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VOL. XLIX.

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LONDON, ONTARIO, JUNE 11, 1914.

No. 1133

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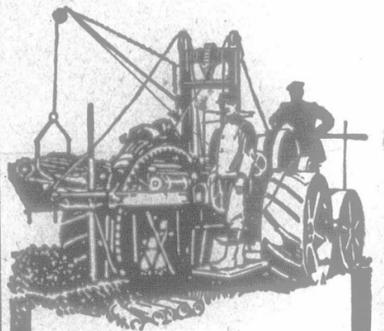
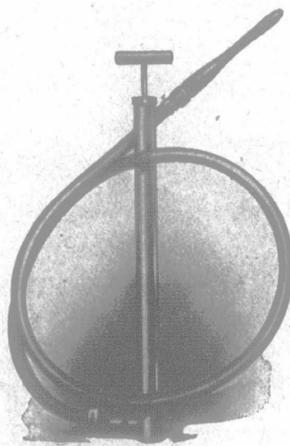
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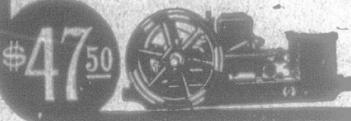
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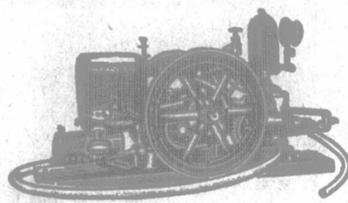
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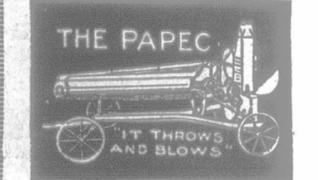
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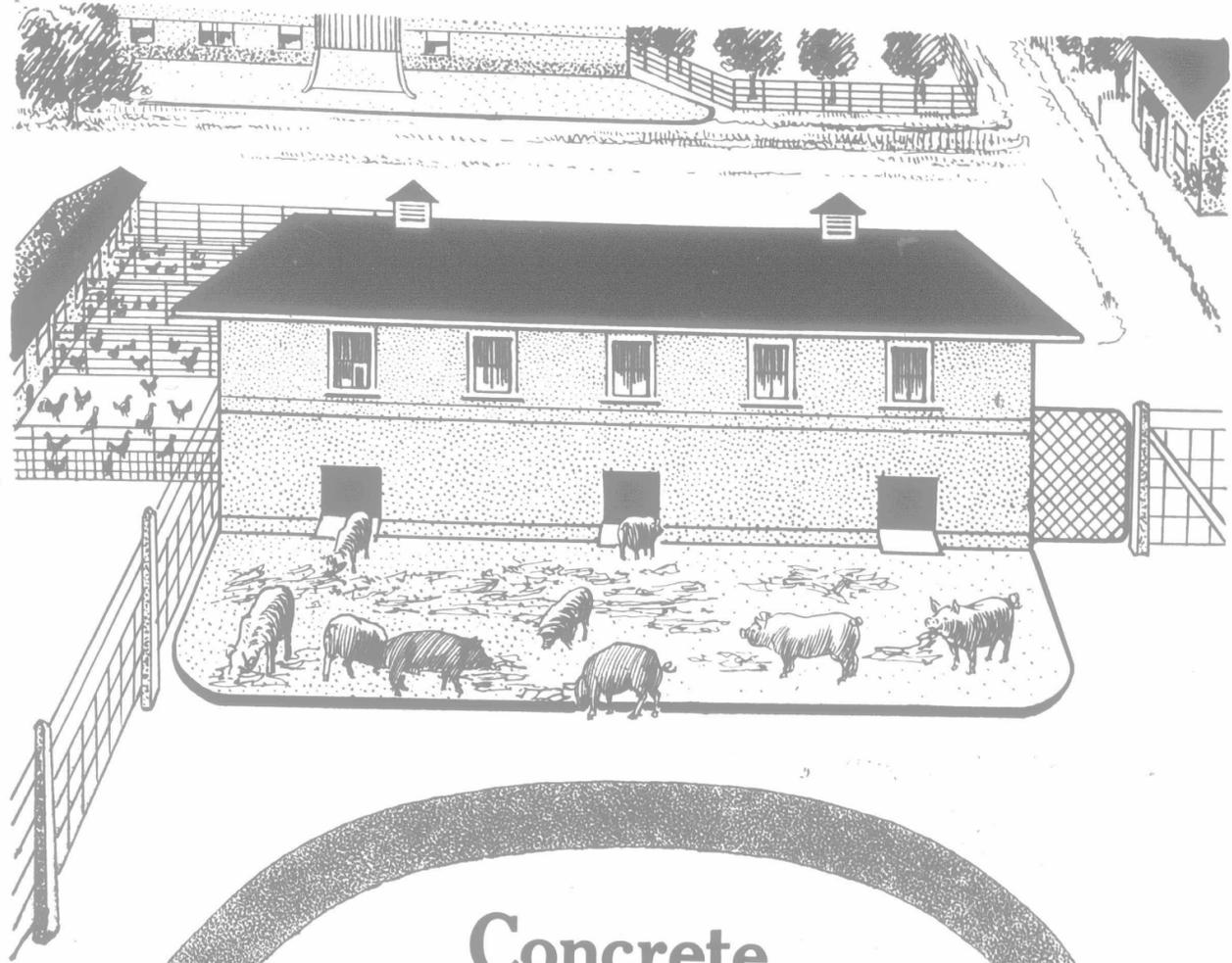
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Vol. XLIX.

LONDON, ONTARIO, JUNE 11, 1914.

No. 1133

EDITORIAL

Time savers are money savers.

Harrows and weeders save hoeing.

Break up the crust on the corn field.

Be on the job and see that it is made to pay.

System is profitable on the small as well as on the large farm.

Go after this farming proposition; it can be made worth while.

Norfolk County is a county of trees—fruit trees and forest trees.

The man who keeps his eyes and his mind open generally succeeds.

"There is sorrow on the sea," wrote the weeping prophet long centuries ago.

Once more with fearful emphasis hath the world been taught to haste not upon an unknown, chanceful way.

Land in Western Ontario has been a veritable hot bed of late. With frequent showers and warm weather growth has been very rapid.

A good farm poorly tilled is often a losing proposition, but a poor farm well tilled and well managed is generally a money maker, and is not long a poor farm.

About the nearest approach to perpetual motion is the folly of spreading gravel on ungraded, undrained hill roads to wash back into rivers for contractors to haul on again next year.

For the right man specialized agriculture brings highest returns, but the average farmer is safer with mixed farming, making each branch as much of a specialty as lies within his power.

There may be nothing new under the sun, but there is a great deal roundabout us that is new to most of us, and it only requires observation to reveal it. Cultivate the faculty of seeing your own neighborhood.

Nearly fifty years ago an English journalist anticipated the coming of a day when work would be paid for in proportion to its disagreeableness. "The man who carts muck," he said, "will be better paid than the one who sells tape."

In litigation as in war, the victor is often the loser. The noted Donnelly-McArdle twenty-three-year law suit over a bill of goods, has just been concluded in New York state. Donnelly got the final verdict of \$18,000, but it cost him \$186,000 to do so. The time and energy frittered away would amount to another fortune.

Systematized Agriculture.

System or lack of it means much towards the successful operation or failure of farm undertakings, just as it does to the progress made in any other line of human endeavor. Elsewhere in this issue there is an account of a large farm, which, for methodical and economic regularity, might well be held up as a model. True, not many farms are as large, but many things which work successfully on the large farm may, in a modified form, be equally valuable on the smaller holding. We were particularly favorably impressed with the care of the implements. It means no loss of time for the man or team to draw the drill, cultivator, disc, or any such implement to the implement shed when coming from work at noon or night. And while the small farm could not provide work for a special mechanic or handyman the principle could be carried out, the teamster himself taking five or ten minutes to go over his implement, tighten nuts, and put things in running order for the next half-day in the field. And apart from the time saved and breakages avoided the implements and machinery are, when not in use, under cover and not exposed to the weathering agencies which soon place them in the discarded fence-corner heap. This is system in one department of the work; try it and see how soon it will spread to other departments to the satisfaction and profit of all concerned.

A Farmer's Knapsack.

It is not a usual sight to see a farm laborer or the farmer himself going to the field with or without his team and carrying a leather knapsack on his back—a sack which looks much like a school bag only, built of heavier leather and with stronger straps and handles; and yet this knapsack is an important item in systematized agriculture on a large farm where several of these sacks are provided. This is another small item, but it saves a lot of time. Oh, but you say, "what does the sack contain." Just tools—common small wrenches, pincers, wire, a few small bolts and necessary nuts, washers, etc., a screw-driver, cold chisel, a file, and like handy small tools, so often needed in the field, and so often lost in an improvised tool chest or among the litter generally found on a farm work bench. There is nothing to prevent the farmer having such a sack or bag no matter how small the farm. If the farm is large more than one are necessary, but they will pay for themselves many times over in time and steps saved. If a small break occurs, nuts loosen, or screws drop out, the necessary tools to make repairs are right in the field, and the workman always knows where his tools are. If he doesn't it is his fault. The bag should be returned to the barn each night with the team. Isn't this worth a trial?

A Farm Smithy.

A small forge on the farm is not always a necessity, but it is often a great convenience, and few farms situated any considerable distance from a blacksmith shop can afford to be without it. Any man possessing a very ordinary amount of mechanical genius can soon learn to make many useful little articles needed almost every day, and can often save a drive to town which would spoil a half day by repairing his own breakages. A cheap set of tools should go with the outfit. These little things are essential parts of system on the farm, that system which should be carried right up to the main departments of operations.

The Onus is on the Man.

Men living on the most fertile land in the country are often heard to find fault with their opportunities and results. We were recently talking with a man on the train who remarked how well the country looked at this season when another man chipped in with the statement that most likely the owners of the fine crops growing in the fields, through which we were passing, would have something to "growl" about even though everything was so promising, and to back up his statement cited the case of a farmer upon whom he once called and who had two hundred acres, the heaviest crop of wheat he had ever seen. This man, when congratulated upon the fine crop which his acres were producing, after a moment's hesitation to dig up a reason for his "grouch" replied, "yes, it is a fine crop but it is awfully hard on the land." Are not many of us often given to looking at the wrong side of everything? Surely the man whose farm is producing him a good crop year after year should not always be complaining. He has troubles of his own no doubt, but many of his fellows have more and grumble less. Is it not a fact that a great many of the things about which we find fault give cause for grumbling only because of our own neglect or failure to put in practice the best methods on the land? We have often wondered how it is that some men make money and do well on the poorest of soil; in fact many take a run-down farm and soon convert it into fertile fields, while others far more favorably situated have a struggle to make ends meet on the best of land. After all success or failure depends largely upon the man not the farm, and if things do not work out satisfactorily the man should apply his "grouch" to himself, and not put the blame on wind or weather, land or crops. Place the blame where it belongs, and by a knowledge of mistakes and studying the success of others it will soon be found that grumbling is generally done without a just reason. Fault-finding never accomplished anything, but studying mistakes and successes and applying the knowledge gained with common sense has made over poor farms to such an extent that they are now numbered among the most profitable in their districts.

The Young Farmer's Business.

It is often said that what is everybody's business is nobody's business and this in a sense is true, but with the government of our country there is a difference. The making of the country's laws is just as much the business of the voter as of the representative, and he should feel the responsibility when he casts his ballot. It is not of the voter that we wish particularly to speak, but rather of the representative in parliament. Farmers are often heard complaining that there are not more of their number filling seats in the Legislature or House of Commons, and we believe the complaint is justified. But why are conditions as they are? No one doubts but there are men from the farms capable of filling the seats, but many of those who should be there are too busy at practical farming and are in business too extensively to afford the time. It would mean loss to them. And then again too small a percentage of the rural population pay any serious attention to the doings of politicians and politics generally, voting as father used to vote. They are not up to all the dodges worked in by political machinery, and,

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generally not being public speakers, do not care to face a campaign where the platform must be taken and big questions threshed out. If farmers desire more members they must prepare them and elect them. It is the young man's day, and, if we mistake not, before many parliaments have been dissolved there is going to be an upheaval and some of the thinkers, among the live farming communities who have had the advantage of training at some agricultural or other college, will be in the fight, and will be able to hold their own with members of other professions and will ably represent agriculture and the people. It is the business of the farmer to get into this political game, play it fair, and see that the other fellow does not win with a cold deck of cards.

Nature's Diary.

A. B. Klugh, M.A.

Among all the plants which abound in our woods, fields and bogs there are none more beautiful or more interesting than the Orchids. The most striking flowers in our flora belong to this family, and all the species are extremely interesting because of the wonderful way in which their flowers are modified to ensure cross-pollination by the aid of insects.

Before dealing with the modifications which the flowers of the Orchids exhibit it would be well to briefly review the structure of some flowers which are not so modified. Take for instance the Buttercup. Here we have five separate sepals, five separate petals, many separate stamens and several separate pistils. In any flower the essential parts are the stamens and pistils. The former bears at its apex the anther which contains the pollen the latter has a sticky surface at the top, called the stigma, to which the pollen grains adhere. On the stigma the pollen grains germinate, sending a tube down into the ovary. Along this tube the nucleus of the pollen grain passes, fuses with the egg-cell in the ovule. The ovule is then said to be fertilized and is termed a seed.

Now let us look at the Lady's-Slipper and see

what modifications have taken place. In Fig. 1 we see that there is a broad oval standard at the top of the flower, this is one of the sepals. The other two sepals are united and are below, and in the illustration are hidden by the lip. Two of the petals stand out like wings at the sides, the third is very much modified, being changed into a sac called the lip. From Fig. 2 we see

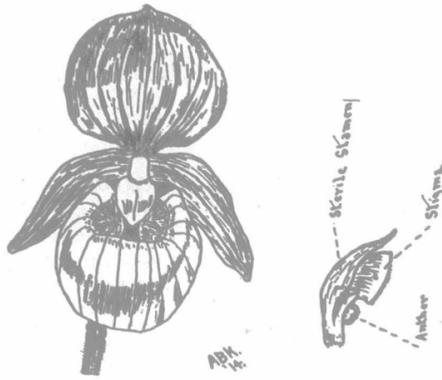


Fig. 1—Showing Lady's Slipper. Fig. 2—Side View of Column of Lady's Slipper.

that in place of the stamens and pistil being separate, they are fused together into a structure known as the column. This is really composed of three stamens and the pistil, but one stamen is sterile and has been transformed into a shelf, in the centre and underneath which is the stigma, while at each side and beneath are the two fertile stamens, which have lost their filaments (or stalks) so that only the anther remains. The

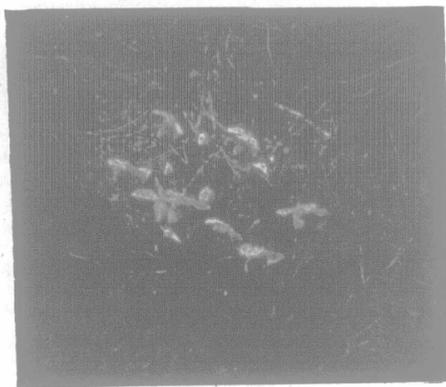


Fig. 3—Showing Lady's Slipper in its haunts.

pollen in the orchids is not dry and powdery as it is in other plants, but is contained in the anther in an adherent sticky mass, which is termed the pollinium, or pollen mass.

Now when we come to investigate the method of pollination we see the use of these modifications. The insect enters readily enough through the opening shown in the centre of the flower in Fig. 1., but when after having dined on the nec-



Fig. 4—Root's Head Lady's Slipper.

tar secreted by the hairs at the bottom of the lip, it cannot leave by this opening because of the incurved sides. The only exits are the two little openings on either side of the flap formed by the sterile stamen, and in crawling out of one of these the insect is obliged to pass under the pollinium, thus gathering up some of its sticky pollen. When it visits the next blossom on leav-

ing by the "back doors" its back comes in contact with the stigma (see Fig. 2) and some of the pollen is scraped off on it. At the same time the insect gets another load of pollen from this last flower to carry to the next and so on. Thus we see that by this elaborate device cross-pollination is ensured.

The structure of the flower of the Yellow Lady's-Slipper is very similar to that of the species just described, but the upper sepal is narrower, and the two side petals are twisted, narrow, and hang downwards.

In the Stemless Lady's-Slipper, which is also rather aptly called Moccasin Flower, the entrance to the lip is a slit instead of a roundish opening, the texture of the lip is softer than in any other species of the genus, and the lip is purple in color.

The little Ram's Head Lady's-Slipper is one of our most unique-looking flowers, as may be seen from Fig. 4, and it also has the distinction of being by far the rarest of all our Lady's-Slippers.

The habitat of the Lady's-Slipper is usually in peat-bogs, and it is fortunate that it is so, for few but ardent botanists venture into these places of wet and uncertain footing, and if they grew in more accessible places they would soon be exterminated in all settled parts of the country. The botanist is content to admire them in their haunts and to carry away a few blossoms to exhibit as examples of the beauties of our native flora, but the chance way-farer is almost certain to return with a spade and a basket or two, to dig up the plants and plant them in a garden where they soon die in its uncongenial soil.

THE HORSE.

Rearing Foals From Working Mares Profitable.

A correspondent of "The Farmer's Advocate," Winnipeg, Man., gives some reasonable advice regarding the rearing of foals from working mares, and his ideas herein recorded are applicable throughout Canada.

