for the solids of the milk in proportion to their value in cheese-making.

**"FAT PLUS-TWO" METHOD**  
 A favorite Canadian method started as a "fat-plus-one" method, but after some study was modified to the "fat-plus-two" method. By this system the percentage of fat is increased by two, which is considered the average percentage of casein in milk, and the results used the same as in making dividends on the fat basis. This system is an attempt to approximate the yield of cheese as a basis for making dividends. It allows paying for two pounds of casein, in addition to fat, in the case of all milks.

The following objections are made to this method: (a) It considers yield of cheese alone and not quality. (b) It does not recognize any casein in milk above 2 per cent., though milks richer in fat are known to contain, in general, more casein than milks containing less fat. (c) This method is in the interest of the producer of poor milk at the expense of the producers of richer milk. (d) It offers a premium on watering and skimming milk. (e) It is in opposition to the teachings of Robertson, Babcock and many other recognized authorities, so far as it works in favor of the poor milk at the expense of richer milk.



(A) Single tank near boiler. (B) Live steam pipe. (C) Exhaust steam. (D) 3 inch pipe to carry whey to matting of ground will permit. (E) Valve. (F) Stup cock. (G) Slipping ground line. This system may be used where the floor is not pumping.



(A) Tank. (B) 8 or 10 inch cross piece, 1 1/2 inches thick over centre of tank. (C.C.) Cover raised for clean raised. (D) Shows arrangement of pipes through cross piece, (B) in order not to interfere with covers when raised. (C.C.) Shows cover lowered over tank.

rich milk. Economy in production, good dairying and general prosperity are promoted by every movement that improves the quality of our herds.  
 The weight-of-milk method is inherently unfair in that it assumes that the same amount of cheese can be made from each hundred pounds of milk, while really the amount may vary from 8 to 13 pounds even with normal milk, and skimmed or partially skimmed milk may yield only 5 to 6 pounds to the hundred. This undiscriminating tends toward the production of milk low in fat; and not

by Dr. Babcock of Wisconsin, formerly of the Geneva station. This method considers the yield of cheese from different milks as affected by the cheese solids contained in the milks and gives to the fat a value of 6.6 times as great as content of each patron's milk is found by the Babcock test and the specific gravity of the milk determined by a simple lactometer. From careful studies a table has been made out to be used with this method which gives factors for milk with different fat content and specific gravity; so that calculation of dividends is little if any more difficult than by the simple fattest method. The results secure-

\*Extract from a Review of Bulletin on Methods of Paying for Milk at Cheese Factories, by L. L. Van Slyke.

**Special Offer**

With all orders received during the month of June, 1909, for our stencilling outfit, come with all will give a recipe for making the best and best ink made for the purpose.  
 The ink we supply is sufficient to brand factory name and weight on 10,000 boxes at least. We guarantee our goods to give satisfaction or money refunded. Instructions given how to do stencilling properly.  
 ALL FOR \$1.00.

**F. W. BRENTON & SON**  
 Cheese Exporters  
 BELLEVILLE - ONT.

**ST. LAWRENCE DAIRY COMPANY**

Pasteurizer, Curd Agitator, General Cheese Factory and Dairy Supplies.  
 21 ST. PETER ST., MONTREAL, QUE.  
 'Phone Main 4619

**READ THIS BOOK**

**The Science and Practice of Cheesemaking**

By L. L. Van Slyke, Ph.D., and Chas. A. Pablow, A.B., M.D., C.M.

This is a new book that should be in the hands of every cheese-maker. It represents both the scientific and the practical side of cheese-making. It not only describes clearly the different operations in the manufacture of cheese, but special attention is given to explaining the reasons for a work step. It is a splendid book as a work of reference for the daily use of practical cheese-makers during the cheese-making season. It will help YOU to be a maker this summer. Send for this book to-day, and keep abreast of the times.

The book is profusely illustrated, and contains 400 pages, 5 inches x 7 inches.

Price Postpaid - \$1.75

Book Department  
**THE RURAL PUBLISHING COMPANY**  
 Peterboro - Ontario

**COLD STORAGE AND A MARKET**



Butter and Cheese Makers desirous of selling their products in Montreal will always find buyers and excellent Cold Storage facilities at the  
**COLD COLD STORAGE COMPANY'S STORES**  
 there. Leading Factory men throughout the country have for years made use of these stores as a market, obtaining the highest prices for their goods with immediate payment. Write us and learn how this is done.

**COLD COLD STORAGE COMPANY**  
 Grey Nuns and William Street  
 MONTREAL - QUE.

It is desirable to mention the name of this publication when writing to advertisers.



our Jimmy could ha' beat him in a fair race, and no favors; but he's a awful snootie kid and prays about everything. Do you sing?"

"I do—a little," the Englishman said, modestly.

"Oh, my, I am glad," Pearl cried rapturously. "When I was two years old I could sing. 'Hush my babe lie, all through—' love sing'—and can sing a little, too. But I don't care much for my own. Have they got an organ here?"

"I don't know," he answered, "I've only been in the kitchen."

"Say, I'd like to see a melodeon. Just the very name of it makes me think of lovely sounds, religious sounds, moun'tin' higher and higher and swellin' out grander and grander, rollin' right into the great white 'trone, and shakin' the streets of gold. Do you know the 'Holy City,'" she asked after a pause.