There is no reason whatever why breeding mares should not do a fair share of the season's farm work, and at same time successfully raise a strong, healthy foal. Of course discretion must be used. Personally I am in favor of their being kept off the roads from doing such work as hauling grain on account of the uncertain state of the roads at this season. Mares hauling heavy loads and constantly getting "stuck" would probably result in giving birth to dead foals. On the other hand, they can be worked to advantage at almost any kind of field work such as seeding, summerfallowing and cultivating right up to within a few days of foaling, and again with discretion two weeks after foaling.

Mares are in much the best shape for foaling if allowed access to grass frequently and regularly. Personally, I am dead against work horses being turned out to pasture, after doing a hard day's work, all night to get their living, but I do think that in-foal mares give much better results when they have lots of green grass to eat, but then they should not be doing full work at this time. Where the mares do not get green feed they should certainly have bran and oats at this period. A mare doing a fair amount of work should get five quarts of oat chop and two quarts of bran three times a day with all the best hay she will clean up. The colt should be given oats as soon as it will eat them, which usually is surprisingly soon.

Be sure these oats are the best possible. Avoid musty or heated oats, old oats are best. The colt should also get a chance to nibble a little sweet hay as soon as old enough. When mares are working and come in from the fields at all heated they should be kept from colts until they have had time to cool off. I think the best place for a foal when dam is working is a nice high-boarded, loose box with small yard in connection, also well boarded. Right here I must say I think the very worst place for a foal is to be allowed to run all over the farm after the mother when mother is working, and yet it's surprising how many thoughtless farmers allow their colts to do this.

Before turning mare in with foal remove harness to avoid accidents. It is also much the best not to tie mares up as colts are likely to get entangled in the halter shank. If this is unavoidable, I advise tying a stick to halter shank between the head piece and manger. This helps to prevent the colt getting entangled. Colts that are raised in this way are invariably quieter than the range-raised colts, they are used to being handled, and it is a very simple matter to halter-break them at this period. They are also easier to wean in the fall, and if given proper attention will not lose any colt flesh at this period which is most important.

All things considered I think working in-foal mares with discretion a good business proposition, and in itself comprises a branch of mixed farming I am at present very much in favor of.

Indigestion in Horses—IV.

Flatulent Colic.—A disease commonly called flatulent colic is quite common in horses. It is a form of indigestion, and in the early stages the symptoms strongly simulate those of the disease already discussed as acute indigestion. This condition is much more serious than spasmodic colic, and the causes are much the same, viz., changes of food or water, overfeeding (especially after a long fast or when overheated), food of poor quality, severe exercise too soon after a meal, a weakness or partially inactive state of the digestive glands, etc. Food that ferments readily, as green clover, turnip tops, etc., especially if wet or frosted, is a fertile cause. It sometimes occurs during the progress of other diseases, indicating a very grave condition. This, and in fact mostly all intestinal diseases, occasionally appears without recognizable cause, due, no doubt, to a nonactive condition of the digestive glands.

Symptoms.—The symptoms do not appear so suddenly, nor yet are they so violent or alarming to the ordinary observer as those of spasmodic colic. The animal becomes dull, uneasy, stamps his feet, probably kicks at his abdomen, looks around at his flanks, paws, lies down carefully, may roll, gets up again and continues to show uneasiness. The pulse is increased in both force and frequency, and the respiration is often more or less labored. The symptoms of pain are practically constant, but vary in intensity. In a short time after the first symptoms are shown there will be noticed a more or less well-marked fullness of the abdomen (bloating) more marked on the right side just in front of the point of the hip. The visible mucous membranes become injected, the pulse continues to increase in frequency but usually gradually loses force, the respirations will be labored in proportion to the degree of distention of the abdomen with gas. The extremities are usually cold, and there is often a twitching of the muscles. If relief be not afforded the symptoms continue to increase in severity, bloating becomes excessive and death takes place from rupture of the intestine, suffocation or absorption of gases into the circulation.

Treatment.—Place in a roomy box stall or paddock. Agents which combine with, neutralize or dissipate the gases are indicated. For this purpose there is probably nothing that can be safely given by the stomach that acts so well as oil of turpentine and raw linseed oil, one to three fluid oz. of the former in half a pint to a pint of the latter (according to the size of the patient). If necessary the dose may be repeated in an hour. When this is not quickly obtainable 1 to 1½ oz. of carbonate of soda (washing soda) or 2 to 3 oz. bicarbonate of soda, (baking soda) dissolved in water should be given. The patient should be well bedded and kept as comfortable as possible. A couple of gallons of warm, soapy water should be injected into the rectum occasionally. If pain be severe it should be combated by the administration of 1 to 2 oz. chloral hydrate dissolved in water or 1½ fluid oz. each of tincture of belladonna and sweet spirits of nitre in a pint of cold water as a drench. This anodyne dose may be repeated every two hours as needed. If bloating becomes excessive care should be taken to prevent the patient from throwing himself down suddenly, as there is danger of this causing rupture of the distended intestine. If the bloating becomes so marked that there is eminent danger of suffocation or rupture the patient should be punctured on the right side at the most prominent part between the point of the hip and the last rib, to allow the immediate escape of gas. This operation, if skillfully performed with a trocar and canula, has proved very successful in most cases, but the use of knives and other crude instruments, has not usually been followed by satisfactory results.

In a case of this disease where the administration of the doses recommended does not gain relief in at most two hours it is better, where possible, to secure the services of a veterinarian. Where this cannot be done the attendant can only do his best according to instruction.

Constipation of the Bowels.—In many cases may be looked upon as one of the symptoms of other digestive diseases rather than as a disease of itself. In other cases it is the primary trouble. This is often noticed when a sudden change of food, especially from hay to straw is made, as is often the case in the fall when the work is finished and the horses will have little or nothing to do for a few months. In about a week or ten days after the change is made the symptoms of the trouble become apparent. In many cases it occurs without well-marked cause, and a change to a laxative diet will correct it. It may be due to a weakness of the digestive glands, in which case the administration of a dram each of nux vomica and sulphate of iron 3 times daily will suffice.

Symptoms.—The symptoms are not usually alarming. We notice that the horse has not his usual vitality, he is somewhat dull and his appetite is impaired, and the excreta is small and

lacks moisture. If the ear be placed to the abdomen an absence of the normal intestinal murmur will be detected. The murmur may be almost absent or it may be of a metallic nature. There is a partial or complete paralysis of the muscular coats of the intestines, hence, the absence of or altered nature of the sounds.

Treatment.—The administration of active purgatives must be avoided, as a purgative cannot act so long as the paralysis exists, and may do harm, by irritating the intestines. The paralysis must be overcome by administering nerve tonics as nux vomica in 2 dram doses three times daily, followed by one to two pints of raw linseed oil or 4 to 6 drams aloes and 2 drams ginger. Injections per rectum should be given, and the patient fed on laxative, easily-digested food.

WHIP.

LIVE STOCK.

A Summer Silo has a Place.

The practice of soiling seemed so radical at first that it was not universally adopted, neither has it yet become established on the large percentage of farms throughout Canada, but it is yearly working itself into the system of farming now being carried on where land is limited and the operators are after dividends and profits. True, it is the labor problem has discouraged the custom, but arrayed against this obstacle is the decreased area of land required to maintain an equal-sized herd. There is no doubt but what more labor is involved in the soiling practice, but most crops used for this purpose can be mowed with the machine, raked with the horse rake loaded with the hay loader, and spread on the barn floor twice a week and preserved in good condition. This eliminates much of the labor and wasted time often considered when the hand-scythe and wheel-barrow are used to carry out

Why Not Have a Dehorning Day?

Now-a-days things which concern everybody are done in a co-operative way. There is "clean up day," "alfalfa day," "hog cholera day," but the greatest obstacle in the way of a dehorning day is that the calves should be deprived of their horns before they are three weeks old, and all the calves in the country are not the same age. However, a particular day of each week might be set aside as a fitting time to use the caustic potash freely, and in a humane manner perform the operation which is so necessary and desirable from many viewpoints. In their primitive state cattle required horns, they were their sword and battle axe in time of peril, but in the domesticated state horns are no more necessary than a repeating rifle at a peace conference.

The mandate of the Union Stock Yards, Toronto, that \$2.00 per head shall be deducted from each horned animal is conclusive evidence that horns depreciate the value of stock offered. One visit to the yards will convince anyone that this move is just. The lacerated sides of a number of the animals that have been ripped by the horns of others in transit or after arrival, and the bawling and frantic bellowing of the weaker ones when being pinned to the wall by a more pugnacious creature are proof that the horns are a detriment. Furthermore, the animal may not show any exterior signs of injury, but the dressed carcass often tells the story by bruises and red punches. These are often inflicted by careless drivers but more frequently it is the result of horning, and salesmen claim that it materially decreases the appearance and value of the carcass. Cattle without horns are more quiet in the runs, and it behooves the feeder to forcibly remove their horns in the fall, and with a full-grown animal it is little short of a brutal operation. Farmers who allow the young calf to grow up without removing the horns are even more responsible for the pain to the creature than the feeder who makes it fast and with saw and clipper painfully separates the horns from the bawling brute.

Many a lasting scar or perhaps an eye or limb could often be spared the attendant who is constantly working with the stock if they were deprived of such deadly weapons. True, it is many breeds and especially show animals of those breeds are enhanced in value through the possession of those ornaments, but those creatures are usually trained to deport themselves manfully and the risk is not so great. Barring such class of stock, where opinions might differ, there is still a host of cows fit only for the dairy, and they are just as productive and quite as pleasing in appearance when deprived of their dan-



Our Only Hope—The Growth of Independence.

this end. The usual mid-summer shrinkage in milk or flesh can best be avoided by housing the stock in the stable during the heat of the day, and turning them out at night for exercise and grazing. A smaller run will suffice where they receive liberal rations during the day.

In Wisconsin it is considered that one acre of soilage crops equals about 2½ acres of the good blue grass pasture for feeding dairy cows, but the matter of corn silage in the summer may be considered soilage as well as clover, alfalfa vetches or rape.

Many stockmen now have at least one silo on the farm, but there are many cases where a second silo to be opened in the spring would be a money-maker for the place. On an average \$250 should erect a serviceable silo that would hold at least 100 tons. \$1.25 is the approximate cost of producing and ensiling one ton of corn. This places every ton of silage at a total cost of \$3.75 the first year. Dairy men now-a-days admit that corn silage in the silo is worth \$3.00 per ton, and if this be so there is only a debt of 75 cents per ton of silage outstanding against this venture. This could be easily wiped out in the second year and handsome profits gained.

From experiment it is hard to discriminate between ordinary, forage-crop soilage and corn silage. Taking them under similar conditions they give practically equal results, thus it seems that if labor is to be scarce considerable saving can be made by using the silo in conjunction with the field, thus producing the largest crop of forage possible to grow on an acre of land, and to be preserved in the best possible manner.

gerous appendages.

The most effective and humane method to attain this most desirable end is to use a stick of caustic potash. Moisten it well and rub it on the sprouting horns before the calves are three weeks old. Rub it on the horns only, and if necessary repeat the operation. If properly handled there is no disfigurement and a happy result. Let us have a dehorning day.

THE FARM.

Farm Engineering.

WATER WHEEL INSTALLATION AND COSTS.

A preliminary survey and outline report by a competent engineer is advisable in every case where a water power plant of any great size is to be erected. Such advice is not expensive and will many times set the farmer on the right track regarding details of his venture. For small installations however, the farmer may rely on his own judgement and the help available from the manufacturers whose wheel he purchases. This series of articles has for its purpose the training of the farmer to the extent that he may recognize the possibilities lying in the small stream running through the fields and may be able to determine the power available from it and the kind of wheel to purchase. Just what installation is best in each case and the exact cost depends upon local conditions. The best we

can do is to give general information in these particulars.

Before determining the size of wheel to use, the condition of the stream at all seasons of the year must be taken into account. The installation is for continuous use and average conditions must be figured on for, if the head of water is real variable, a wheel too large for all but the highest heads will operate at a very low efficiency when the head is low. On the other hand, a wheel too small for any but the very low heads will have low efficiency on the high heads. In almost every case the wheel is chosen to run at a certain fixed speed. This speed cannot be maintained under wide variations in head without affecting the efficiency of the plant. The usual solution is to arrange the plant so that the head will remain as nearly constant as possible and any surplus water go to waste. As has been stated in a previous article low heads are best developed by turbines and high heads by Pelton wheels. These two types are practically the only ones which can be readily purchased for small installations and are used extensively. The speed of the turbine is fast; that of the Pelton wheel is slow. The turbine uses a great quantity of water; the Pelton uses comparatively little.

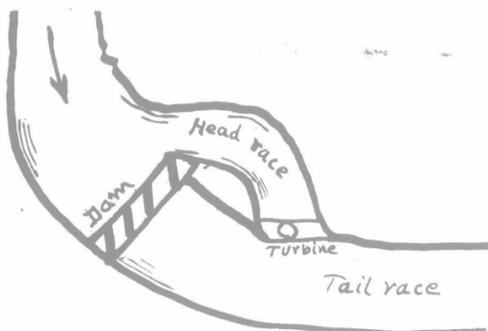
For turbine installations the natural head is usually enlarged sometimes doubled, by building a dam across the stream at some convenient spot. Off to one side of the dam, as illustrated in the sketch, the raised water enters the head race, goes through the turbine, and then goes out through the tail race. The short length of pipe or open channel from the head race to the wheel is called the penstock or flume. The portion of the water course in which the wheel is situated is called the wheel pit.

The following table gives some figures about successful farm installations of water power in various parts of the country. All of these are turbine plants.

TABLE 1.

Power developed	Head of water	Length of dam	Cost of power plant	Cost of plant, transmission line and equipment	Symbol for future reference
15 ft.	5 h.p. (old dam)	36 ft.	\$ 220	\$ 518	A
6 ft.	17 h.p.	200 ft.	1,000	1,800	B
17 ft.	15 h.p.	350 ft.	700	1,200	C
11 ft.	8 h.p.	350 ft.	693	1,022	D

These cases indicate how wide a variation in cost there may be in such installations, even of approximately the same power development. As a general guide, however, in rough estimation of costs one may be reasonably sure that \$100 per horsepower will cover the complete equipment unless there is some unusual condition of affairs.



A Dam for Turbine Installation.

The higher the head the less the cost, other things being the same. The larger the plant, the less the cost per horsepower. In case C above, for example, the power developed is three times that of case A with but twice the cost, and is twice that of case D with but little additional cost. These are hardly fair comparisons, however, because conditions are quite different.

In case C above the dam was of concrete and raised the available head fifty per cent. to the figure given. The transmission line is about 2,000 feet long from power-house at the stream to the farmer's house. The cost of operation is the interest and depreciation on the plant, amounting to about eight dollars per month. The actual cash outlay for oil and repairs will not exceed one or two dollars per month.

In case D the dam was of earth. It cost nearly \$400. The transmission and house wiring cost \$350. The remainder was paid for the wheel and installation.

The turbine wheel must be installed pretty close to the dam. On the other hand, the Pelton wheel is very frequently far from the point where the water is available. In the first case the power is transmitted electrically from power-house to place where it is used. In the latter

case the water is transmitted from the stream through pipes to the Pelton wheel. As a rule there is no dam nor other construction necessary if a Pelton wheel is used. There need be no running water. A pond elevated above the wheel is ideal. The expense consists of the pipe line to the wheel, the wheel itself, the pipe line or other arrangement to conduct the waste water away. In particular this style of plant lends itself to ready use in connection with irrigation projects. The water is then brought to the wheel, and the waste water from the wheel used for irrigation purposes. The expense incurred may then be divided between the two projects, power and irrigation.

The cost of the Pelton wheel depends upon the size. A 3-foot wheel costs from \$220 up to \$450, depending upon the head under which it is to operate; a 4-foot wheel from \$285 to \$675; a 5-foot wheel from \$350 to \$625; a 6-foot wheel from \$400 to \$800. The following table gives

the horsepower developed by these standard wheels under the various heads. The amount of water needed in each case can be figured by the methods already given.

TABLE II.

Head in feet.	3-ft. wheel.	4-ft. wheel.	5-ft. wheel.	6-ft. wheel.
50	5.98	10.60	16.63	23.93
100	16.84	29.93	46.85	67.36
150	31.01	55.08	86.22	124.04

Smaller wheels may be purchased for smaller heads and less water supply.
Nova Scotia. R. P. CLARKSON.

Growing Forest Trees for Generations to Come.

Four hundred and ten thousand trees to the average man would seem a great forest, and yet, distributed over the wide Province of Ontario, they would only make a wind break if planted eight feet apart in a single row across the north side of this Province. But this in itself is no small matter—it is one of the big things of the day this reforestation. When it is known that from a small farm, as farms go in Norfolk county, this number of forest trees were sent out by a few men this spring to be planted here and there over the entire Province, as a start in reforestation it must be considered one of the largest undertakings, and shows during the last four or five years, which the Norfolk Forest Station has been in existence, most remarkable development. Just think what these 410,000, now very small trees, will be worth to this country forty years hence; and this is only a beginning. As years go by thousands upon thousands of trees will go forward from this farm, which was some four years ago a heap of drifting sand.

One is almost amazed who knew the farm before its development commenced, when he now approaches it from the south and beholds on the south-east corner, which some five or six years ago shifted by the wind out into the roadways and men and teams were required to move the sand back, young Jack Pine trees anywhere from eight to fifteen or sixteen feet high, and pushing out new growth which is now sixteen to eighteen inches in extent. Five years ago old timers in the section merely laughed and scoffed when they saw men attempting to grow trees on land which had to be held down by piles of brush, or otherwise it would move over to the next farm. These are now the strongest converts to the possibilities of reforestation, even on the shifting sand.

Just back of the five-year-old plantation referred to are two and three-year-old trees making excellent growth. One hundred and twenty acres are now permanently planted to forest. Much more would have been done but the people of the country have been appreciative, and, realizing the need which exists for more forest area, the demands made for trees which are sent out free of charge have been great, so great in fact that this spring not a tree was added to the permanent plantation at the Forest Station. So great was the demand that the station was cleaned out of nut trees entirely, and most of the other common varieties were pretty well gone, although quite a number of Manitoba Maple were noticed in stock. Chief amongst the varieties sent out are Scotch, White, Red and Jack Pine, Black Locust, White Ash, Hard Maple and the nut trees.

From observations made at the Station and in the opinion of some of the experts in charge, the Scotch Pine, especially for light land, seems to be one of the best varieties. On a ridge back toward the centre of the plantation a block of Black Locust had been planted a few years ago.

These made almost phenomenal growth, but the hard winter of 1913, which so affected the peach trees, seemed to have a similar effect on the Black Locust plantation. The trees are quite severely frozen back, and it will take them some time to recover from the shock, in fact, many of them will not recover. There is a point in this for those contemplating planting forest trees. Unless favorably situated where there is little danger from freezing, namely close to the lake shores, it would seem that it is not altogether advisable to plant heavily of Black Locust. The Jack Pine makes almost a phenomenal growth on light land, and on this the lightest of blow sand is going ahead at a rapid rate. It is held, though, by experienced foresters that in the end the Scotch and other varieties of Pine will overtake and outgrow the Jack Pine. It is a rapid grower at the start, but does not do so well later on under some conditions.

One of the most interesting departments of the work are the seed beds in which the seed is planted and the young trees propagated. These are situated in very light sand, but irrigation is resorted to to keep the young trees growing. The Skinner system has recently been installed and with it the beds may be moistened every evening, in fact it is not believed that any harm would result if the water were applied during the entire night. The water is supplied from a pond well back on the farm, and from which by wind mill and gasoline engine the water is forced up and into an elevated tank, pipes from which lead to the system of irrigation in the seed beds. This gives pressure enough to make a very fine spray of water from the nozzles which are placed every four feet on the overhead pipes of the irrigating system. It is just about as near natural rain as man can hope to get, and the germinating seed and young trees should do extra well in these warm beds with plenty of added moisture.

A nursery is located about the centre of the main farm, and here we saw some 300,000 White Pines which had just been set this spring. These are grown in rows much as the gardener grows onions, and are shipped out at two years of age. All hard woods and nut trees are ready to ship the next year after planting from the seed beds.

Reforestation is bound to be a paying investment for those who undertake it properly on rough land which is practically worthless for cultivation, and besides this most farmers would benefit by having and keeping a woodlot on their farms. Mr. Lane, who has been in charge at the station since the work began, believes that many of those now planting apple orchards would be better off if they planted instead White Pine forests. This applies, of course, to poor land, and particularly where apples have been planted by careless men who will not look after them. The strong point in the forest work is that forests require very little care after being



Pines on Blow Sand.

A portion of the Forest Station planting at St. Williams. The trees in the background are four years planted, those in the front, two years.

planted. In thirty or forty years trees now being set, if they grow anything like as fast as those are doing on the very poor land which comprises the Forest Station at St. Williams, cannot but be a very valuable asset to the country, and will surely yield large returns to the owner of the land upon which they grow. One well-known lumberman took 35,000 trees this year from the Station, and he now thinks so much of the work that we understand he is contemplating starting a forest nursery of his own

and planting out some half million trees annually. He has felled many a fine forest, and now is attempting to undo the havoc which he has wrought. This gives some idea of how the work is taking hold of the people who understand the need which the future will have of more forest trees.

As stated in the beginning, one who knew the barren waste of five years ago, and where these fine trees are now growing, can scarcely believe his eyes when he approaches the plantation. It

is indeed marvellous, and Prof. E. J. Zavitz, under whose control the work is, and his able assistants, Mr. Newman and Mr. Lane, are to be congratulated upon the success they have made and are making of the venture, and the faith they have had in the possibilities of the work is gradually spreading over the Province until great things must eventually come from the small beginning made on the sand hills north of St. Williams in Norfolk county.

A Big Farm Where System Saves Dollars.

Just east of the pretty town of Simcoe in Norfolk County, Ontario, with a high front elevation overlooking the Lynn River, lies the Lynndale Farms, in reality a big farm-development proposition which in a few years will be one of the largest fruit-producing farms in Canada.

It is a revelation to anyone who knew this property some years ago to see the changes which have taken place during the short space of four years. Four years ago the land lying next to the town of Simcoe was very poor indeed, a good deal of it being considered almost too light to attempt to grow any crop thereon, and several fields were thickly dotted with pine stumps, the only remains of the noble forest which once covered these then somewhat infertile tracts. The land was also cut up into rather small fields by more or less tumble-down fences in the corners of which grew luxuriantly many noxious weeds which seemed to do well on the land even though crops did not always develop into a paying proposition. A vast change has come over this land. It would seem that some magic hand had with one stroke swept the fences from off the slopes, and removed the stumps from almost the entire farm. With these have gone the weeds, and in the place of a more or less barren waste there grow peach and apple trees in one large orchard 450 acres in extent.

In this block of land there is all told about 700 acres. True, some of it was improved and planted before the present management took over the land. One hundred acres was purchased from Jas. E. Johnson, and most of this was already set to fruit. Just east of this farm another 100 acres, known as the Olds Farm, was purchased and several acres of this was already in fruit. The greater part of the remaining portion has been set since the land was purchased, and one can stand at one end of a row of trees over three-quarters of a mile long, and to use a common phrase, it is "as straight as a bee line." Farming is done on a large scale on this place, but many ideas are brought into use which, in a modified form, could be worked out on a smaller scale on the averaged-sized farms of the Province.

THE HORSE BARN.

Thirty horses are required to do the work on the farm, and for convenience these are all stabled in the same barn, the old stables having been pulled out and the barn basement turned into a horse stable. There are features in this barn which could be used in any horse stable, and which for cheapness and utility recommend themselves to those having a horse stable to refit or a new one to build. Most of the stalls are nine feet deep and five feet wide. There are a few a little narrower than this, but for good-sized horses they are considered too narrow. Mangers are made of plank and are very simple in construction, with the oat-box in one end as is the usual custom. In this barn a feeder is kept, and he has everything ready for the horses when they come in from the field. To facilitate matters, in the alley-ways in front of the animals an oat-box is arranged in front of each horse, and opposite and connected with the oat-box in the manger. This is fitted with a slide bottom and the grain fed is placed therein by the barn man, and the teamster, when his horses come from the field, provided they are not too warm to be fed, simply pulls the slide and the feeding is done. This is simple and practicable, and is working out entirely satisfactorily.

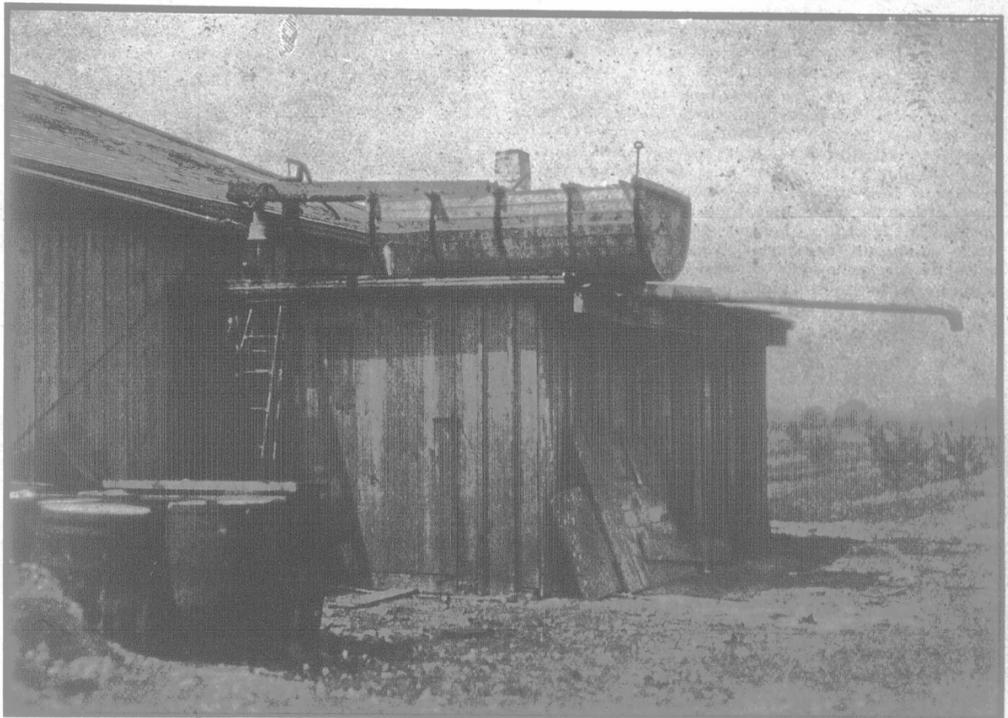
Another thing which we noticed, and which is important in a horse stable, is that the plank partitions do not extend to the ceiling of the stable, but the top is fitted half way back from the front of the stalls with $\frac{1}{2}$ -inch iron rods. The system quite often used of sloping the plank stall partitions from the front about half way back and leaving them low at the back was tried, but unless the horses were tied too short for their own good and comfort they did considerable fighting over these partitions, and it was deemed wise to change the plans. The iron rods are set into holes bored in a piece of scantling which extends the length of the stall at the top, and the other ends rest in holes in the top plank of the partition at the bottom. These preclude all danger of injury to the horses caused by their irritating each other over the tops of the partitions, and allow a free dissemination of light to

the front of the stall where it is so much needed and so often neglected.

This barn has a ventilating system somewhat different from the general run. It is not always easy in remodelling old buildings to get things just as required. These ventilators seem to be working well, and are simple in construction and inexpensive. Three galvanized-iron pipes run from the basement through the roof.

FEEDING AND GROOMING.

Some of our readers might be interested in the manner in which the horses are fed. These horses are big, fairly clean-limbed, quite rangey fellows, weighing anywhere from 1,300 to over 1,500 pounds each, and each horse receives eight quarts of rolled oats at a feed three times daily. This is equivalent to about six quarts of whole oats. Hay is fed in very small quantities in



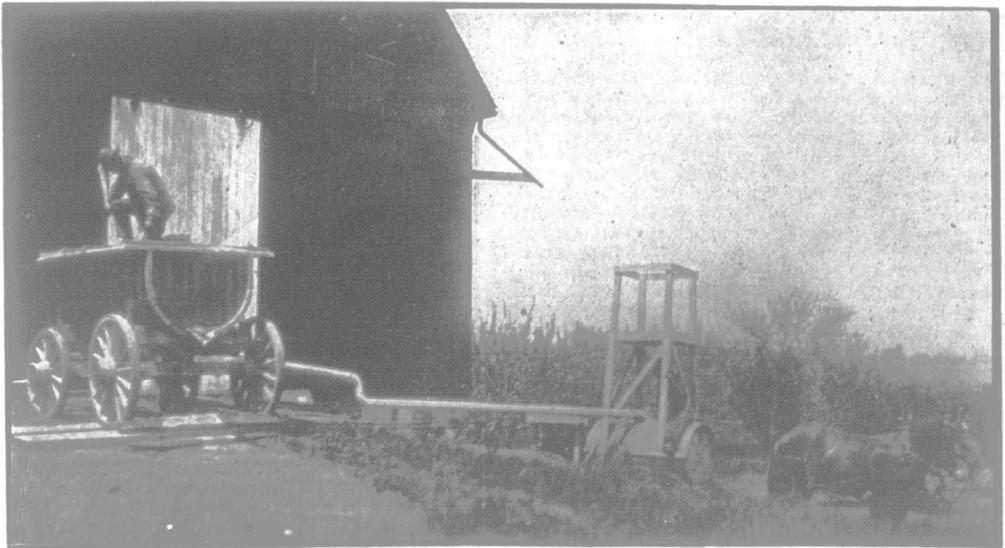
A Handy Mixing Tank.

Showing tank for mixing spraying materials elevated on blacksmith shop. Water is pumped from cistern under implement shed.

They are eighteen inches in diameter and extend down to within a few inches of the floor, having also an opening near the ceiling of the stable, which is operated on the same plan as a check draft in an ordinary cook stove. These are the outlets for foul air. Fresh air is brought in through the doors and windows only. The outlets were constructed by a local tinsmith, and so far have done the work quite satisfactorily.

the morning and none at all is given at noon, but all the horses will eat up clean is placed in the manger at night. This is the system followed in many livery barns, but has not been adopted by many farmers. The horses after a heavy spring's work, and in the harness every day, are in first-class condition, and are fit and ready to work at any time.

One of the most important factors in keeping



Filling the Spray Tank.

Another method of quick filling. (see article.)

the horses in good condition is believed to be the frequent use of the currycomb and brush. Every horse in the stable is cleaned twice each day, and is given a thorough brushing which keeps their skins sleek and clean. The entire thirty were clipped early in the spring before going to work on the land. This also facilitated the matter of keeping their coats in good condition.

In the working of the horses a system is used which is not common, even on fruit farms. With such a large acreage cultivated, it is necessary to use big implements and experienced orchardists know with what difficulty these are operated around and under trees. Most growers, therefore, choose to use two-horse implements only. On this farm, however, four-horse implements are used whenever possible, two horses making a team to draw these where trees interfere with the progress of the work. A regular four-horse team is kept, two of them being worked in the forenoon and two in the afternoon. These teams get no more feed and get the same care as the regular four-horse teams which work the land not already planted to trees, and to all appearances are in just as good condition for work. When in the field they are kept steadily going, but as stated they only work half a day at a time. It is thus found possible to keep the four-horse implements going in the orchard by the use of two-horse teams half a day about.

All harness used in operating this big farm is kept in small harness cupboards. At first hanging on pins behind the horses was tried but it was not satisfactory; now every team has a separate cupboard which cost only about \$6.00 for labor and material in making, and in which the harness is hung and closed up. These stand in the wide alley behind the horses, take up little room, are inexpensive, and one of the best methods we have seen of preserving harness and keeping it in good condition.

A REPAIR SHOP A NECESSITY.

With twenty-five men and thirty horses, and all the necessary implements and machinery, and the multiplication of problems which come up, it is necessary to have a complete system on the farm, otherwise the work would eventually develop into a hopeless muddle. Few indeed are the farms large or small which have everything so systematized as is the case on this fruit ranch. Adjacent to the horse barn stands the large implement shed, 150 feet long, and every noon and night all implements which it is possible to draw to the building without loss of time are brought to this shed and backed under cover. Here a mechanic is in readiness to go over every implement and machine, tighten all loose nuts and make necessary repairs. In this manner the implements and machines are always ready to take the field, and not a moment is lost through small breakages. This mechanic is an all-round handy-man. He makes double-trees, neck-yokes, tongues for the implements, and repairs all sorts of small and large breakages of iron or wood. This bringing the implements in also insures their being handy when next needed, and preserved from the elements which so soon destroy them. Besides this each group of men working together is provided with a leather tool sack of necessary tools to take to the field with them. A small, inexpensive blacksmith shop with a forge and necessary blacksmith and carpenter tools is provided. This handy-man is one of the busiest men on the place, and saves more time and money than perhaps any other of the hired men. With thirty horses and the necessary implements, one can readily understand that there is work to do in the repair shop most of the time.

HOW SPRAY TANKS ARE FILLED.

This man also looks after the mixing of spray materials, and a tank of well-mixed spray material, during spraying time, is always ready to go to the orchard. While on this point we draw attention to our illustrations which show the method of filling the spray tanks. A two-hundred-gallon tank is placed on top of this blacksmith shop, the roof of which is double boarded with a prepared roofing between. Two pumps lead from the roof of this shop, one to a large cistern which holds nearly 28,000 gallons, and which is situated under the end of the implement shed, next the blacksmith shop. This cistern is kept full of water from the eaves of the large horse barn and the big implement shed. From it the water is pumped into the 200-gallon tank on top of the blacksmith shop. The other pump leads to a vat of commercial lime sulphur used in spraying. The spray material is mixed in the tank by the handy-man, and when the proper outfit comes from the orchard it just takes about a minute to fill the tank from this elevated preparation tank, so no time is lost in preparing material, and the outfits are kept going all the time. The other illustration shows the method of filling on the farm, which was formerly the Johnson farm; a windmill and gasoline engine are used to pump the water up into a tank. A preparation tank is filled at the end of the barn from the tank into which water is pumped. This is drawn around on the

barn approach, and, as shown in the illustration, the material already mixed is run from this tank into the spraying outfit, which, in this illustration, is the compressed-air outfit, in which the water and air are mixed at the nozzle and a finer spray results with much less pressure on the hose. This is one of the simplest methods of filling spray tanks we have seen, and is just as quick as most. The spray materials are always well mixed, and the idea is an all-round

With the standard winter varieties there is also a large number of trees of the earlier varieties, such as Transparents, Duchess, Wealthy, etc. On the Johnson place there is a block of sour cherries comprising some 300 trees, which, unless all indications fail, will give a very heavy crop as the young fruit is set and growing rapidly. Just east of this is a block of Keiffer pears, one of the finest young pear orchards it has ever been our privilege to see. The trees are kept fairly well headed back, are uniform in size and shape, and well lined up at all angles.

Planting these orchards so as to get the trees straight for such long distances was no easy task, especially when one takes into consideration the fact that the land is very rolling in spots, and that also small acreages had already been planted here and there over the land which now comprises the large farm. The wire-cable system was used throughout. To hasten planting and allow of no loss of time a double cable was used, so that while one cable was being strung men could be setting on the other cable. These cables were seven-strand wire instead of six as is so often used, the six strands in this case being wound

around the seventh. This makes a much stronger cable than the other, and there is not so much danger of stretching or breaking.