The Englishman began to hum it in a rich tenor.

"That's it, you bet," she cried delightfully. "Just think of you coming all the way across the ocean, and I know that just the same as we did. I used to listen at the keyhole when Mrs. Francis had company, and I was the helping Camilla. Dr. Clay sang that lots of times."

The Englishman had not sung since he had left his father's house. He began to sing now in a sweet, full voice, the melody on the quiet evening air, the cows staring idly at him. The old dog came down to the bars with his bristles up, expecting trouble.

Old Sam and his son Tom coming in from work stopped to listen to these strange sounds.

"Confound them English!" old Sam said. "Ye'd think I was payin' him to do that, and it harvest-time, too!"

When Dr. Clay, with Danny Watson gravely perched beside him, drove along the river after saying good-bye to Pearl, they met Miss Barner, who had been digging ferns for Mrs. McGibbin down on the river flat.

The doctor drew in his horse.

"Miss Barner," he said, lifting his hat, "if Daniel Mulcahey Watson and I should ask you to come for a drive with us, I wonder what you would say?"

Miss Barner considered for a moment and then said, smiling:

"I think I would say, 'Thank you very much Mr. Watson and Dr. Clay. I shall be delighted to come if you have room for me.'"

Life had been easier for Mary Barner since Dr. Clay had come to Millford. It was no longer necessary for her to compel her father to go when he was sent for, and when patients came to the office, if she thought her father did not know what he was doing, she got Dr. Clay to check over the prescriptions.

It had been rather hard for Mary to ask him to do this, for she had a pride in her father's Scotch hand things in her life to hesitate now. The young doctor was genuinely glad to serve her, and he made her feel that she was conferring, instead of asking, a favor.

They drove along the high bank that fell perpendicular to the river below and looked down at the harvest scene that lay beneath them. The air was full of the perfume of many flowers and the chatter of birds.

The Reverend Hugh Grantley drove made his presence felt for the first time by the apparently irrelevant remark:

**FOUNTAIN PEN FREE**

A 14 kt. Gold Fountain Pen will be given to any child who secures only one new subscription for Farm and Dairy. These pens are guaranteed to give satisfaction. Try and win one.

"I know who Miss Barner's fellow is! so I L. J."

Now if Dr. Clay had given Danny even slight encouragement, he would have pursued the subject, and that might have saved complications in the day to come.

(Continued next week.)

**The Upward Look**

**The Spirit That is Within Us**

Create in me a clean heart, O God, and renew a right spirit within me.—Psalms 51: 10.

None of us can live as happy, cheerful, helpful lives as we should until we have the right spirit within us. Every thought by that inner spirit, do is governed by that inner spirit. There are all kinds of spirits. There is the spirit of pride that leads us to many foolish errors. There is the spirit of self that makes us forget our duties to others in our thoughts about ourselves. There is the spirit of doubt that binds us to God's glorious gifts to give us whatsoever we ask of Him for, if we have the right of Him for. There is the spirit of jealousy or revenge that inclines us to dislike or injure others and thereby warps the spirit of our very natures. There is the spirit of an unclean tongue that leads us to vent our tired feelings or worries on others, often on those we love most, in unkind words and in cross tones.

The foregoing, and many other similar spirits, are spirits of evil. They are placed in our hearts by Satan, the prince of evil spirits, who knows where we are weak and just how he can tempt us to feelings of pride, of selfishness, of doubt, of hatred, of temper are not little faults, common to us, but they are sins that come between us and God, and we can overcome these evil spirits that are in us.

David, when he cried to God, as we should, in the words of our text, recognized his need of a right spirit within him. The spirit he desired is mentioned in the following verse: In the spirit of God. Just in proportion as we have the Holy Spirit in us evil spirits will be driven out. If we are full of God's spirit there will be no room for anything displeasing to Him.

The spirit we need is the spirit of love. That is the spirit of God for God is love. In John 4: 12, we are told that "If we love one another God dwelleth in us, and His love is perfected in us." If we have God's spirit in us our lives will show the result for the fruit of His spirit is love, joy, peace, long suffering, goodness, faith. Everybody, even sinners, long for love and joy and peace. We may all have them and much more for the asking for God has promised to give His Holy Spirit to all who ask Him for it.—I. H. N.

**Labor Saving Devices**

By Charlotte Aiken

Few homes can boast of a model kitchen. And yet, given a room with proper light and ventilation and ordinary dimensions, much can be done by the ingenious housewife who takes pride in that domain to make the home bright—at least a very convenient and comfortable spot to work in.

The tendency is toward smaller kitchens that will not necessitate too many steps between the pantry, sink and range. If possible the kitchen should have two windows on opposite sides or ends, so that a good circulation of air can be secured. Two coats of paint, in some suitable light shade, make a very desirable finish

for the walls of the ordinary kitchen. As it is the laboratory of the home from whence are to come the supplies that are to repair the waste of the bodies and maintain health and vigor, it needs to be, first of all, a clean room. No amount of kitchen utensils and labor-saving appliances will mean comfort, unless there is a system used in planning the entire work. No patent device will ever take the place of common sense in the kitchen. For the floor-covering, linoleum is easily cleaned, and so much more comfortable for constant walking or standing than a hardwood floor, that it is certain to remain indefinitely in favor in kitchens of all grades of homes.