Fences have nearly all been removed along the highways as well as those separating the land into small fields. The fence rows have been cleaned up, and all is now one large field divided here and there by private driveways or public highways. A great deal of rye is grown in the orchards on the sand land, and this is ploughed down to maintain fertility. Besides the manure made at the place over forty tons of home-mixed commercial fertilizer have been applied this spring. About ten acres of strawberries were just coming in bloom last week, and promise a crop of anywhere from 30,000 to 40,000 baskets. Between twenty and thirty acres of potatoes are grown and a considerable acreage of corn, some for the silo, but most of it is sweet corn for canning purposes. Tobacco has been a paying crop on the place, and this year late tomatoes for the canning factory are to be planted quite extensively. During the spring season it is sometimes necessary to get on extra help, and a few teams are hired to get the orchards ploughed and cultivated before the weeds make too much of a start.

SWEET-CORN SILAGE.

In one of the barns we noticed a number of heifers which had been fed all winter on silage fed for cattle or even to make suitable silage, but the silage upon which these heifers were fed was made from sweet corn stalks, from which all cobs had been removed and sold to the canning factory. Besides this this corn was frozen two or three times very badly before being ensiled. A stream of water was run into the box when it was being cut and put into the silo, and last



Going to Dinner.

A fine four-horse team on Lynndale Farms.

commendable one. It costs very little to collect the water, the walls of the implement shed being the walls used for the cistern, which is seven feet deep and twenty feet by thirty feet. The cement for these walls was mixed one to four with a floor six inches deep, and the side walls reinforced and ten inches thick with no plaster. So far it has not leaked a drop. This cheap method of getting water is practicable and in every way efficient.



A Good Team.

All implements go in when the horses go. The corn planter on the road at dinner time.

THE ORCHARDS.

The plantation comprises most of the well-known standard varieties of apples, with some of the earlier varieties used as fillers. The standard trees are planted forty feet apart under the filler system. Peaches are used as fillers over a great deal of the orchard and up to last winter's hard frost had done very well, but cold weather froze them back considerably, and it will take them at least a year to regain their past vigor.

week when we examined the silage it seemed right in every way, and, moreover, it must have been most satisfactory as the heifers being fed on it are now sleek and in first-class breeding condition, whereas when put in in the fall many of them were very thin.

The Superintendent, P. E. Angle, B. S. A., believes that there is something in the argument in favor of sowing corn thickly and not allowing it to produce cobs, and he plans to utilize as much as possible of the sweet corn stalks for silage.

A BIG JOB.

This property is owned by the Ontario Fruit Lands Limited, with G. R. Cottrelle as manager, and head offices at Toronto. The man who actually operates this farm for the company has a big task before him, but judging from appearances the man is still bigger than the job. It requires a good deal of thought to develop a system whereby no loss of time or money occurs in the daily work connected with such a large, development, fruit-farm undertaking. Men are all hired by the hour, weekly time books are in the hands of the foremen, and each man's time and each horse's time is so tabulated that at a glance at each week's end everything is revealed. Cottages are provided for the married men who are paid as the other men, by the hour, and so much a month deducted from their wages for rent. With each house goes a small garden. Fuel, milk, potatoes and such necessities are supplied by the farm owners, but are charged for in the same manner as the rent is charged. In this way the man knows just what he is getting, the management know just what they have to pay out, and everything runs smoothly. There is no trouble between employer and employee. When conditions are not satisfactory the man is asked to stop work at once, or where he desires to quit his time is out at once. Men are paid at the end of each week, one week's wages being, of necessity, held back to facilitate matters in the bookkeeping. The foremen turn in their books to the superintendent every Saturday night, and they are kept in the office. From them it is possible to tell just how long it took to spray, cultivate or work in any other manner any part of the orchard. It is the most simplified system we have yet seen, and is working out to the entire satisfaction of all concerned. It is a great undertaking from start to finish, and the entire workings of the place are brought down to such a simplified system that success must follow. Like a mighty railroad the smallest portion of the great work is recognized, and is a part of the great machine which must not be neglected. This farm business is a big business after all and requires big men.

THE DAIRY.

Milk-Testing.

Editor "The Farmer's Advocate":

EVOLUTION OF MILK TESTS.

Judging from letters received and requests for testing information, also from the number of samples of milk and cream received by mail to be tested, this is one of the most important questions with dairy farmers. In certain kinds of dairying, notably among cheese-factory patrons where milk is paid for according to weight regardless of what it tests, farmers are not interested in testing problems. These are chiefly concerned with producing as large a weight or bulk of milk as possible. In creamery districts, certain cheese sections, at some condensers, and to a certain extent in city milk trade, the test problem is a big one.

We purpose dealing with some of these problems in two or three articles, with the permission of the editor.

For a long time previous to 1890, cow owners, and milk purchasers, had been looking for a simple test by which they could determine the relative values of individual cows' milk, herd milk, and milk bought and sold. Whenever and wherever there is a strong demand for an article, with prospect of said article being highly remunerative, someone, somewhere is almost sure to evolve that which is demanded. It was so with a milk test.

THE PIOSCOPE.

One of the first, and by far the simplest test ever invented for testing milk is called a Pioscope, sometimes spelled Pioskop. The test is based on color. To make the test, place a few drops of milk in the centre of a black disc. Over this place another disc, have colored sections shading from blue to yellow, the blue section being marked "very poor," and the yellow marked "cream." The intermediate shades between the extremes, blue and yellow, are marked "poor," "less fat," "normal" and "very fat." It gives the relative color values of different grades of milk to those who are not "color blind." It is simplicity itself, but unfortunately it is based on a wrong assumption, yet one which is quite prevalent to-day among many persons, namely, that the color of milk is a sure indication of the

percentage of fat contained. This is quite erroneous. This morning (May 30th) I noticed that the vat of milk in our creamery had a beautiful golden color—looked as if it might test five or six per cent. fat, yet it would not test over about 3.6 or 3.7 per cent. fat. It is because of this popular belief in the relation of color to richness or percentage of fat in milk, that some dealers add cheese coloring to milk which is sold to city dwellers, thus soothing their (consumers') minds as to the quality of milk which is received.

There is but an indirect relation between "color" and percentage of fat in milk. The yellow color of milk is due to a substance called "lactochrome" which is associated with milk-fat, but separate from it. Its original source appears to be the coloring matter of plants. Some scientists say it is wholly derived from the green coloring matter (chlorophyll) of plants, but we know it may be derived from other sources, or other coloring matters. For instance, the reason that the vat of milk looked so yellow in our creamery this morning is that the cows had eaten a great many dandelions, and under such conditions milk, cream and butter are nearly always highly colored. Other plants, such as corn and clover, also seem to have the property of adding yellow color to milk when cows are fed on these foods. Then, too, some cows appear to have the power of extracting more coloring matter from plants than do other cows—for instance, Guernsey and Jersey cows. All this leads us to be careful in the judging of milk as to richness or percentage of fat, by its color. The eye is easily deceived in many things, and in none, more so, than in the milk question. Taste is probably a more reliable test than sight in this case.

Following or preceding the Pioscope were a whole host of tests, with which we need not concern ourselves, although they are very interesting to the student of milk-test evolution. We shall pass over these and come to the one brought out in 1890 by Dr. Babcock of the Wisconsin Experiment Station in the United States. The inventor of this test is still living, hence it is difficult to write of the matter as will some future historian. Dr. Babcock deserves all the honor and praise that has been heaped upon him. His scientific attainments and his modesty are well-known. He would be among the first to acknowledge his indebtedness to other workers who had paved the way for him. Our American friends are peculiarly sensitive on this point, and anyone who has the audacity to even hint that their hero is not "the whole show" in testing matters is sure to be called to account. At the risk of offending some of my American dairy friends, I venture to say that the inventor of the Babcock Test made large use of the work of other investigators, notably that of Short and Wiley, but he had the "luck," or scientific genius, to put one and one together to make one of the most noted advancements in practical dairy science.

Prof. Short and other chemists had evolved the principle of dissolving the constituents of milk other than fat, by means of chemicals. Dr. Wiley had made use of centrifugal force in his Washington Laboratory for separating various food substances of different specific gravities. Dr. Babcock put these two things together and evolved his well-known milk test. So far as we know, this point has not been previously made clear, and yet so far as we are able to look into the history of the matter, the foregoing are briefly the facts. (If we are wrong we shall be glad to be put right as a matter of correct history.)

THE GERBER TEST.

In the same year that the Babcock test came out in America, a Swiss chemist, Gerber, worked out independently what is known as the Gerber milk test in Europe, which test is used very largely by European dairymen. The principles of the Gerber test are identical with those of the Babcock, which is additional proof that these principles of chemical disassociation of the fat from the non-fatty milk compounds, and the massing of the fat, by means of centrifugal force, in properly graduated tubes, were well known to dairy chemists at that time. In saying this we are not desirous of detracting one iota from the work done by the American chemist, but justice and correct history would seem to demand that the facts be made public before they become too much clouded by the mists which gather around all great events in human evolution.

THE HART CASEIN TEST.

During the eighteen years, from 1890 to 1908, the dairy world could see nothing but "fat" in milk. Everybody judged milk by its fat content, nearly everybody "swore by the fat," and if here and there a man raised his voice in protest against the fat craze, he was at once anathematized and read out of the books of the dairy party. Such a person was almost sure to be ostracized, and had it been possible, there were those ready to crucify anyone who dared say one word against the new god who had risen in the dairy world. All those who did not "kow-tow" to this mikado, their heads were,

metaphorically speaking, cut from the shoulders, and carried to the Emperor in a mil-kan.

Strange to say that eighteen years after the Babcock test was evolved at the Wisconsin Station, another chemist at the same Station worked out a test for the casein in milk, but it was received coldly by the dairy public. Two gods in one generation are rather too much for even a fickle American public to seriously take into their household of worshippers. To-day the worship of the casein test is largely neglected, and the dairy public still bows the knee to fat. They seem to be somewhat like the American public-school boy who was reprimanded by his mother for saying, "Ma, my ball has bust!" His Mother said, "Johnny you shouldn't say 'bust,' but 'burst.'" "Well," replied he, "the other day I said the burst of George Washington and the teacher licked me, so now I'm going to stick to bust." The American and Canadian publics still stick to "fat."

WALKER CASEIN TEST.

Dr. Walker of the Eastern Dairy School, Kingston, affiliated with Queen's University, has recently evolved a very ingenious and simple method of determining the casein in the milk, but it also is coldly received. It was amusing, if it was not pathetic, to hear, at a recent dairy convention, one member of a Dairy School staff upholding the merits of casein determination in milk, and another member of the same staff following with an address proving by most elaborate experiments, that there was "nothing to it."

O. A. C. CASEIN-FAT TEST.

The Dairy Department of the Ontario Agricultural College, Guelph, has evolved a test by means of which both the casein and fat in a sample of milk may be determined at one operation. Not very much has been said about this up to the present, and it will probably require a new generation of dairymen to appreciate the value of casein or casein-fat tests. So far as the writer can see, this casein-fat test should come into use at cheese factories, milk condenseries, and for town and city trade milk; as, for all practical purposes, the casein and the fat of milk determine the value of milks for all these dairy branches. For cream trade, and for the manufacture of butter, milk-fat is the determining factor of value in milk and cream, hence the Babcock test or some similar test will be used in these cases.

In our next article we shall speak of the application of these tests to dairy practice.

O. A. C., Guelph. H. H. DEAN.

The Island Cheese Industry—and Eastern Ontario.

Editor "The Farmer's Advocate":

It's a question if this Island would not be as well or better off to-day, after 21 years of active operation, if the cheese industry had never been introduced. The dairy or rather the cheese business was established through the efforts of Prof. Robertson, in 1893, after an experimental factory had been in operation at New Perth, the year previous, which proved a success. The industry took like wildfire on the Island, for seven years later, in 1900, 59,901,155 lbs. of milk were drawn to the cheese factories. That year the price was very low, 60.05 cents per cwt., and somewhat discouraged the farmers, as might be expected from the price received for their milk, and this quantity has never been duplicated since. 1900 was the big year for milk, and low as the price was, it was also the big year for the total cash received from cheese, was \$569,106.75. Butter that year was the lowest in history, and in factories where butter was made the milk realized but 46.5 cents per cwt. But from 1900 butter began to rise in price, and has ever since been generally more profitable than cheese making, not counting the value of the skim milk. The next year, 1901, milk for cheese realized but 65.64 cents, while milk for butter realized 77.07 cents per cwt. Here is where our Island farmers made their big mistake in not dropping cheese in 1901, and adopting butter in its stead. There have been a few years since, however, when milk for cheese realized higher prices than milk for butter, but not so if the value of the skim milk were taken into account, which in late years has been worth from 25 to 40 cents per cwt, for hog feed, considering the price of purchased meal and the high price of hogs.

Only in 1911 did the patrons of the cheese factories realize as much as a dollar a cwt. for the milk drawn to the factories, for in 1910 the price was but 81.57, which was also the price if made into butter. For the last three years milk at the cheese factories has been around the dollar mark, the same as in Ontario, while milk made into butter has averaged about four cents less. The value of milk for either butter or cheese has been so nearly the same since 1900 that there is good ground for suspicion that butter has not received fair play at the factories. Take 1908, for example, milk for butter fetched 89.96; milk for cheese, 89.85. 1909, cheese, 84.83; butter, 84.49. 1910, cheese, 81.57; but-

ter, 81.32. Apparently these prices were made and manipulated by the buyers. While the prices of cheese may have been legitimate, it is plain that the prices of butter were not legitimate, but were based on the price of cheese, and seeing that Canada did not make enough butter for its home consumption, and that large quantities were regularly imported from New Zealand and some from Europe, and none at all exported, it is plain that a deeply-laid scheme was planned by the purchasing interests to keep down the price of butter,—to discourage the Canadian farmer from going out of the cheese business in order to go into butter-making. The same forces, which endeavored to keep the price of milk for butter-making on a level with milk for cheese-making are working in Eastern Ontario. In my county of Carleton, milk for cheese-making was scarcely as high for the last three years as it has been in Prince Edward Island, for the price in 1912 was 102.7 cents in P. E. I., while the factories in the County of Carleton did not realize quite this figure. The prices in Eastern Ontario were one or two cents lower than in P. E. I.

I think farmers of Prince Edward Island and Ontario have now been long enough furnishing one of the most nutritive food products in existence, cheese, for the Englishman at a price much below the cost of production. Canadians should let New Zealand take a spell at this work if they choose to work for nothing. Think of our farmers here furnishing milk in 1900 for 60 cents per cwt. to make cheese to feed the low-paid Englishman, but considering the prices of cattle feeds, and also the present prices of by-products of the dairy, as pork, \$1.00 per cwt., prices in 1914 is not really as good a price for milk as 60 cents was in 1900, 14 years ago.

If milk was worth 60 cents 14 years ago, it should be worth at least \$1.20 to-day, and there would probably only be the same profits for the milk producer, at this price, that there were in 1900.

Selling milk to a cheese factory at \$1.00 per cwt. is throwing it away. Assuming that only \$1.00 could be realized in making butter instead of cheese, have we not the residual skim milk, worth anywhere from 25 to 40 cents per cwt., say, 33 cents per cwt.? If we only get a dollar a cwt. at the creamery we have the residual 33 cents, which raises the value to \$1.33. First-class bacon cannot be raised successfully without skim milk, and first-class bacon hogs have been selling in Ottawa all this spring for \$14.00 per cwt.

P. E. I.

J. A. MACDONALD.

National Dairy Show Sets Dates.

The Executive of the National Dairy Show, held annually in Chicago have decided upon October 22nd to October 31st, as the period in which they will hold their show in 1914. It is the purpose to make this show the annual round-up of the herds that have shown in the various circuits of the country and have judges of national and international reputation pass upon them and send the cattle to their home farms for the season in such accredited form as will establish forever a national roll of merit for the winners.

In previous years Canadian breeders have exhibited at this show with considerable success, and it is pleasing indeed to Canadian visitors to see such fine specimens of the dairy breeds in competition with their American neighbors. It is not too early now for Canadians to begin to fit their herds for exhibition at this annual event.

POULTRY.

Where Forest, Field and Stream are Utilized for Better Poultry.

Everyone has read the story of the children in the wood, but few of us have heard any tales about chickens in the wood, and yet there is such a story to be told and it is based on fact. It is no fairy tale, and more than that the chickens are not wild chickens but are thoroughly domesticated, and while the roosters crow just as do the roosters in the farmyard the hens are laying real eggs in real old-fashioned, every-day straw nests and proclaiming their industrious proclivities just as do the farmyard biddies around our own back doors. If you want to see a woods swarming with laying hens and proud strutting roosters go to Norfolk county, find the little village of St. Williams and the rest is easy, for you can almost hear the crowing and the cackling which emanates from the woods one-half mile straight eastward as you stand at the four corners of the village and wonder which pathway leads to the Norfolk Specialty Farms where poultry is the main specialty, and where seventy-four acres of soil, some once wet and boggy, some formerly shifting sand and some forest almost primeval is now literally swarming with poultry, chiefly hens but with some ducks and turkeys. They do things on a large scale in

Norfolk county, and the poultry business is not allowed to lag behind. This farm is admirably situated for poultry farming. The wet places have been underdrained, and where a few years ago water stood in June there now stands one of the most promising crops of oats it has been our privilege to see this year. The lighter land has been planted to fruit—apples, peaches and black currants, and all around even in the woods are placed permanent hen-houses, colony houses and coops. It is a chicken ranch stocked chiefly with bred-to-lay Barred Plymouth Rocks, single-combed White Leghorns and single-combed Rhode Island Reds. The hen that lays is the hen that pays, and these hens do both. Twenty-five hundred layers roam about seeking insects which they may devour, and incidentally taking a spear of grass here and there. Besides what they pick they are now being fed corn, wheat and rolled oats in a mixture from hoppers. Diagonally across the farm runs a small stream from which most of the poultry may obtain water, and in which the large flock of Pekin ducks spend a great part of the time. The location is suitable.

Hens make their homes in some forty-three colony houses which are scattered through the woods, around the buildings, and many of which will soon be set on either side of the small stream, and the young chickens will have the run of the corn which is planted adjacent to the creek. Chickens do well in corn. It provides shade and protects from hawks and crows. In the large woods at the west side of the farm the majority of the laying hens make their abode. At first Leghorns were placed in the woods but they soon became wild, and consequently were removed to pens nearer the house and barn, and the houses in the woods were filled with bred-to-lay Barred Rocks of a quiet disposition. These hens were admirably suited to their new conditions, and made themselves right at home. During the hot summer weather, from which these heavy hens often suffer and become lazy, the hens of the wood may be seen busily turning over the fallen leaves and leaf mould and helping themselves to all the forms of life found thereunder. The woods is quite thick and is

forth live chicks. In the 1,500-egg machine no hatch has been put through which did not bring forth at least 1,000 chicks. Several smaller machines are run with equally good if not better success. And withal there has been very little loss from white diarrhoea or other chicken ailments. Free range and proper feeding must have done much to keep the birds healthy. The whole thing is poultry under natural conditions.

Besides the hens a large flock of Pekin ducks are kept, and eggs from these have been in such demand that few have been retained for hatching so far this season.

A flock of some twenty-five bronze turkey hens are also kept with the necessary male birds. Eggs from these have been sold as fast as produced. It is a big plant, but is not growing fast enough to supply the demand made upon it. Over 5,000 chicks sold, over 60,000 eggs shipped for hatching, and the process being pushed day after day makes the superintendent of The Norfolk Specialty Farms, E. F. Montgomery, a very busy man, but he is busy at a business he likes and understands, and success must follow. Everyone is a worker on this place and the busy business of producing eggs goes merrily on day after day, while the oats grow rapidly in the front field, and the corn fairly jumps ahead on the back field with a young orchard making almost a phenomenal growth just back of the barns, and in the midst of all this some ten colonies of bees are ready to swarm into more colonies to fertilize the fruit blossoms when the trees reach bearing age. Highly specialized agriculture is an interesting and profitable business, and poultry, as the leading specialty, is one which requires skill and steady application.

HORTICULTURE.

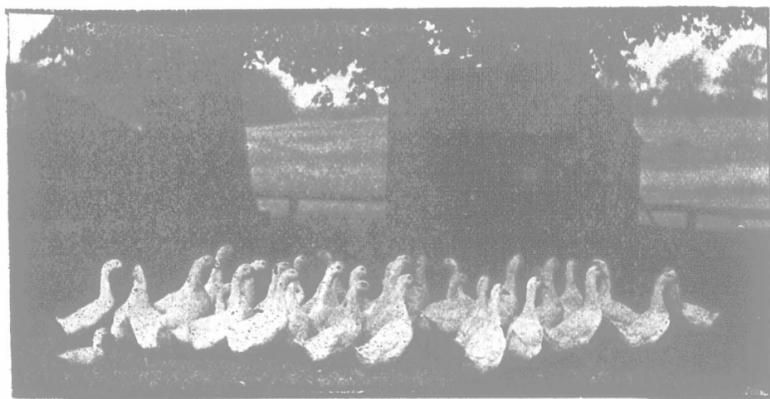
Gooseberries One of the Money-makers.

While the production of some kinds of fruit, especially those requiring least labor is seemingly on a par with the demand there are other lines that are lagging behind and do not meet the request of the immediate consumers or that of the jam and canning factories. These are the products that return fair profits, and since they equalize the labor over the bearing season when fruits are coming on, there appears little reason why berries now much sought after should not occupy a part of the plantation. Gooseberries are coming to the front as money-makers, and a

few growers report profits in the vicinity of \$110 per acre after deducting the initial costs, taxes, rent of land, cost of growing and marketing. This is a fair remuneration considering all the costs and overhead charges have been paid. Gooseberries, of course, are not outstanding as profit-makers, but they are one of a group that are now being used more than in the past.

Gooseberries are not so particular about the character of the soil upon which they grow as are many other fruits. One thing, however, they do wish and that is a cool soil which supplies a large amount of moisture. They are shallow-rooted growers and usually a sandy-loam soil with a heavy subsoil about one foot from the surface will give best results. They require an abundance of moisture, but the soil in which they grow must not contain superfluous water. Stagnant water on soggy land will preclude the growth of most any kind of fruit. Northern slopes are often desirable and although most crops require an abundance of sunlight, the gooseberries must be protected from the direct rays else scalding and mildew will be prevalent and injurious. This can be prevented to a certain extent through systematic pruning, but large growers advocate the planting of peaches or other tree fruits in conjunction with them and this practice, besides protecting the gooseberries from injuries common to them, adds profits to the acres.

Gooseberries start to grow quite early in the spring and if the setting be done in the fall considerable growth will ensue in the early spring and time also may be saved. The row system is commonly used in commercial plantations and the plants are set four feet apart in rows six feet apart. This requires about 1,800 plants per



Pekin Ducks.

Breeding flock on the Norfolk Specialty Farms.

cool and shady. In it are placed colony houses some six feet by eight feet, six feet high in front and four feet at the back, others are eight feet by ten feet. Besides these we noticed several permanent pens some twenty feet square, four feet high front and back and seven feet high in the center, with the entire front wire screen and some the same style only twice as long. These hold 100 and 200 hens respectively. It is almost surprising how these hens take to life in the woods. Theirs seems to be one continual picnic, but their summer home is also their winter quarters, and while happy and healthy they are busy turning out the eggs which make them as good as their name "bred-to-lay." During last winter the hens on the farm averaged from fall to spring over twenty per cent. egg production daily, or, in other words, eggs were got from twenty per cent. of the 2,500 hens every day during this time. This is a record not often equalled when it is considered that so many hens are being kept. The woods seems to be a good place for eggs.

A good trade is done in day-old chicks, upwards of 5,000 having been shipped previous to our call last week, and of that number only two reported did not reach their destination alive and ready to go forward and make money for their new owners. The chicks seem lively and alert, and there is such a demand, not only for the chicks, but for eggs for hatching that it is altogether impossible to keep it satisfied. Eggs for hatching are shipped in thousands.

Speaking of mating and fertility there is a good point for breeders to be learned from this farm. With free range twenty-five females are mated with each male and fertility runs from seventy to ninety-four per cent., while over two-thirds of the eggs bring

acre. The common practice in pruning in this and other countries is to allow the gooseberries to assume the bush form, but little pruning need be done during the first two years, with the exception of cutting the growth back to strengthen the various fruit spurs all along the branches. The fruit is produced on year-old wood or on spurs produced during the previous year and bearing this in mind the pruner need only take out that wood which is three or four years old, allowing it to be replaced with younger shoots. If it has grown berries for two or three years its vigor has been dissipated and it is advisable to replace it. The practice of thinning out the head of the bush in order to admit sunlight and force larger berries is wrong for it usually results in scalded fruit. There must be foliage enough to protect the small berries from the sun else disastrous results will follow. Autumn and early winter is the best season for pruning and care should be taken then to cut out all the weak young shoots and cut off the branches near the ground that a good circulation may exist and the berries be kept clean.

The two strains of berries commonly grown are known as American and English varieties. The jam factories are taking large quantities of the English varieties from which they produce their pulp, but these kinds are quite subject to mildew, and unless extreme care be taken considerable loss results. The American varieties do not grow so large, neither are they quite so susceptible to mildew, but many growers now prefer to put the extra care and expense on the English varieties in order to procure the large yields. In the American varieties the Pearl, Downing, Red Jacket and Swift's Improved are the ones commonly grown, but most favor is lavished on the Pearl and Downing. The Red Jacket is gaining prominence very quickly. In the English varieties Whitesmith, Keepsake and Industry have been the yielders, but Whitesmith and Industry are the ones making up the larger part of all gooseberry plantations. They are good yielders and of their kind the freest from attacks of the mildew.

FARM BULLETIN.

Agricultural Legislation in New Brunswick.

Agriculture received considerable attention from the New Brunswick Legislature during its 1914 session and the Agricultural Department is reaching out to greater activities.

While the appropriations for agriculture from the Provincial Treasury are not very much larger than in previous years there are grants for the Farm Settlement Board, for Immigration and for Exhibitions which have such a direct bearing on agriculture, thus they may be classed almost as agricultural expenditure and the Dominion subsidy for agricultural education comes in to relieve the Provincial appropriation of that phase of the work and thus enables the extension of work for stock improvement, seed competitions, agricultural societies, poultry raising, etc.

For the present year the Dominion subsidy covers most of the salaries for the Departmental staff engaged in educational work. It includes the Provincial Horticulturist and three assistants as well as various temporary assistants used in field work. All the Farmers' Institute work, the Women's Institute work, the Director of Agricultural Schools, the Provincial Animal Husbandman, the Poultry Superintendent, the Provincial Entomologist, the teachers on the farming special trains and other help of this nature are paid from this fund.

The appropriation for the Provincial Treasury is made up of the following items.

Grants to Agricultural Societies,	\$16,500
Superintendent of Agcl. Societies,	1,000
Salary of Minister of Agriculture,	2,100
Salary of Secretary of Agriculture,	1,800
Grants to Butter and Cheese Factories,	1,000
Encouragement of Dairying,	3,500
Dairy School,	4,500
Maritime Stock Breeders' Association,	800
Encouragement of Horticulture,	2,000
Encouragement of Stock-raising,	4,000
Bonus to Mussel Mud dredges,	1,000
Farm Settlement,	1,500
Standing Crop Competitions	1,200
Exhibitions,	12,000
Brown Tail Moth Extermination,	3,000

This with other salaries and expenses brings the total up to \$63,200.

An Act was passed to authorize the Provincial

Minister of Agriculture to enter into agreements with the Minister of Agriculture of Canada as to the expenditure of the Dominion Subsidy for agriculture.

An Act dealing with tuberculosis in cattle was also passed. This law makes it a criminal offence for anyone to knowingly sell animals affected with tuberculosis, except under a special permit from the Department of Agriculture. It also makes the distinction or obliteration of marks placed on tuberculous cattle by an inspector, a crime and provides penalties for the infraction of the law.

An Act amending the Act of 1912 to encourage the settlement of farm lands was also passed. This Act places the Farm Settlement Board under the direct control of the Minister of Agriculture, authorizes the Board to borrow \$50,000 during the current year for the purchase and resale of farms upon easy terms and makes certain conditions as to the terms with which purchasers of farms must comply.

The encouragement of co-operation among the Agricultural Societies was provided for in an Act which gives the society the power to purchase fertilizer ingredients and to arrange for the importation, warehousing, distributing, etc. to any agricultural society, and when authorized by Order-in-Council of the Lieutenant-Governor-in-Council to undertake and carry on any other work or business which may be of advantage to the farming industry to obtain credit from any incorporated bank within the Province and to pledge and hypothecate such of its property as may be necessary or an incident to financing said business. A statement of business must be filed each year with the Department of Agriculture on or before the first day of January. Annual meetings of the Association must be held in November and the Association has the power to pass such by-laws as it deems necessary and advisable for the management and control provided, however, that no such by-laws shall become effective until approved by the Minister of Agriculture, in writing, except such as may be necessary to the effective organization of the society. The President and Secretary of any Agricultural Society or substitutes duly appointed which shall pay the annual fee required by the by-laws of the Association shall together with such members as may be elected by the Association from time to time be members of the Association.

The Ormstown Show.

The fifth annual exhibition, held under the auspices of the Live-Stock Breeders' Association, of the District of Beauharnois at Ormstown, Quebec, on June 3, 4 and 5, was by far the most successful show ever held in this great livestock breeding centre, and one of the most successful stock shows ever held in any part of the Dominion, and proved, if any further proof was needed, that the big drawing card at any exhibition is surely live stock. Owing to an almost continuous rain the attendance was not up to that of former shows; nevertheless the total attendance went well up in the thousands, and those present were well repaid in the splendid program of events, which, besides the breeding classes of horses, cattle, sheep and swine, included many single and double carriage horse events, single and double high steppers, tandems, lady drivers, pony contests and hurdle jumping. In the entry list were 324 horses, 350 Ayrshires, 200 Holsteins, and 25 Jerseys. The swine exhibit was most creditable, and included Yorkshires, Berkshires, Tamworths, Chester Whites and Duroc Jerseys. The sheep exhibit was represented by Leicesters, Oxford Downs, Shropshires, Hampshires, Southdowns and Dorsets. A special prize for best pen of any breed went to a pen of Leicesters exhibited by John Purcell, of Huntingdon.

Ayrshires made an exhibit unequalled at any previous show in the history of this country, an exhibit that only the great Counties of Chateauguay and Huntingdon could produce. Every class had a big entry, and keen competition that taxed the skill of the judge. D. Drummond, of the R. O. P. Branch of the Department of Agriculture, Ottawa. In the aged bulls R. R. Ness won on the many-times champion Hobsland Masterpiece Imp. Second went to G. H. Montgomery, of Phillipsburg, Que., on Auchenbrain Seafoam Imp., and third went to J. J. Logan, of Howick, Que., on Netherhall Sir Douglas Imp. Three-year-olds showed rare quality. First went to J. H. Black, of Lachute, Que., on Hobsland Burnside Imp. Second to R. S. Pringle, of Huntingdon, on Masterpiece Ensign. McMillan & Leggitt, of Huntingdon, won the two-year-old class on Springburn Ensign. Senior yearling went to

Hector Gordon, of Howick, on Netherton Lochinvar; second, to W. F. Kay, M. P., Phillipsburg, on Beecham Surprise; third, to R. R. Ness, on Humeshaugh of Burnside. Junior yearlings went, first, to J. H. Black; second, P. D. McArthur, of North Georgetown, Que.; third, J. J. Logan. Aged cows in milk had an entry of 15 of the world's greatest, the highest honor among which went to the big, faultless, Lessnessock Pansy 2nd Imp., the entry of Hector Gordon; second, to Barcheskie Lady Margaret Imp., the entry of G. H. Montgomery; third, to Auchenbrain Whinflower Imp., the entry of J. J. Logan. These awards could have been duplicated two or three times, and still left some rare good ones of three-year-olds in milk. First, went to W. F. Kay; second, to Sir Montague Allin, of Montreal; third, to J. P. Cavers, of Ormstown. In two-year-olds, D. Ness, of Howick, captured first and third; J. P. Cavers, second, and W. P. Montgomery, fourth. Special for four best cows in milk went, first, to R. R. Ness; second, to Hector Gordon; third, to J. P. Cavers. Aged cows dry, McMillan & Leggitt, first, on Auchenbrain Bunty Imp.; W. F. Kay, second on Barcheskie Daylight Imp.; R. R. Ness, third on last year's champion Broomhill Flora Imp. Dry heifer two years: First, went to Sir Montague Allin; second, to J. P. Cavers; third, to Hector Gordon. Senior yearling: Hector Gordon, first; J. P. Cavers, second; D. Ness, third. Four, the get of one sire: First went to, J. P. Cavers, on the get of Burnside King Crown; second, to J. J. Logan, on the get of Netherhall Sir Douglas; third, to R. R. Ness, on the get of Masterpiece. In the graded herds there were eight lots: first, went to Hector Gordon; second, to G. H. Montgomery; third, to R. R. Ness, and fourth, to McMillan & Leggitt. Championship for best bull any age went to R. R. Ness, on Masterpiece. Senior female championship went to McMillan & Leggitt, on Auchenbrain Hattie Imp. Junior female championship went to D. Ness.

Holsteins.—Individual excellence was most marked throughout the entire exhibit of Holsteins. The awards were placed by Prof. Barton, of Macdonald College. The large entry in almost every class with the high standard of quality maintained throughout made his task anything but an easy one. In aged bulls first went to Neil Sangster, of Ormstown. Two-year-olds: First, went to J. J. Alexander, of Howick, and second, to W. McRae, of Howick. Yearling: First, went to P. J. Sally, of Lachine Rapids; second and third, to A. Younie, of Tullochgorum. Aged cows in milk: First, second and fourth, went to Neil Sangster; third, to A. Younie. Three-year-olds: First, P. J. Sally; second, W. McRae; third, N. Sangster. Two-year-olds: First, N. Sangster; second, J. J. Alexander. Young herd: First, P. J. Sally; second, N. Sangster; third, W. McRae. Four cows in milk: First, N. Sangster; second, W. McRae. Both the senior and junior female championships went to P. J. Sally.

Horses.—In the large horse entry Clydesdales made considerable over half the entire number. Aged stallions, imported, had an entry of four: first going to R. Ness & Sons, of Howick, on Sir Spencer; second, to John McGerrigle, of Ormstown, on Baron Archie; third and fourth, to Dr. D. McEachern, of Ormstown, on Fyvie Time and Favorite's Own. Three-year-olds had but one entry, Bondies Pride from the Howick stables of R. Ness & Son. Brood mares with foal by side: Dr. D. McEachern, first and second. Three-year-old fillies: First, R. Ness & Son; second, Dr. D. McEachern; third and fourth, N. Wagg, of Claremont, Ont. Two-year-old fillies went to the entries of Dr. D. McEachern. Championship for best stallion, imported, went to R. Ness & Son, on Sir Spencer. Championship for best Canadian-bred Clydesdale stallion went to G. H. Montgomery, of Phillipsburg, Que., on Sir Spencer. Championship for best Canadian-bred Clydesdale mare went to R. Todd, of Geneva, Que., on Aberdeen's Grace by Imp. Aberdeen. Championship for best Hackney stallion went to J. C. Steele, of Howick, on Terrington Narcissus, Imp.