One of the first steps toward the saving of labor in one home was to cover the two work-tables in the kitchen with zinc tacked well over the edges. This can be readily cleaned by washing with soap and water, and does away with the arduous labor of scouring. Never keep dry food supplies on the shelves in paper sacks. Each article should have its own receptacle, labeled so that it can be easily found. Glass fruit jars make excellent containers for articles of this kind, as it is next to impossible to keep neat pantry shelves if one is obliged to dip into paper sacks for supplies.

The kitchen cabinet is an exceedingly useful piece of furniture. Most of the cabinets contain a small flour bin and sifter, sugar bin, cans for half a dozen or more kinds of spices, places for stirring-spoons, graters, etc., all within reach, also sliding mixing or kneading boards.

A food chopper or grinder is another kitchen utensil that saves time and energy. Bread crumbs, suit most raw or cooked—or any vegetable that is to be minced, can be prepared in less than half the time it takes to chop them in the old way. Horseshad without the fits of weeping that usually follow that operation.

Scoops for the flour and sugar bins, biscuit cutters of the right sizes and shapes, graded in measuring cups small aluminum jelly or blanc-mange molds, wire dish-cloths, egg-beaters and lemon squeezers are among the little things that do not cost very much but which help to make cooking an easier task.

Many a cook has been thoroughly discouraged at the collapse or falling in pieces of a cake while trying to remove it from the pan. To prevent this accident there are cake tins with separate bottoms, which are worthy of a place in any kitchen where many cakes are made. A wire cake-cooler is simply a sheet of wire supported on four wire legs. The use of one of these prevents the bottom of the cake becoming soggy from the moisture.

For the cooking of eggs there are numerous devices. A wire egg-boiler is simply a basket which holds the eggs while they are immersed in water; and an egg-poacher makes the task of poaching eggs much easier and there is less likelihood of breaking the eggs.

A high stool in the kitchen saves a great deal of strain on the back and limbs, and in a short time will seem almost indispensable. It will prove very useful when ironing or washing dishes.

Old newspapers can be utilized in various ways to prevent soiling of the kitchen tables and floors. A crumpled-up newspaper, if used as a rub-off kitchen stove, will render cleaning and polishing less frequent. Old newspapers also make excellent substitutes for a rubber window-brush in polishing windows.

Where most meat or fowl is to be roasted, a roasting-pan with a cover will be needed if one wants to reach the highest success in this line of cookery. In handling and preparing

**NEW CENTURY**

with strong rigid Wringer Stand

This new Wringer Attachment to "head and shoulders" above any other. The entire stand is absolutely rigid—always in position—never in the way—and the water drains right into the tub.

"New Century" Washing Machine—complete and delivered at any railway station in Ontario or Quebec—only \$9.95. Write for free booklet.

DUNNELL, BROS. MANUFACTURING CO. LIMITED, HAMILTON, ONT. 85

meats, a cleaver, or hatchet, and a small meat-saw will be worth having, as many a time.

The condition of the dish-cloths and dish-towels is an index to the habits of the housewife. One who is careful to wash out her dish-cloths can as a rule be trusted. For the daily washing of dish-cloths and dish-towels, a small wash-board such as is furnished children for toy laundry-purposes—one that fits easily into the dish-pan—has proven an incentive to many a cook to keep her dish-cloths clean.

**Life's Mirror**

(By Madeline D. Brydes.)

There are loyal hearts, there are spirits brave;  
There are souls that are pure and true;  
Then give to the world the best you have,  
And the best will come back to you.  
Give love, and love to your life will flow,  
A strength in your utmost need;  
Have faith, and a score of hearts will show  
Their faith in your word and deed.  
Give truth and your gift will be paid in kind,  
And honor will honor meet;  
And a smile that is sweet will surely find  
A smile that is just as sweet.

For life is a mirror of king and slave,  
'Tis just what we are, and do;  
Then give to the world the best you have,  
And the best will come back to you.

**What would you take?**

Suppose you were required to live for a certain length of time on only one article of food. Which would you choose?

There is one food that stands without a rival for such a test. Quaker Oats is that one. It furnishes more strength with least wear and tear on the digestive organs than any other food. You'll feel well and strong at the end of the time. Try it. Don't stop eating other things, but eat more Quaker Oats and you'll notice the gain in strength.

You'll find Quaker Oats put up in two size packages, the regular size and the large, family size for those who are not convenient to the store. The large package contains a piece of hand-some cloth for the table.

All grocers sell these.  
Eat Quaker Oats daily for breakfast, it strengthens you for the day's work. It's Canadian.

**THE COOK'S CORNER**

Send in your favorite recipes, for publication in this column. Inquiries pertaining to cooking are solicited, and will be replied to, as soon as possible after receipt of same. Our Cook Book sent free for two new yearly subscriptions at \$1.00 each, address, Household Editor, this paper

**BACON FRAZE.**

Mix thoroughly 4 eggs,  $\frac{1}{2}$  a cup of milk, and a teaspoonful of flour. Fry some thin slices of bacon in a frying pan and pour this batter over it. Cook until both sides of the bacon are well browned and serve on a heated dish.

**HORSE RADISH SAUCE**

Beat the yolk of 1 egg, add  $\frac{1}{2}$  teaspoon each of salt and sugar, 3 tablespoons grated horseradish and 6 tablespoons whipped cream. Beat all together, adding the cream last, and use with cold meats.