Heavy-draft teams, imported: First and fourth, R. Ness & Son; second, Dr. D. McEachern; third, J. C. Steele. Heavy-draft team Canadian-bred: First, W. W. Pringle, Huntingdon; second and third, D. J. Gregg, Allans' Corners.

President G. C. Creelman, of the Ontario Agricultural College, is to be one of a party of fifteen from Canada and the United States, to visit Australia, New Zealand, Japan, China and the Philippine Islands during the coming season. Dr. Creelman goes upon invitation of the British Association for the Advancement of Science to meet in Australia, early in September.

Toronto University has conferred the honorary degree of D. Sc., upon Frank J. Shutt, Chemist and Assistant Director of the Dominion Experimental Farms, and the honorary degree of L.L.D. upon President Bowles, Chancellor of Victoria University.

On Being "Cordial."

By Peter McArthur.

There are jokes everywhere if we could only find them. This afternoon I found one in the most unexpected place—the financial page of a daily paper. It was raining and I was looking through the pages to pass the time when my eye fell on the Annual Report of the "Brazilian Traction, Light and Power Company, Limited." Knowing that this is one of Sir William MacKenzie's far-flung enterprises I decided to read the report so as to see how the good man is getting along with some of his other altruistic schemes. It was mighty dry reading, but before I got through I was rewarded. Just at the end I found this delightful paragraph.

"The Board also have pleasure in stating that the relations of the subsidiary Companies with the Government officials, both Federal, State and Municipal are of the most cordial character."

Can you beat that? There is a hint to the shy Canadian investor that Sir William stands well with the Brazilian Government just as he does with our own. Standing in with Governments seems to be a very important feature of his method of financing. The C.N.R. bond guarantee shows that his relations with the Government at Ottawa "are of the most cordial character." I like that word "cordial." It seems to be just the word we need to describe his methods. It is derived from the Latin word "Cor"—the heart. Sir William puts heart into his promotions. He makes the right people love him and everything else is easy. On looking it up in the dictionary I find several illuminating quotations that show the use of the word. How would this from Matthew Arnold do as a description of our greatest financier?

"That comely face, that cluster'd brow,
That cordial hand, that bearing free,
I see them yet."

That seems about perfect. Sir William certainly has a "cordial hand." In fact I have heard people who are not purists in the use of English say that he is a past master of "The Glad Hand"—that great asset of the successful lobbyist. I wonder if that was what Matthew Arnold had in mind? Farther on in the dictionary I find another quotation that seems to cast more light on the phrase "Cordial hand." Old Chaucer says:

"For gold in phisic is a cordial."

That seems very significant. It is well-known that there is nothing like gold for establishing "cordial relations."

Now that the C.N.R. proposals have reached the Senate, I am wondering if that august body

will also be "cordial." Having a Liberal majority, and judging by the attitude of the Opposition, one might expect it to be hostile but as a philosopher once remarked "Dey ain't no knowin'." When dealing with a man who advertises "cordial relations" with governments one hardly knows what to expect. Still I should like to whisper to our "Elder Statesmen" that there has been far less talk about abolishing the Senate since they referred back the Naval Appropriations for the consideration of the people. Of course there was considerable political wrath at the time, but the Empire still stands and the German menace does not look nearly so disturbing as it did. Perhaps if they referred back the C.N.R. proposals Canada would weather the storm. Things might not go to smash and some "cordial" gentlemen might take some of their Brazilian, Mexican and Canadian profits to pull through the C.N.R. Anyway, I hope the Senate will insist on a full verification of the accepted story about the building of the Canadian Northern. It seems too good to be true, but if it is entirely true the fact should be made clear to everyone. If MacKenzie and Mann have put through the railroad without taking a cent of profit, and they say they did, the story should be written in words of one syllable so that our children may learn it by heart and put into practice the lofty ideals of public service that inspire these remarkable men. I should like to try my hand at such a story myself. I think I could embellish it with Mother Goose rhymes and make it so affecting that children would cry for it. I would show that they did the great work while living on "curds and whey" and that when it was done they sang like Little Jack Horner, "O what a good boy am I." And I would show that at all times they had "cordial relations" with both political parties. And yet I couldn't do that, for "cordial" is not a word of one syllable. Still it might be possible to find substitutes. I wonder if that short and ugly word "grat" wouldn't cover the situation?

* * * *

Some of you may remember that when first discussing the C.N.R. proposals I spoke of the wisdom of the ancient Greeks in dealing with contentious questions of this kind. They always took care that the people were occupied with something else when they tried to put through a big scheme. Whether they did it intentionally or not our government has done the same thing. The debate of the C.N.R. "synchronized" with the spring rush of work and I find that very few people have been following it. I followed it because my business makes it necessary, and I even went to the trouble to get the official report of the debates so that I might get the speeches

without having them garbled by the party papers. Naturally when I went to the village the other day—for the first time in some weeks, I thought that people would be interested in what was going on. Meeting a prominent Liberal, I asked him his opinion of the bond guarantee, but he didn't know anything about it. Instead he talked to me for half an hour about a new kind of commercial fertilizer he is trying out this spring. Shortly afterwards I met a leading Conservative and tried to interview him.

"MacKenzie and Mann" he said in a dazed sort of way. "Aren't they the people that the So-and-So boys are working for? It seems to me that I did see something in the papers about some grant they are getting, but I was so busy with the seeding that I didn't read it." And then he began to tell me about the trouble he was having with men who were putting in a tile drain for him. So I had ample proof that the Greek method is the right one when a man is establishing "cordial relations" with a government. If the people were not so busy perhaps they would object to their representatives being so wonderfully "cordial."

Excursions to the Agricultural College.

The following is a list of dates of excursions to the Ontario Agricultural College, Guelph, for June, 1914.

Thurs., June 11, E. & W. Peterboro and E. Durham, E. and W. Lambton. Frid., June 12, no excursions. Sat., June 13, Lincoln, N. & W. Bruce & N. Grey, W. York. Mon., June 15, Halton, (C.P.R.). Tue, June 16, E. & W. Elgin, N. Wentworth, N. York, E. Simcoe, Halton (G.T.R.). Wed., June 17, S. Wentworth, E. Middlesex, C. Simcoe. Thurs., June 18, E. York, S. & W. Bruce & E. Huron. Frid., June 19, C. and S. Bruce, W. Simcoe, S. Simcoe. Sat., June 20, E. Perth, Dufferin, Welland, W. Huron (C.P.R.). Mon., June 22, S. Perth, S. Grey, N. & S. Oxford. Tue., June 23, N. & S. Waterloo, Peel.

More Agricultural Offices Opened.

The District Representative system is being further extended this year through the appointment of four men, graduates of the O.A.C., to four new counties. R. L. Vining, B.S.A., goes to Hamilton in Wentworth Co.; H. R. Hare, will be stationed in Halton Co.; J. E. Lattimer will open an office in Port Arthur, and P. Stewart is sent to Kenora. Other appointments to fill vacancies are J. S. Knapp to Galt, Waterloo Co.; W. J. Hunter to Chatham, Kent Co., and W. G. Nixon to Liskeard, Temiskaming.

Toronto, Montreal, Buffalo, and Other Leading Markets.

Toronto.

Receipts at the Union Stock Yards, West Toronto, on Monday, June 8th, numbered 97 cars, 1,814 cattle, 830 hogs, 277 sheep and lambs, and 17 calves. Fat cattle 10c. to 15c. higher. Sheep and lambs firm, calves higher, hogs lower. Choice steers, \$8.25 to \$8.50; choice heifers, \$8 to \$8.30; medium steers, \$7.75 to \$8; cows, \$3.50 to \$7.50; bulls, \$6.50 to \$7.75; milkers, \$65 to \$100 each; calves \$7 to \$10.50; sheep, \$4 to \$6.50; lambs, \$5 to \$8; hogs, selects fed and watered, \$8, \$7.65 f. o. b. cars, and \$8.25 weighed off cars.

REVIEW OF LAST WEEK'S MARKETS

The total receipts of live stock at the City and Union Stock-yards for the past week were:

	City.	Union.	Total.
Cars	15	353	368
Cattle	186	4,096	4,282
Hogs	185	10,290	10,475
Sheep	378	1,407	1,785
Calves	130	1,565	1,695
Horses	—	90	90

The total receipts of live stock at the two markets for the corresponding week of 1913 were:

	City.	Union.	Total.
Cars	16	352	368
Cattle	189	4,973	5,162
Hogs	125	7,036	7,161
Sheep	378	1,407	1,785
Calves	180	951	1,131
Horses	—	76	76

The combined receipts of live stock at the two markets, for the past week,

show the same number of car loads, and an increase of 3,254 hogs, 614 calves, and 14 horses; but, a decrease of 877 cattle, and 500 sheep compared with the corresponding week of 1913.

There was a fair supply of cattle for the past week, many of which were of good to choice quality, in fact, some were too good, that is too fat and too heavy for the local trade. Choice light cattle 850 to 1,050 lbs. were readily bought at firm prices; but, the heavy steers and heifers, 1,250 to 1,350 lbs., were slow sale and 10c. to 15c. per cwt. lower. Many of these choice, heavy cattle, had been bought by the drovers several weeks ago at high prices in anticipation of an advance in value during the month of June, these higher values have not materialized thus far. This caused a dull market for this class, as, buyers refused to pay, in some cases, even the price paid the farmer, as there was little or no demand from the local trade. Some of these cattle were held on the market from Monday to the end of the week, and then sold at lower prices than were offered at the beginning of the week. Receipts of stockers and feeders were light, and prices ruled strong for choice quality. The milkers and springers sold at about the same values for the best grades. Common and medium cows were plentiful, but the top grades were scarce. Veal calves were more plentiful, that is of the common and medium classes, and values for these took a drop of from 50c. to 75c. per cwt., while the good to choice were firm and unchanged. Sheep and lambs sold at steady to firm prices, excepting the heavy, fat ewes and rams, prices for which were decidedly lower. Hogs coming forward in larger numbers, caused prices to decline

materially, reaching a lower level than for several months.

Butchers'.—Choice loads of butchers' steers of handy weights sold at \$8.25 to \$8.55, but only one load at latter price; good to choice steers and heifers, \$8 to \$8.35; medium to good, \$7.80 to \$8.10; common, \$7.30 to \$7.65; choice cows, \$7 to \$7.50; good cows, \$6.50 to \$7; medium cows, \$5.75 to \$6; canners and cutters, \$3.75 to \$4.75; bulls, \$6.50 to \$7.75.

Stockers and Feeders.—Choice feeding steers, 700 to 800 lbs., \$7.50 to \$7.85; medium steers, \$7.25 to \$7.40; stockers, \$6.75 to \$7.20; short-keep feeders sold as high as \$8 to \$8.10 for a few lots.

Milkers and Springers.—No cows were reported at more than about \$100, as there were none of the extra quality, such as bring these high values, on sale. Prices ranged from \$60 to \$95, the bulk selling from \$70 to \$85.

Veal Calves.—Choice calves sold at \$10 to \$10.50; good, at \$9 to \$9.50; medium, \$8 to \$8.50; common, \$7 to \$7.50, and rough, common, eastern calves, at \$6.25 to \$7.25.

Sheep and Lambs.—Receipts were moderate. Heavy fat ewes, \$4 to \$5.50; light ewes, \$6.50 to \$7.25; rams, \$4 to \$6; clipped sheep, selling at 50c. to 75c. per cwt. less. Spring lambs, sold at \$5 to \$9 each.

Hogs.—Receipts being large prices have declined. Selects fed and watered, \$8 to \$8.10; and \$7.75 f. o. b. cars at country points, and \$8.35 weighed off cars. Should there be liberal receipts this coming week the prospects are for still lower values.

TORONTO HORSE MARKET.

Trade in horses at the Union Horse Exchange was a little more active dur-

ing the past week, about 100 horses having changed hands at steady prices. As in our last report the bulk of the sales were made to buyers from Ottawa, Montreal and Quebec, with a few going to the local city trade. Prices were reported as follows: Drafters, \$200 to \$250; general-purpose horses, \$175 to \$225; expressers, \$150 to \$200; drivers, \$125 to \$200; serviceably sound, \$35 to \$70.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, \$1.03 to \$1.04, outside; Manitoba, No. 1 northern, \$1.00½ track, bay points; No. 2 northern, 98½c.; more at Goderich.

Oats.—Ontario, No. 2 white, 39c. to 40c., outside; 41½c. to 42½c., track, Toronto; Manitoba oats, No. 2, 42½c.; No. 3, 41c., lake ports.

Rye.—Outside, 63c. to 64c.
Peas.—No. 2, \$1 to \$1.10, outside.
Corn.—American, No. 3 yellow, 76½c., all rail, track, Port Colborne.

Barley.—For malting 55c. to 56c., outside.
Buckwheat.—No. 2, 83c. to 85c., outside.

Flour.—Ontario, 90-per-cent. winter-wheat patents, \$3.80 to \$3.85, bulk, seaboard. Manitoba flour—Prices at Toronto are: First Patents, \$5.60; second patents, \$5.10; in cotton, 10c. more; strong bakers', \$4.90, in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, No. 1, \$14.50 to \$15.50; No. 2, \$12.50 to \$13.50 per ton.

Straw.—Baled, car lots, track, Toronto, \$8.50 to \$9.

Bran.—Manitoba, \$25, in bags, track, Toronto; shorts, \$26; Ontario bran, \$24, in bags; shorts, \$25; middlings, \$28.

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Capital Authorized - \$ 25,000,000
 Capital Paid - 11,500,000
 Reserve Funds - 13,000,000
 Total Assets - 180,000,000

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Savings Department at All Branches

HIDES AND SKINS.

City hides, No. 1 inspected steers and cows, 14c.; No. 2, 13c.; city butcher hides, flat 14c.; country hides, cured, 15c. to 16½c.; green, 12c. to 12½c.; lamb skins and pelts, 35c. to 50c.; calf skins, 16c.; horse hair, per lb., 37c. to 39c.; horse hides, No. 1, \$2.50 to \$4.50; tallow, No. 1, per lb., 5½c. to 7c. Wool, unwashed, coarse, 17½c.; wool, unwashed, fine, 19c.

COUNTRY PRODUCE.

Butter.—Receipts have been liberal, causing prices to be easy. Creamery pound rolls, 24c. to 26c.; creamery solids, 24c.; separator dairy, 23c. to 24c.; store lots, 20c.

Eggs.—The market for new-laid eggs was easy, at 23c. to 24c., by the case. Honey.—Extracted, 9c. per lb.; combs, \$2.50 to \$3 per dozen sections.

Beans.—Imported, hand-picked, \$2.40; Canadians, hand-picked, \$2.40; primes, \$2.25 per bushel.

Potatoes.—Car lots of Ontarios, per bag, track, Toronto, 90c. New Brunswick Delawares, \$1.00 to \$1.10 per bag, track, Toronto.

Poultry.—Cold-storage is now being used, and prices are quoted as follows: Turkeys, 21c. to 25c. per lb.; geese, per lb., 14c. to 15c.; ducks, per lb., 16c. to 20c.; chickens, per lb., 17c. to 23c.; hens, per lb., 14c. to 17c. Spring chickens are coming forward in small lots, and are selling at 50c. to 55c. per lb. dressed.

FRUITS AND VEGETABLES.

Receipts of foreign fruits and vegetables are large, as many as 150 to 200 car loads arriving weekly on the Toronto market. A few kinds of Canadian vegetables are being sold at reasonable prices.

Apples.—American, \$2.50 per box; bananas, \$2 to \$2.75, per bunch; cherries, black and red, from California, \$2.50 to \$3 per box; grape fruit, 54's, \$4.25 per box; 68's, \$4.75 per box; 54's, \$4.25 per box; 46's, \$4 per box, all Florida grown.

Lemons.—\$3.50 to \$4 per box; oranges, \$3.75 per box; pineapples, 24's and 30's, \$3 per box; rhubarb, 25c. per dozen; strawberries, 14c. to 17c. per box; asparagus, \$1 to \$1.25 per basket; beets, \$1.40 per hamper; beans, wax, \$2.50 per hamper; beans, green, \$2.25 per hamper; cabbage, \$2.50 per crate; carrots, \$1.50 per crate; cucumbers, \$2.25 per basket, (Florida); lettuce, 20c. to 50c. per dozen; parsley, 75c. per basket; potatoes, new, \$3 per 90-lb. bag; spinach, 60c. per bushel; tomatoes, \$3.50 per case; watercress, 50c. to 75c. per basket.

Montreal.

The weather has been very cool recently, and this, no doubt, has reflected to some extent upon the local cattle market. Prices were fully up to those of the previous week, and the tone of the market was generally strong. The supply of choice stock was limited, and sales of choice steers were made at 8½c. to 8¾c. per lb. Fine quality was 8c. to 8½c.; good, 7½c. to 8c.; medium, 6½c. to 7½c.; and common ranged down to 5½c. per lb. There was a fair demand for butchers' cows, and for bulls at prices ranging from 5½c. up to 8c. per lb., according to quality. Demand for old sheep was not specially active, and

prices held about firm at 5½c. to 7c. per lb., while yearling lambs were in very fair demand at 7½c. to 8c. Spring lambs sold readily at \$4 to \$8 each, according to size and quality. The supply of calves was liberal, and prices ranged from \$3 to \$5 for ordinary, and up to \$10 for the best. The tone of the market for hogs was a shade easier, and supplies were rather larger than expected. Ontario stock sold at 9c. per lb., weighed off cars. Some predict a slightly lower market for hogs.

Horses.—The market for horses was unchanged. Horses weighing from 1,500 to 1,700 lbs. sold at \$275 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., \$225 to \$275 each; broken down, old animals, \$75 to \$127; and choicest saddle and carriage animals, \$350 to \$400 each.

Dressed Hogs.—The market for dressed hogs was about steady, but demand was not particularly brisk. Abattoir-dressed, fresh-killed hogs, 12½c. to 13c. per lb.

Potatoes.—Supplies were rather limited, but some imported new stock was being used. Green mountains, in car lots were quoted at \$1.05 to \$1.10, in bags of 90 lbs., while Quebec white stock was 85c. to 90c., and reds about 5c. less. In a smaller way prices range from 15c. to 20c. above these figures.

Honey and Syrup.—Maple syrup in tins was 60c. to 65c. in small tins, and up to 85c. for 11-lb. tins. Sugar was 9c. to 10c. per lb. White clover comb honey was 13c. to 14c. per lb.; extracted, 10c. to 11c.; dark comb, 12c. to 13c., and strained 6c. to 8c. per lb.

Eggs.—Supplies were still of fair quality; demand active. Quotations continued firm, being 22½c. to 23c. for wholesale lots of straight-gathered eggs, and 26c. for single cases of selected stock; with No. 1, at 23c., and No. 2, at 21c. to 21½c.

Butter.—Grass is now good, and the flow of milk is larger, but supplies are said to be lighter than a year ago at the same time. Prices of butter were firm. Choicest quality creamery sold at 23c. to 23½c.; and finest, at 22½c. to 23c.; while seconds were 22c. to 22½c., and Manitoba dairy was 17c. to 18c.; Ontarios, 19c. to 20c.

Cheese.—The market for cheese was fairly active, but prices were unchanged. Western colored was 12½c. to 12¾c. per lb.; and white, 12c. to 12½c. Eastern cheese was 11½c. to 12c. per lb.

Grain.—The market for oats showed practically no change. No. 2 Western Canada oats, 43½c. to 44c. per bushel, ex store, in car lots; and No. 3, at 42½c. to 43c. per lb.; with No. 2 feed at 41½c. to 42c. per lb.

Flour.—Manitoba first patent flour was unchanged at \$5.60 per barrel, in bags; seconds being \$5.10, and strong bakers, \$4.90. Ontario winter-wheat flour was firmer at \$5.25 to \$5.50 for patents, and \$4.70 to \$4.90 per barrel for straight rollers in wood.

Millfeed.—Millfeed prices were steady. Bran sold at \$23 per ton, and shorts at \$25, in bags; while middlings were \$28, including bags. Mouille was \$30 to \$32 per ton for pure, and \$28 to \$29 for mixed.

Hay.—No. 1 pressed hay, car lots, Montreal, track, \$16 to \$16.50 per ton; extra good, \$15 to \$15.50, and No. 2, \$14 to \$14.50.

Hides.—The market showed no change last week. Prices were: beef hides, 14c., 15c. and 16c., for Nos. 3, 2 and 1 respectively; calf skins, 16c. and 18c. for Nos. 2 and 1; and sheep skins, \$1.35 to \$1.40 each. Lamb skins were higher at 25c. each; with horsehides ranging from \$1.75 for No. 2 to \$2.50 each for No. 1. Tallow sold at 1½c. to 3c. for rough, and 5c. to 6½c. for rendered.

Chicago.

Cattle.—Beeves, \$7.25 to \$9.25; Texas steers, \$6.80 to \$8.15; stockers and feeders, \$6.35 to \$8.25; cows and heifers, \$3.70 to \$8.75; calves, \$7 to \$10.15.

Hogs.—Light, \$8.05 to \$8.32½; mixed, \$8.05 to \$8.35; heavy, \$7.85 to \$8.35; rough, \$7.85 to \$8; pigs, \$7.20 to \$7.95; bulk of sales, \$3.25 to \$8.30.

Sheep.—Yearlings, \$6.25 to \$7.50. Lambs, native, \$6.50 to \$8.75; spring lambs, \$7.50 to \$9.75.

Buffalo.

Cattle.—Trade the past week, with a pretty good supply and ample receipts in the West, together with a lessened Jewish demand, on account of holidays, was lower by 10 to 25 cents. Thirty-five cars were Canadians, which included about six loads of very weighty distillery steers. Around forty cars of steers altogether suitable for shipping demand. Some of the eastern order buyers were in the trading, but the demand from this source was lessened considerably. Top shipping steers ranged from \$8.90 to \$9. The half a dozen loads or so of weighty stillers were bid on, but carried instructions from the owners not to sell below a price and were forwarded on to Jersey City, where they sold at prices which they would have brought here. It is understood that some of the Toronto speculators have something like 500 head of these heavy distillery steers, contracted at a price regarded high. Bids on some of these stillers were made at \$8.90 to \$9. Best handy butchering steers sold from \$8.50 to \$8.60; yearlings, up to \$8.75; some medium fleshed kinds, \$8.25 to \$8.50; killers not being especially interested in the half-finished yearlings. Best fat heifers ranged up to \$8 to \$8.25; best fat, strictly dry-fed cows running from \$6.75 to \$7.50. Bulls sold generally steady for the best kinds, dime lower for the common, grassy grades. Milchers and springers ruled from \$2.50 to \$5 per head lower. This is the season of the year when the dry-fed cattle will be scarce, and the grassy grades will come on. There will be a difference in price of from fifty to seventy-five cents, except on some very desirable, very fat grassy steers, which often sell to good advantage, but they must be very fat and show good kill. Quite a few Canadian cattle have been coming of late, including about all kinds, with a pretty good proportion of steers and especially shipping grades. Authorities are of the opinion that this month will be high for strictly dry-fed steers, of which there appear none too many in the country, and the lighter kinds will probably be given preference. As the hot weather approaches these lighter weight cattle become more popular. Receipts the past week figured 3,775 head, as against 3,150 for the previous week, and 4,090 a year ago. Quotations:

Best strictly dry-fed weighty steers, \$8.75 to \$9; fair to good, \$8.50 to \$8.60; plain and coarse, \$8.25 to \$8.50; best handy weight steers, \$8.40 to \$8.60; common to good, \$8 to \$8.35; best yearlings, \$8.50 to \$8.75; medium to good, \$8.25 to \$8.35; best heavy fat cows, \$6.75 to \$7.25; good butchering cows, \$6.25 to \$6.50; canners and cutters, \$3.75 to \$3.25; best fat heifers, \$8.25 to \$8.50; medium to good, \$7 to \$8; best feeders, \$8.15 to \$8.25; fair to good, \$7.50 to \$8; best stockers, \$7.50 to \$7.75; fair to good, \$7 to \$7.25; common and stock heifers, \$6.50 to \$7; best fat bulls, \$7.25 to \$7.75; good butchering bulls, \$7.25 to \$7.50; best milchers and springers, \$75 to \$90; medium to good, \$55 to \$65; common, \$35 to \$45.

Hogs.—Hog values were on a decline again the first part of the past week, packers getting their kinds down to \$8.40, a few scattering sales \$8.45 to \$8.50. Monday's run included 16 decks of Canadians, which came from Alberta, and the bulk of these moved at \$8.25. Market reacted the next four days, bulk Thursday and Friday— which was the high time for the week—selling at \$8.65. Thursday's run had three decks of Canadians and these sold at \$8.55; and Friday, nine decks of Canadians brought \$8.55, with one deck selling in with a string of natives, at \$8.65. Pigs the fore part of the week sold down to \$8, and before the week was over they brought up to \$8.35 to \$8.50. Roughs \$7.15 to \$7.30; stags, \$6 to \$6.75. Runs the past week totalled 31,200, as against 30,400 for the previous week, and a year ago, 35,200 head.

Sheep and Lambs.—Supply the past week lightest of the season—only 9,600 head. Runs were against 16,200 the previous week, and for the corresponding week last year. Monday, spring lambs reached \$10.50; and Friday, top for these was \$10. Best yearling lambs fore part of week sold down to \$7.85 to \$7.90; and on Friday, one load that were not even choice, reached up to

\$8.40; culls going from \$7.25 down. Best wether sheep past week \$6 to \$6.25, one load \$6.35; mixed sheep, \$5.75 to \$6; ewes, \$4.50 to \$5.50, as to weight, heavy fat ones \$4.50 to \$4.75; and cull sheep mostly \$4 down. Spring lambs from now on will have the right of way, and clipped lambs, after next week, will be classed as yearlings.

Calves.—Market was higher every day the past week. Week started with a \$10 to \$10.25 market for tops; Tuesday, they reached \$10.50; Wednesday and Thursday they brought \$10.50 to \$10.75, and Friday the bulk of the tops landed at \$11. Medium calves the latter part of the week, sold up to \$10.50; strictly culls went from \$9.50 down, and desirable cull calves ranged up to \$6 to \$6.50; common ones quotable as low as \$5. No Canadians to speak of here this week, there being a few scattering ones offered. Receipts: Past week, 2,775; previous week, 3,050; year ago, 3,475.

Cheese Markets.

Cowansville, butter, 25½c.; London, cheese, 12½c. and 12¾c., bidding from 12c. to 12½c.; Belleville, 12½-16c.; St. Hyacinthe, butter 24½c., cheese, 12½c.; Watertown, N. Y., 14½c. to 14¾c.

Gossip.

See the advertisement elsewhere in this issue of the big sales of pure-bred live stock to be held in England, by John Thornton & Co., July 8th, 10th, and 21st. For full particulars look up the advertisement.

WILL IMPORT SHEEP.

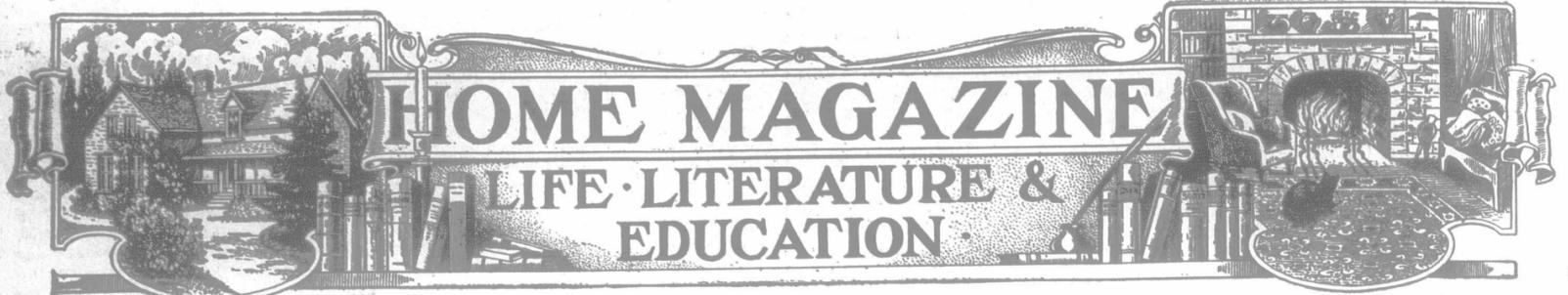
Robt. McEwen, of Byron, Ont., is leaving this week for Britain, and will be glad to execute any commissions in the purchase of sheep. He would also look after any purchases already made or made through him, and see them safely through quarantine. Write or phone Byron, Ont.

Attention is directed to the advertisement in this issue of a large sale of 50 head of pure-bred cattle, the property of Neil McGugan, R. R. No. 3, Shelden, Ont. Among the lot are some heavy producers, including Queen Bess Calamity, which as a two-year-old gave 12.70 lbs. of butter in one week three months after calving. Daisy Bell Abberkerk gave 19.24 lbs. of butter in seven days, and over 18,000 lbs. of milk in a year. Pearl De Kol Hengerveld, as a senior two-year-old gave 14.18 lbs. of butter in 7 days. Space does not permit further comment. See the ad. Write for catalogue. Attend the sale.

An opportunity to get some good Jersey cattle is offered in another column in this issue, being the advertisement of the dispersion sale of Rock Bailey's herd which was established in 1889, with a foundation of three pure-bred St. Lambert heifers. Such good bulls as King Hugo of St. Anns, Mokinas Boy, son of Elite of Glen Rouge, and sired by One Hundred Per Cent, and out of Marjoram of Glen Rouge, Columbine's Coronation King tracing to Golden Lad and the present stock bull Lady's Jolly of Don. This bull will be sold, and he traces on both sides direct to Golden Lad just four generations back. The herd is a choice lot and all young. See the advertisement and remember the date—Tuesday, June 30th. Write to Union, Ontario, for further particulars.

A GREAT SALE OF JERSEYS.

At the annual auction sale of imported Jersey cattle, by T. S. Cooper & Sons, at Linden Grove Farm, Coopersburg, Pennsylvania, on May 30th, 127 head were sold for \$61,820, an average of \$487, the highest price reached being \$2,725 for the five-year-old cow Champion Gauntlet, taken by Elmendorf Farm, Kentucky. At \$2,100 the four-year-old cow, You'll Do Fawn Beauty, fell to the bid of White Horse Farm. Twenty-seven of the top females averaged over \$1,000. R. J. Fleming, Toronto, Ont., secured a bargain in the two-year-old heifer Ocean Cowslip for \$800. The demand for bulls was rather limited, and the highest price for that class was \$610 for the yearling Sarah's Sultan



The Poet and His Song.

By Paul Laurence Dunbar.

A song is but a little thing,
And yet what joy it is to sing;
In hours of toil it gives me zest
And when at eve I long for rest,
When cows come home along the bars,
And in the fold I hear the bell,
As night, the shepherd, herds his stars,
I sing my song, and all is well.

There are no ears to hear my lays,
No lips to lift a word of praise;
But still, with faith unaltering,
I live and laugh and love and sing,
What matter yon unheeding throng?
They can not feel my spirit's spell.
Since life is sweet and love is long,
I sing my song, and all is well.

My days are never days of ease:
I till my ground and prune my trees,
When ripened gold is all the plain.
I put my sickle in the grain.
I labor hard, and toil and sweat,
While others dream within the dell;
But even while my brow is wet,
I sing my song, and all is well.

Sometimes the sun, unkindly hot,
My garden makes a desert spot;
Sometimes a blight upon the tree
Takes all my fruit away from me;
And then with throes of bitter pain
Rebellious passions rise and swell;
But—life is more than fruit or grain,
And so I sing, and all is well.

Browsings Among the Books.

On Bees.

[From "Locusts and Wild Honey," by John Burroughs.]

The drones have the least enviable time of it. Their foothold in the hive is very precarious. They look like the giants, the lords of the swarm, but they are really the tools. Their loud, threatening hum has no sting to back it up, and their size and noise make them only the more conspicuous marks for the birds. They are all candidates for the favors of the queen, a fatal felicity that is vouchsafed to but one. Fatal, I say, for it is a singular fact that the fecundation of the queen costs the male his life. Yet day after day the drones go forth, threading the mazes of the air in hopes of meeting her whom to meet is death. The queen only leaves the hive once, except when she leads away the swarm, and as she makes no appointment with the male, but wanders here and there, drones enough are provided to meet all the contingencies of the case.

Toward the end of the season, say in July or August, the fiat goes forth that the drones must die; there is no further use for them. Then the poor creatures, how they are huddled, and hustled about, trying to hide in corners and by-ways! There is no loud, defiant humming now, but abject fear seizes them. They cower like hunted criminals. I have seen a dozen or more of them wedge themselves into a small space between the glass and the comb, where the bees could not get hold of them, or where they seemed to be overlooked in the general slaughter. They will also crawl outside and hide under the edge of the hive. But sooner or later they are all killed or kicked out. The drone makes no resistance, except to pull back and try to get away; but (putting yourself in his place) with one bee a-hold of your collar or the hair of your head, and another a-hold of each arm or leg, and still another feeling for your waist-bands with his sting, the odds are greatly against you.

It is a singular fact also, that the queen is made, not born. If the entire population of Spain or Great Britain were the offspring of one mother, it might be found necessary to hit upon some device by which a royal baby might be manufactured out of an ordinary one, or else give up the fashion of royalty. All the bees in the hive have a common parentage, and the queen and the worker are the same in the egg and in the chick; the patent of royalty is in the cell and in the food; the cell being much larger and the food a peculiar stimulating kind of jelly. In certain contingencies, such as the loss of the queen with no eggs, in the royal cells, the workers take the larva of an

stiletto upon her unhatched sisters. Cases have been known where two queens issued at the same time, when a mortal combat ensued, encouraged by the workers, who formed a ring about them, but showed no preference, and recognized the victor as the lawful sovereign. For these and other curious facts we are indebted to the blind Huber.

It is worthy of note that the position of the queen cells is always vertical, while that of the drones and workers is horizontal; majesty stands on its head, which fact may be a part of the secret.

The notion has always very generally prevailed that the queen of the bees is an absolute ruler, and issues her royal orders to willing subjects. Hence

sole female bee in the hive, and the swarm clings to her because she is their life. Deprived of their queen, and of all brood from which to rear one, the swarm loses all heart and soon dies, though there be an abundance of honey in the hive.

The common bees will never use their sting upon the queen; if she is to be disposed of they starve her to death; and the queen herself will sting nothing but royalty—nothing but a rival queen.