**PINEAPPLE FRAPE.**

Pare and shred a ripe pineapple sugar it and let stand 2 hours—then drain off one cupful of the syrup. Boil  $\frac{1}{2}$  of a cupful of sugar and the cupful of pineapple juice to a thick syrup; add slowly the well beaten yolks of 4 eggs. Cook in a double boiler, stirring continually until the mixture thickens. Remove from the fire and beat until cold; whip until stiff a pint of rich cream and add this to the mixture, together with two tablespoonfuls of lemon juice. Pack in a mold, surrounded with ice and salt and allow to stand four hours. Serve surrounded with whipped cream.

**BAKING POWDER BISCUITS.**

Two cupfuls flour, 1 heaping teaspoonful baking powder, 1 tablespoonful of lard or butter, one-fourth teaspoonful of salt, and one scant cupful of sweet milk. Sift baking powder, flour and salt together, rub in lard, then pour in all the milk and mix with a knife.

**BOUQ CHAM PIE.**

One cup of sour cream, one-half cup of seeded raisins chopped fine, one-half teaspoon cinnamon, one cup of sugar, one quarter teaspoonful cloves, three yolks of eggs and one white of egg. Bake like a lemon pie, using the whites of two eggs with two tablespoonfuls of sugar. Put on after pie is baked and brown in oven. If not liked that way, stir all three whites in together before baking.

**SALMON CROQUETTES.**

One pound can of salmon, 1 egg and 3 soda crackers stirred well together and then made into small cakes. Beat 2 eggs and roll the cakes first in eggs and then in rolled crackers or crumbs. Fry in a mixture of half butter and half lard.

**OUR HOME CLUB**

**THE HOUSEWIFE'S ALLOWANCE**

Some say to give the housewife a fixed salary and give it monthly, that she may be able to get just what she needs, and when she needs it. I have lived on a farm in my young days, and I may say that I am very proud of it. At all times, money is not plentiful on the farm. Some times there was a pretty good supply, but sooner or later it became exhausted and times were rather hard, until something else was sold or a cheque came from the cheese factory to replenish the purse.

I would not say to give the wife the butter and eggs and let her do with that, as I think any intelligent farmer and his wife would agree with me that they, "together," were losing money by this plan. The wife will want certain articles that can not be bought at the general store, or the grocery. She will not like the idea of taking cash price for eggs, when by taking a due bill, the husband would get a good many articles that he needs also. I think

on the farm, the wife should have in each case what the husband and wife think they can afford. Usually they will be able to get along nicely, by the wife using out of the husband's purse when she needs the money. The husband will feel free to use the due bills for what he may need.

Sometimes the doctor has a very busy time and money is paid promptly, while other times there is very little in this line of work, and what there is, may not be bringing in returns as we would like to see it. We just have to make the very best of our circumstances and I might say "cut according to our cloth." In almost every case, whether on a farm, or in a town or city, the intelligent wife will be just as anxious, if not more so, than the husband will and will see to it, that she does not go beyond what they are able to afford.—"The Doctor's Wife."

**HELP THE BOYS**

Since writing my first letter to the "Home Club" that matter of sympathy and encouragement dealt with has been uppermost in the mind of "The Son." How easy it is to drop a word of encouragement when the boy has put forth an extra effort to complete some task or has taken an interest in things on the farm, as if they were his own! Yet, how often is it done?

You fathers that like to parade the natural abilities and accomplishments of your boys before your neighbors or often date upon them in the back recesses of your heads, take heed! Drop a word of praise when it is called for. Silence may mean assent, but much more will be conveyed to your boy when you speak the word.

Try it for a while at least. It will do good in at least two ways. You will feel better for having praised the boy. The boy will soon show you that he feels better for it by taking renewed interest in things and by accomplishing much more work. I know; for it has been done so—"The Son."

**The Sewing Room**

Patterns 10 each. Order by number and size. If for children, give age; for adults, give bust measure for waists and waist length. Address all orders to the Pattern Department.

**GIRL'S DRESS 635.**

To be worn with or without the gimp. The dress is made with waist and skirt portions. The waist consists of front and back portions of the yoke and the front and back lower portions. These last are finished at their upper edges and arranged over the yoke. The skirt is made in two pieces and is joined by a belt while the closing is made invisibly at the back.



Material required for the medium size (10 to 12 yrs) is 24, 4 $\frac{1}{2}$  yds 32 or 34 yds 44 in wide. The pattern is 625 in sizes for girls of 6, 8, 10 and 12 yrs of age and will be mailed to any address on receipt of 10 cts.

**MISSIE'S SKIRT 629**

This skirt can be made with the high waist line, or in a princess style as illustrated or be cut off and finished with a belt as used. In each case it fits with perfect smoothness over the hips and is cut wide enough about the bottom to allow comfortable walking.

Material required for 16 yr size is 7 $\frac{1}{2}$  yds 24, 9 yds 32, 10 yds 34, 11 yds 36, 12 yds 44 or 2 $\frac{1}{2}$  yds 52 in wide.

The pattern is 629 for girls of 14 and 15 yrs of age and will be mailed for 10 cts.

**BREAKFAST JACKET 6219**

The breakfast jacket that is slightly open at the neck is comfortable. This one is absolutely simple, the sleeves being cut in one with the body portion.

Material required for medium size is 3 $\frac{1}{2}$  yds 24, 2 $\frac{1}{2}$  yds 32 or 2 $\frac{1}{2}$  yds 44 in wide with 5 yds 52 in for bands.

The pattern is cut for a 34, 36, 38, 40 and 42 in bust and will be mailed on receipt of 10 cts.



If You Have a Big Wash To Do tell your husband he must get you a

**"Puritan"**

**Reacing Washing Machine**

It takes all the work out of wash day. Improved Roller Gear makes washing quick and easy.

The "Puritan" is the latest and most improved. If your dealer does not handle the "Puritan," write us for literature and illustrations.

DAVID MAXWELL & SONS, St. Mary's, Ont.



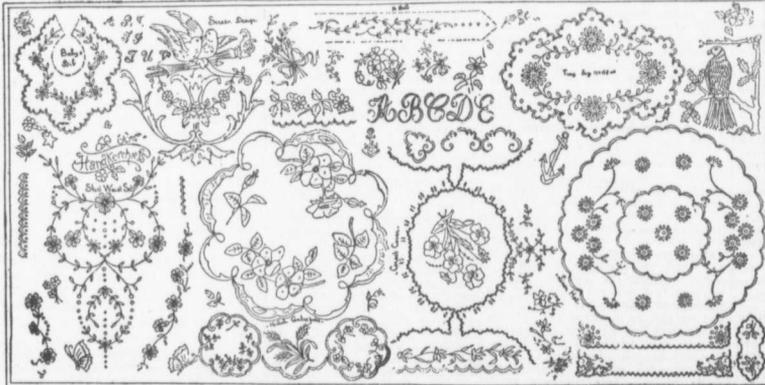
**PATTERNS FREE**

YOUR CHOICE OF ANY 3 PATTERNS illustrated in Farm and Dairy, ABSOLUTELY FREE, in return for one new yearly subscription at \$1 a year.

ART EMBROIDERY STAMPING OUTFIT, FREE, for one new yearly subscription at \$1.

Address, Pattern Department,

**FARM AND DAIRY**  
Peterboro, Ont.



**Art Embroidery**

No. 571. Special Perforated Stamping Outfit. This splendid outfit consists of about fifty up-to-date and hand-some full-size designs, including a Shirt Waist, Corset Cover, Lingerie Hat, two Complete Alphabets (one 2 $\frac{1}{2}$  in. and one 1 in.), Catechises (size 10 in.), two Bibles (5 $\frac{1}{2}$  in.), two turnovers, Borders, Belt, Book Cover, Sofa Pillow, and many other useful designs, in all the modern styles of embroidery. The above designs are perforated on a good quality of paper. We also include a cake each of the blue and white of the "Ideal," two Pencils, and full directions for using the stamping; preparation, at the special price of 75c for all.

These Perforated Patterns can be used an unlimited number of times.

JACOB

feeding  
was  
farm  
and 30  
for wo  
cent f  
been i  
today.  
feeding

a big  
in prom  
crops w  
worth  
houses.  
promis  
great l  
wick, I  
bill 13  
them in  
in the  
their w  
larger  
spring.  
horse to  
The  
Brunwei

are light  
posses  
spring a  
the light  
mature  
carriage  
general  
to qual  
but the  
McC.

LENNO  
about a  
does not  
from last  
up milk  
looks fair  
is a ver  
ply of r  
most crop  
Park is  
higher, t  
Best also  
if secured  
is coming  
with the  
likely to  
last year.

WATER  
outlook f  
assuring  
during the  
ed to pro  
considerin  
well, or  
speak—  
COMPTON  
land were  
as early a  
by much  
hay crop,  
done on t  
for the ra  
money. Th  
to run the  
that we g  
better thi  
ratepayer  
ing River  
tows. The  
paring fo  
selling of

ACTING  
with all  
are looki  
spring. Th  
good as  
Pasture is  
this time  
and high  
people cou  
Apples ar  
this year;  
bleak—  
—T K.

THE RID  
about cov  
of corn a  
light crop  
was winter  
be out in





to \$55 and common to medium at \$25 to \$35 each. Veal calves have been on the market in liberal supply though prices kept up well. On Thursday calves sold at \$35 to \$50.00 with a few picked lots going at \$6 to \$5.50 a cwt. At Buffalo veals are quoted at \$10 to \$25 a cwt.

Owing to the larger run sheep sold a little lower at the end of the week. On Thursday heavy cwt. sold at \$3.50 to \$4.00 with a few picked lots going at \$6 to \$5.50 a cwt. Spring lambs held steady in price at \$3 to \$6.00 with a few picked lots going at \$2.50 a cwt. Should heavy receipts come in this week a further decline is expected.

The hog market was somewhat higher than at some advance in price. At the city market on Thursday quotations were \$7.60 to \$7.65 a cwt. for cars at country points and \$7.90 fed and watered on the market here. A year ago hogs fed and watered sold at \$6.50 a cwt. Prices at Buffalo were sold at \$6.50 a cwt. Prices at Buffalo were sold at \$6.50 a cwt. Prices at Buffalo were sold at \$6.50 a cwt.

The Trade Bulletin's London cable quotes bacon as follows: "The market is weak and declining. Canadian bacon 65c to 70c."

ONION STOCK YARDS PRICES Toronto, Monday, June 21.—Receipts of live stock at Yards Street on this morning comprised 54 cars, consisting of 1153 cattle, 5 hogs, 175 sheep and lambs and 12 cars of hogs. The quality of the cattle generally was good, especially exporters. Trade was quiet. Stall fed cattle were firm. Firmly sold. Export American buyers will be present. Export steers, \$5.85 to \$6.40; export hogs, \$4.55 to \$5.25; export cows, \$5 to \$5.30. Prime pickers of huts, \$4.50 to \$5.25; \$5.75 to \$6; \$5.80; common, \$4.75 to \$5.15; hams, \$4 to \$5.50 each. Very few were of good quality. Calves, \$3 to \$3.50 a cwt.; heavy fat was slow of sale at \$3.50 to \$4 a cwt. Light export cows, \$4 to \$4.50; hams, \$3 to \$3.50; spring lambs sold at \$8.50 to \$9.50 a cwt. The hog market was firm, \$7.50 and watered was \$7.90. The market is for drovers at country points. The outlook is for lower prices for grass fed cattle.

PETERBORO HOG MARKET Peterboro, Monday, June 21.—Danish hogs delivered on the English markets here, totalled 35,000. The demand for hams in the old country was better, was two shillings lower. The George Matthews Co., quote the following prices for this week: Fat hogs, \$8.15 a cwt.; delivered at abattoir, \$7.75 a cwt.

MONTREAL HOG MARKET Montreal, Saturday, June 19th.—The demand for live hogs has been steady this week and fully equal to the supplies, which were rather light, and seem likely to continue for some time to come. The offerings this week were quickly picked up at \$2.25 to \$2.50 a cwt for selected lots weighed off cars, in occasional lot fetching a fraction more. F dressed hogs are firm and selling freely at \$2.10 a cwt for fresh killed abattoir stock.

EXPORT BUTTER AND CHEESE Montreal, Saturday, June 19th.—The market for cheese has been firmly maintained at the lower level reached at the opening markets of the week in the Belleville district where the offerings were sold on

FOR SALE AND WANT ADVERTISING TWO CENTS A WORD CASH WITH ORDER

IMPORT your bulbs and perennials direct from Holland at one-quarter price. Get import list immediately. Morgan's Supply House, London, Ont.

EXPERIENCED MAN — Disengaged July 15th. wants a change. Hamilton District. If preferred, good character. Abstainer. Write Box C, Farm and Dairy, Peterboro, Ont.

FOUNTAIN PENS, 14 K. GOLD—FREE IN return for one new yearly subscription to Farm and Dairy. Write to Circulation Dept., Farm and Dairy, Peterboro, Ont.

PURE BRED PIGS—Not for sale, but to give away, in return for seven new yearly subscriptions to Farm and Dairy. Write to Circulation Department, Farm and Dairy, Peterboro, Ont.

Tuesday at 11 9/16 to 11 13/16 a lb. The bulk of the cheese offered in the country this week sold at 12 1/2 to 12 3/4. A few lots fetched as high as 13 1/16.

There has been a good demand for export although the volume was not quite equal to that of last week, which left the market pretty bare of stock last week end. This week however was sufficient to absorb the increased receipts, and there is probably 20,000 boxes of cheese left here. The outlook is not at all encouraging. The face of the accumulating stocks and increasing receipts, and unless there is a decided improvement in the demand for export, prices next week will probably rule at least as low as this week, although they are not likely to go much below 12 1/2 as the British trade seems to be prepared to purchase Canadian cheese for cold storage purposes at about this level.

The market for butter is very firm, and prices have been well maintained at the high level reached last week, and to-day's country markets report a slight further advance, the offerings at Cowanville being all sold at 23c a lb. at factories. Throughout the week considerable business has been done at about 23c for Eastern Toronto creamery, with other sections of Quebec at 22 1/2 to 23c. Dairy butter is not plentiful and is selling at about 12c a lb. About 1600 packages of butter were shipped from Toronto this week as the result of the week before for butter that came on last week before the advance in price was known. There has been very little doing since, the trade on the advanced price asked and they seem to be in the prospect of them coming on unless there is a shortage in the supply of butter from Europe, during the next few weeks. If there is no further demand for export we may see prices decline again to a lower level.

Started in Business

Last year we had the pleasure of sending to Master Ray E. Wells of British Columbia, two pure bred pigs for securing clubs of new subscribers for Farm and Dairy. Ray is a bright boy about ten years of age, and an excellent success in securing new subscribers for Farm and Dairy in British Columbia. In a letter recently received from Ray's father, he writes as follows:

"We must thank Farm and Dairy for the excellent plan of a large piggy which you recently published. With the excellent plan of pigs that you sent our boy last year, and a piggy such as this, we will be well set up in the pig business."—A. C. Wells, New Westminster, B.C.

Judges for Winter Fair

Judges have been appointed for the Winter Fair at Guelph, December 6th to 10th, 1909, as follows:

- Beef Cattle: Robert Miller, Stouffville; James Smith, Rockland. Reserve, J. T. Gibson, Donfield. Beef Carcasses: Prof. G. E. Day, Guelph; Geo. F. Morris, London. J. Shropshires and Dorset Horns: J. C. Duncan, Lewiston, N.Y. Southdowns, Suffolk and Hampshire: W. H. Beattie, Wilton Grove, Cotswolds, Leicesters and Lincoln: John Gardhouse, Highfield, Oxford; J. C. Duncan, Harrison. Short Wool Grades: J. C. Duncan, Lewiston, N.Y.; W. H. Beattie, Wilton Grove.

- Long Wool Grades: John Gardhouse, Highfield; J. E. Hastings, Harrison. Sheep Carcasses: Prof. G. E. Day, Guelph; Geo. F. Morris, London. Yorkshires and Tamworths: A. C. Hallinan, Breslau; Prof. G. E. Day, Guelph.

Berkshires: Thos. Teasdale, Concord.

Chester Whites and Any Other Breed: Grade of Cross: G. B. Hood, Guelph.

Bacon Hogs: Wm. Jones, Zenda; J. C. Nichol, Hubrey; R. J. Garbutt, Belleville.

Bacon Carcasses: Prof. G. E. Day, Guelph; Geo. F. Morris, London.

Dairy: Prof. H. H. Dean, Guelph. Seeds: J. Buchanan, Guelph. Judging Competition: Prof. G. E. Day, Guelph, (in charge).

H. P. Schwab, Irondequoit, N.Y.—Plymouth Rocks. Richard Oke, London.—Buff Orpingtons and all Leghorns except R. C. White.

N. Cosh, Auburn, N.Y.—Spanish, Black and White Orpingtons, Dominiques, Partridge Wyandottes, Javas LaFleche, Creve-Coeurs. S. Butterfield, Windsor.—Games, Game Bantams, Asiaties.—James Wm. McNeil, London.—Ornamental Bantams, Silkies, Sultans. Jas. Tucker, Concord, Mich.—Rhode Island Reds and all Wyandottes except Partridge. J. H. Minshell, Brantford.—Mincorns, Andalusians, R. C. White Leghorns.

L. G. Jarvis, Grimsby.—Polands Dorkins, Red Caps, Houdans, A.O.V. Fowls, Water Fowl. James Anderson, Guelph.—Turkeys. C. P. Wagner, Chas. Currier, Toronto.—Pigeons. Wm. Barber, Toronto.—Ornamentals.

Write Circulation Department FARM AND DAIRY PETERBORO - ONT.

MISCELLANEOUS

ARRAM EASTON, Appleton, Ont., Leicester sheep. Show ring and breeding stock for sale. 6-8-25-20

WANTED—CHESTER WHITE SWINE.

We wish to purchase some pure bred Chester White Pigs, six or eight weeks old. Will any breeders having same for sale write, giving prices, etc., to

FARM AND DAIRY, Peterboro, Ont.

PONIES—AYRSHIRES

FOR SALE—Twenty Canadian, Exmoor and Welsh Ponies, from 11 to 14 1/2 hands in height. Also AYRSHIRES of various ages, and of both sexes. Prices right. Write or call on

P. A. BEAUDOIN, 107 St. James St., Montreal.

AYRSHIRES

AYRSHIRES, males only, two fall and one spring calf. Enquire what their data are doing. James Bege, St. Thomas, E-t

"La Bois de la Roches" Stock Farm

Here are kept the choicest strains of AYRSHIRES, imported and home bred. VORSHIRES, the best bacon types. WHITE ORPINGTON, WHITE WYANDOTTES and BARRED ROCK Poultry.

HON. L. J. FORDYCE, J. A. BIREAU, Proprietors, Manager Ste Anne de Bellevue, Que.

SPRINGHILL AYRSHIRES

Imported and home bred stock of a fine age for sale. See our stock at the leading shows this fall. Write for prices.

ROBT. HUNTER & BONS, Lowville, Ont. 6-5-25-20

IMPORTED AYRSHIRES

Having just landed with 50 head of choice Ayrshires, mostly purchased at the great Butechie sale, I am prepared to fill orders for herd heading bulle, selected from the best dairy herds in Scotland; 12 pairs for service to choose from. Also show females of all ages. Cows with milk records up to 70 lbs. per day. Write and let me know your wants. Long distance phone. R. HESS, Nowicki, Que. 6-9-25-20

AYRSHIRE CALVES FOR SALE

RECORD OF PERFORMANCE COWS

PRICE 1—\$35 when one month old

GUS. LANGELIER, Cap Rouge, Que. 0-6-17-20

Write for our circular to agents and sample copies.

FARM AND DAIRY, Peterboro, Ont.

It is desirable to mention the name of this publication when writing to advertisers.

Wm. Barber, Toronto; W. R. Graham, Guelph.—Utility Pen and Dressed Poultry.

PIGS. PIGS. PIGS.

Pigs Given Away

Any standard variety you like. For a few hours' work

Send us 7 New Yearly Subscriptions for Farm and Dairy at \$1 each.

Write Circulation Department FARM AND DAIRY PETERBORO - ONT.

HOLSTEINS

BERTRAM HOSKIN Mount Pleasant Farm, The Gully, Ont. Breeder of Holstein Cattle, Tamworth Swine, High Class young stock for sale. 6-10-25-20

SILVER CREEK HERD OF HOLSTEINS offers for sale a few exceptionally choice young cows, also this lot for service, bred from A. B. O. dams.

A. H. TEEPLE, Curries, Ont., Oxford Co.

SUNNYDALE

Offers four grandsons of Peterie Hengerveld's Count De Kol, champion bull of the breed. These calves are from 4 weeks to three months old, nicely marked and well grown, with full official dams and choice breeding. Write for particulars. 6-5-10 A. D. FOSTER, Bloomfield, Ont.

LYNDALE HOLSTEINS Head your Herd with a son of Sara Hengerveld Kordecky whose dam was recently sold for \$2,000. His 3 nearest dams average 29.12 lbs. butter each in 7 days. Only 2 of his sons left. We still have a Paul, and a number of Heifers for sale. 6-15-20 BROWN BROS., LYON, ONT.

FOR SALE, HOLSTEIN BULL Cornucopia Alban De Kol, 4 years old, kind and sure; one of his half sisters put their two year old form, some of them with records better than 20 lbs. butter in 7 days. J. A. GASKY, Madoc, Ont.

HOME-BRED AND IMPORTED HOLSTEINS

We must sell at least as cows and heifers at once, to make room for the natural increase of the herd. This is a chance of a lifetime to get good bulls, Pontiac Herd Imp., son of Hengerveld De Kol, world's greatest sire, head of herd. 6-10-20

H. E. GEORGE, CAMPTON, ONT. Putnam Stn., 1/2 mile—C.P.R. 6-4-21-20

HOLSTEIN CATTLE

If you are thinking of buying a choice young cow or heifer in calf, come and see down beautiful heifers safe in calf to five or seven months. Have a Sumer Hill, Choice Goods (imp.) who has 7 records and one sister that averages 29 1/2 lbs. butter in 7 days and one sister that with 31.60 lbs. butter. Write us what you want. We will guarantee everything just as described. Write to Hamilton by appointment. L. D. Telephone 2471, Hamilton

Write for our circular to agents and sample copies.

FARM AND DAIRY, Peterboro, Ont.

It is desirable to mention the name of this publication when writing to advertisers.

**Send Now For  
Sample And  
Booklet**

# PEDLAR

For any work any culvert can be put to, nothing else yet made quite equals this new Pedlar product—Pedlar's Perfect Corrugated Galvanized Culverts. Only the Pedlar People in all Canada make a culvert of Best Billet Iron, in semi-cylindrical sections, corrugated under enormous pressure (over 60 tons to the square inch) and Galvanized after being shaped.

**Most Compact and Portable  
Culvert Made, and the  
Easiest to put in Place**

**PERFECT  
CORRUGATED  
GALVANIZED  
CULVERT**



**I** KNOW it's pretty hard to make some folks believe a new thing is better than what they've been used to—a Pedlar



Culvert, for instance, than concrete or wood or what not. But I feel pretty sure that you will SEE it is, if you will just look into the question fairly and squarely before you undertake any more culvert construction, or road improvement, or ditching. Don't judge this NEW culvert by anything you've heard about other culverts. MINE IS DIFFERENT—a whole lot different, and a whole lot ahead of any other. Write to my people and make them show you why and how. We're making this in all standard diameters, from 8 inches up to 6 feet, so your wants can probably be supplied. Write and ask questions any how.

*G. A. Pedlar*

When the sections of Pedlar Culvert, of any diameter—it's made from 8 inches to 6 feet—reach you, they are nested like Fig. 1. Note the two distinct flanges—the radial and the recurved. These fit into each other, and are FLAT, while the CURVE of the culvert is corrugated. Place section on top of section, and the flanges,



locking-ribs, engage easily, as you see in Fig. 2. The joints between one length and another are "broken"—no overlap reaches more than half-way round the culvert's diameter; and this is possible with NO OTHER metal culvert made. It is a most valuable feature, for it reduces the chance of leakage to the very least minimum.



## This Is The Practical Culvert

Not only is the iron that makes Pedlar Culverts best quality money can buy, but it is unusually heavy—from 14 to 20 gauge, instead of lighter gauges common to inferior goods. This extra

**Not a Bolt  
Nor a Rivet  
About It**

strength enables a Pedlar Culvert to stand heavy traffic upon roads, even though protected by a very thin cushion of soil. Mark also, that this is the ONLY culvert made that is galvanized AFTER being curved and corrugated,—thus insuring it positively against rust and decay.

**Unskilled  
Labor Can  
Easily Lay It**

## Extra-Heavy, Strong, Rust-Proof

The peculiar Pedlar flange, or locking-rib, along the whole length of each side of these Culverts, clamps together easily and most rigidly. There are no bolts, no rivets, no lock-nuts of any kind,—simply clamp the edges of the flanges together, making a triple thickness of inter-sealed heavy metal along the side of pipe (read below here how this is quickly done) and you have a Culvert that is enormously strong, tight, and not only leak-proof, but strain and rust and frost-proof, the rib allowing

**Made of  
Best heavy  
Billet Iron**

for expansion and contraction. You cannot appreciate the value and the simplicity of this until you have seen the culvert itself. It is the easiest culvert to put together, and it is better when put together. It is the most portable. It costs less per linear foot to ship by freight, and a whole lot less to haul,—it nests, that's why, of course. And it will serve any culvert use better.

**Galvanized  
AFTER  
Being Shaped**

**Write To-day For Postpaid Free Sample and Booklet 26** ADDRESS NEAREST PLACE

**THE PEDLAR PEOPLE of Oshawa**

321-3 Craig Street W.  
MONTREAL

423 Sussex Street  
OTTAWA

11 Colborne Street  
TORONTO

86 King Street  
LONDON

200 King Street W.  
CHATHAM