The queen, I say, is the mother bee, it is undoubtedly complimenting her to call her a queen and invest her with regal authority, yet she is a superb creature, and looks every inch a queen. It is an event to distinguish her amidst the mass of bees when the swarm alights; it awakens a thrill. Before you have seen a queen you wonder if this or that bee, which seems a little larger than its fellow is not she, but when you once really set eyes upon her you do not doubt for a moment. You know that is the queen. That long, elegant, shining, feminine-looking creature can be none less than royalty. How beautifully her body tapers, how distinguished she looks, how deliberate her movements! The bees do not fall down before her, but caress her and touch her person. The drones, or males, are large bees too, but coarse, blunt, broadshouldered, masculine-looking. There is but one fact or incident in the life of the queen that looks imperial and authoritative: Huber relates that when the old queen is restrained in her movements by the workers, and prevented from destroying young queens in their cells, she assumes a peculiar attitude and utters a note that strikes every bee motionless, and makes every head bow; while this sound lasts not a bee stirs, but all look abashed and humbled, yet whether the emotion is one of fear, of reverence, or of sympathy with the mistress of the queen-mother, is hard to determine. The moment it ceases and she advances again towards the royal cells the bees bite and pull and insult her as before.

Travel Notes.

(FROM HELEN'S DIARY.)

Wiesbaden, April 20, 1914.

Spring's magic wand has transformed Wiesbaden into a veritable garden of delight. The shade trees and the decorative trees all over the city are masses of marvellous colors,—soft grays, tender greens, delicate pinks and copper browns. The magnolias are in full bloom, and the little pink umbrellas they call Japanese trees are thickly studded with flowers. The fruit trees are snow-white with blossoms, and the air sweet with fragrance. Every lane and street and garden is a lovely bit of color, and as for the parks!—they are dreams of beauty. In front of the Kurhaus is a stretch of level ground called the Bowling Green; although it is no longer a bowling green the old name still clings to it. Now it is a gorgeous flower garden. The flower beds are of all shapes and sizes, and the color combinations most artistic. Just now the tulip is the predominating flower. There seem to be tulips of every color—and such masses of them. There is one huge bed of vivid crimson tulips in the center of this garden which makes everybody "oh!" and "oh!" with wonder and delight. We tried to reckon up about how many flowers were in that particular bed, and decided there must be at least four thousand; and each flower perfect; and each flower a twin of its neighbor. We wondered at the amazing uniformity, and were told that the secret was that the flowers were all in pots, although they looked as if grow-

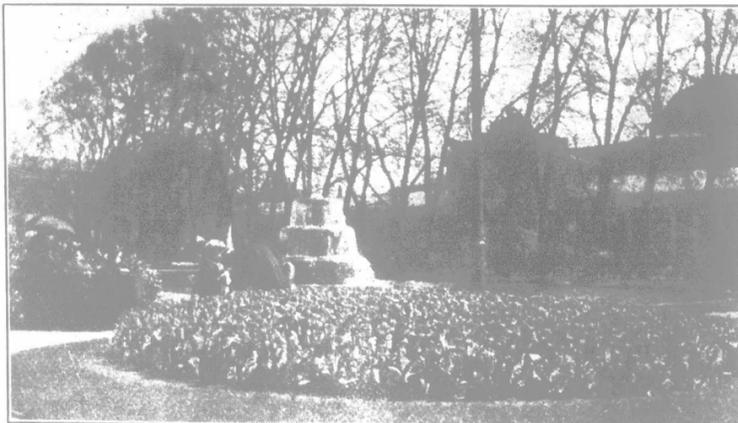


"Church Parade" on Wilhelm Strasse.

ordinary bee, enlarge the cell by taking in the two adjoining ones, and nurse it and stuff it and coddle it, till at the end of sixteen days it comes out a queen. But, ordinarily, in the natural course of events, the young queen is kept a prisoner in her cell till the old queen has left with the swarm. Not only kept, but guarded against the mother queen who only wants an opportunity to murder every royal scion in the hive. Both the queens, the one a prisoner and the other at large, pipe defiance at each other at this time, a shrill, fine, trumpet-like note that any ear will at once recognize. This challenge, not being allowed to be accepted by either party, is followed, in a day or two, by the abdication of the old queen; she leads out the swarm, and her successor is liberated by her keepers, who, in her time, abdicates in favor of the next younger. When the bees have decided that no more swarms can issue, the reigning queen is allowed to use her

Napoleon the First sprinkled the symbolic bees over the imperial mantle that bore the arms of his dynasty; and in the country of the Pharaohs the bee was used as the emblem of a people sweetly submissive to the orders of its king. But the fact is, a swarm of bees is an absolute democracy, and kings and despots can find no warrant in their example. The power and authority are entirely vested in the great mass, the workers. They furnish all the brains and foresight of the colony, and administer its affairs. Their word is law, and both king and queen must obey. They regulate the swarming, and give the signal for the swarm to issue from the hive; they select and make ready the tree in the woods and conduct the queen to it.

The peculiar office and sacredness of the queen consists in the fact that she is the mother of the swarm, and the bees love and cherish her as a mother and not as a sovereign. She is the



A Bed of Pink and White Tulips in the Bowling Green, Wiesbaden, Ger.

ing right out of the earth. As soon as any of the flowers wither, fresh ones are substituted, and in this way the brilliancy of the floral effect is retained.

But think of four thousand crimson tulips massed together with the sun shining upon them! Gorgeous seems altogether too mild a word to express such a vivid sight.

They even grow trees in boxes in Wiesbaden. I saw a family of them being carted into town one day—nice little trees they were, too, with close foliage trimmed in the shape of a dome. A few hours after reaching town those seven trees were growing on one of the public squares, casting a welcome shade on the glaring pavement and looking as if they had been there for years and years, and a week afterwards they suddenly burst bloom, and became pink dimes instead of green.

Talking about trees reminds me of that wonderful belt of horse-chestnut trees which unites Wiesbaden with Biebrich-on-the-Rhine, a distance of three miles. There is a double row of trees on each side of the broad avenue all the way—magnificent trees too, and just now at the height of their beauty, glistening with white cones. One may walk all the way from Wiesbaden to Biebrich under an arch of leaves. Many of the wealthiest Wiesbadens have their villas along this avenue.

Near Biebrich on this same avenue is a famous champagne factory much visited by tourists. It doesn't look like any factory I ever saw before; it looks more like a millionaire clubhouse. The entrance hall is quite magnificent, and fairly smacks of wealth. Every afternoon parties are conducted through the establishment, down into the cellars and wine vaults, through the bottling rooms, and all the rest of it. It all seemed very wonderful to me, but I couldn't help thinking what a lot of after-dinner speeches and after-dinner headaches were stored up in those huge vats and those millions of bottles. One of the interesting features of the place was the dining-room for the employees; a magnificent large hall with tiled floor and frescoed walls and gold ornamentation, and even a fine orchestra to make music for the workmen while they dined. After the visitors have completed the tour of the building they are politely received in luxurious reception-rooms by several very urbane and charming gentlemen, and treated to as much champagne as they care to drink.

Now that the weather is warm the Kurhaus concerts are given in the open. Thousands of people gather in the Kurhaus park every afternoon and evening to listen to the band. During the concert every seat is occupied, the restaurant tables are full, and hundreds of people are promenading. One sees most peculiar and amusing sights. All nationalities are represented, and they bring their manners and habits and style with them. Just to sit and watch the passing show is amusement enough. Yesterday the most conspicuous person on exhibition was a very old lady—she must have been nearly eighty—who was being wheeled around in an invalid chair by a swarthy-faced man in a strange-looking uniform. There was also a nurse in attendance. The old lady was hatless, and had such a mass of snow-white hair that I suspected it of being a wig; her face was brown and wrinkled, but her eyes sparkled with vivacity and interest. But it was what she was doing that made people stare so much and smile as they watched her. And what was she doing? She was smoking cigarettes; smoking them fast and furiously, and chatting away merrily to the nurse between puffs. They said she was a Spanish lady of high degree.

Apropos of the smoking habit in Germany I came across a German proverb about tobacco the other day which may perhaps explain why that weed is so popular here. The proverb runs: "God first made man, and then He made woman; and then He felt sorry for man and made tobacco."

The Wiesbaden "season" is now at its height, and the city is fairly swarming with visitors; the fashionable, the unfashionable, the would-be-fashionable, the ultra-fashionable are all on view—thousands and thousands of them. The streets are full of them; the woods are full of them; the hotels and pensions and cafes are full of them. They are every-

where. The Kurhaus daily paper publishes every day a list of the arrivals with the names of the most distinguished ones printed in heavy black type across the top of the page. The list is peppered with titles; some of them several lines long. Here are some I noticed in the paper to-day:

Se. Enzell. v. Behring. Hr. Wirkl. Geh. Rat., Prof. Dr. med. m. Bed., (This all belongs to one man and means—His Excellency Herr Von Behring, Real Secret Councillor, Professor, doctor of medicine, with servants.)

Borngen. Hr. m. Oberlandesgerichts-Präsident Dr. m. fr., (Herr Borngen, Head President of Law, and wife.)

Frankel. Hr. Gymn.—Prof. Dr. phil. m. fr., (Herr Frankel, Professor of Gymnastics, Dr. of Philosophy, and wife.)

Think of having to write all these titles down every time you change your abode.

There is one hotel here that has the name of being a regular matrimonial bureau. It is frequented by wealthy people with social aspirations, and by titled people looking for wealth. It is the special haunt of young military

of money, as their expenses are greater; a lieutenant in the cavalry must have eighty thousand marks (about \$20,000). The most popular and easiest method of obtaining such a large sum is to marry a rich girl. If she happens to be pretty and attractive, so much the better, but a great deal of feminine ugliness will be overlooked if it is backed up by a good fat bank account.

Every Sunday at noon there is a grand church parade on Wilhelm Strasse. The band plays in the park and the people promenade up and down on the broad pathway under the trees. The benches along the side are filled with spectators. We sat there last Sunday for awhile and watched the sartorial display of spring fashions going by. It was as much fun as a circus.

This being a season of gorgeous ribbons, gay hats and fantastic attire, the pavement procession was like a moving rainbow. Every extreme in modern style had its representative. The "slit skirt" was very much in evidence among the up-to-date dressers, but, except in extreme cases, attracted no particular

cussed its merits and shortcomings as we sat there last Sunday.

Uncle Ned frankly admits that he likes it; Aunt Julia detests it.

He declares it is far and away the most sensible fashion the women have had for a long time; Aunt Julia declares it to be ugly and unmodest.

He says it is much more modest than a ball gown with the top left off, and not nearly so dangerous to health; she says it has nothing to recommend it except its economy.

"Look at that shameless creature," she said.

We looked. The creature designated was a very stout woman with an old face and young hair (latest fashionable shade!) She wore a striped costume. She was billowy in outline, and her clothes were tight to the bursting point. One felt when looking at her that disaster was imminent,—that something might give way at any moment. She wore a skirt slit nearly to the knee, and at every step a glimpse of thick, shapeless ankles could be seen. Her feet were not of the diminutive kind that poets write sonnets about, but good substantial German foundations—the kind that are useful on a walking tour.

"Well," said Uncle Ned, with a twinkle in his eye, "I must admit there are cases where frounces would be a charity. But still I cling to my assertion that slit skirts are neat and graceful. Of course, a woman like that is just a freak."

"Here's another freak," snapped Aunt Julia. "There seem to be lots of them out to-day."

This one was in checks. She was built on the same generous plan as the other, and looked if possible worse.

"Do you consider her a Venus?" asked Aunt Julia.

"Not exactly, but, gee whiz! look what's coming."

A tall, slender lady was coming. She was as graceful as the much-quoted lily; everything from the tip of her tall feather to the tip of her small shoe was perfection. She was a symphony in golden brown,—hair, eyes, gown, shoes, gloves—and she walked with a long, easy, graceful stride that hadn't a jerk in it.

"Well—," admitted Aunt Julia, "of course—there are some women who—"

"Certainly," said Uncle Ned. "It's a mere matter of individuals and of good judgement, and good looks, and good figures, and—"

"Rubbish!" interrupted Aunt Julia. "It's money,—money and a first-class tailor. That's what it is. Why, a smart tailor with an architectural sense and an artistic eye can pad up a skeleton so cleverly that it looks as natural as life."

"But still—don't you think—?"

"I think it is chiefly a matter of gold dollars and artistic sense—and also full-length mirrors," said Aunt Julia with an air of finality.

Uncle Ned looked at his watch. "I think it is time we were moving on," he said.

So we joined the procession.

On the way home we passed the woman who isn't lame, but always carries crutches. She lives in Wiesbaden, and for some time she was a great puzzle to us—we thought she must be demented, but on the contrary she is possessed of unusual sense. The story about her is quite interesting. It seems she had a jealous husband who was very rich. He died some years ago. He must have been a tartar when he was alive, for he carried his malice and spitefulness into his will, evidently determined his wife should not enjoy life even after he was dead. In the will there was a clause which stated that his widow could only inherit his wealth on one condition: She must agree to go all her life on crutches. If she refused she would be cut off without a penny. Now, wasn't that a fiendish will? What a prospect for a strong, able-bodied woman. But she was game,—she consented. What a pity he doesn't know—but perhaps he does. Who can tell? Never for a day can the poor woman go without those crutches, for spies are continually watching her, and if ever she is seen without her wooden props she forfeits her income. I hope she'll live to be a hundred and fool all those grasping and expectant relatives.

THE FARMER'S ADVOCATE



Peasants Returning from Church.

This costume is worn by the peasants in the country near Wiesbaden.

officers who are angling for heiresses, for in Germany an officer must marry money unless he has private means of his own, otherwise he cannot live in the style his position demands. It is said the proprietor of this particular hotel is hand-in-glove with the military, and when he finds that he has some wealthy English or American young ladies in his house, he immediately telephones over to the barracks in Mayence: "Have four or five fine birds here," and the officers who are waiting for snaps hurry over to make the acquaintance of the heiresses. If they succeed in catching one, the future father-in-law settles up all their debts, and hands over the sum demanded. A lieutenant in the Infantry must have sixty thousand marks (about \$15,000) to his credit, and a yearly income of 2,500 marks apart from his salary. The salary of the junior officers is not large,—it probably takes it all to buy their various uniforms and keep their helmets and buttons polished. Cavalry officers require a larger amount

attention. But there were enough exaggerated cases to make observation interesting. Queer how people get used to innovations! When the "slit skirt" first made its appearance it was branded as ugly and indecent; it was not granted one redeeming quality; it was everything that a self-respecting skirt should not be; they said no nice woman would wear one; they said it was just a freak of fashion that wouldn't last; they said the wearing of such things should be prohibited by law, and that any woman bold enough to appear on the street in such a scandalous garment should be locked up or clapped into a lunatic asylum. The men said that if women had no more sense than to wear such foolish-looking clothes that it was quite sufficient evidence that they had not sense enough to vote. This clinched the matter. But the fashion persisted in spite of the vigorous opposition it aroused, and now the narrow slit skirt causes no comment at all, except in extremely grotesque cases. We dis-

There are some other local characters here that are more or less amusing, although they do not intend to be. There is the fat shoe-string pedlar who hasn't any feet and is clothed, so to speak, in fringe. He has shoe-strings wreathed around his neck, dangling from his arms, and hanging all over the front of his coat. He seems to be all shoe-strings except his face and his wooden legs; and he stumps cheerfully along, hopefully offering bunches of shoe-strings to people wearing buttoned shoes.

Then there is the hideous little dwarf who sells flowers at the Kochbrunnen corner—bow-legged, pigeon-toed, and not noticeably clean. Every day, rain or shine, he stands there on the curbstone with a basket of beautiful flowers, and he does a rattling good business too. You can't mistake him for anybody else, and people buy flowers from him because they feel sorry for him. His figure is his fortune. Ugliness making a living out of beauty.

And then the chimney-sweeps! Who would ever expect to see chimney-sweeps wearing a uniform?—But they do in Wiesbaden and a grotesque one it is, black, of course, as befits their occupation. They are black from head to foot; even their faces are black, but that is accidental. The humorous part of their outfit—the part that makes one smile—is the hat—a high, stiff, plug hat. It makes the chimney-sweeps look like negro minstrels. And to see them working up on the roofs of houses with these high hats on is too utterly ridiculous. I wonder if that is why they call them stove-pipe hats? The name suits the trade, but the hat looks like a joke.

Hope's Quiet Hour.

A Door of Hope.

I will give her her vineyard from thence, and the valley of Achor for a door of hope.—Hosea, ii:15.

Your sorrow shall be turned into joy.—S. John, xvi, 20.

Then, welcome each rebuff
That turns earth's smoothness rough.
Each sting that bids nor sit nor stand
but go!

ROBERT BROWNING.

Perhaps there is no other passage from Browning's works more often quoted than the one given above. Does not that prove its power of reaching many hearts? We all find trouble in this world—the word "Achor" means "trouble" or "troubling"—and our hearts naturally reach out after happiness. We feel that happiness is our birthright. We are not such weak, cowardly creatures as to be unwilling to endure pain, but hopeless pain is crushing and leads to despair. It is only possible for a man to "welcome" the difficulties and trials which upset his comfort in the present, if they are full of purpose and meaning, if they are intended to produce glad results. The paradox, as Browning declares, "which comforts while it mocks," is that life can be really succeeding in the very things which look most like utter failure. Sorrow does not only lead to joy, it is "turned into joy"—it is the root from which joy springs. The valley of trouble is the "door of hope," and fruitful vineyards—the precious, lasting fruits of righteousness—come "from thence." They are fruits of trouble.

But when this trouble is the just punishment of sin, what then? When we are suffering justly for our misdeeds—as the penitent thief on the cross owned that he was—have we any right to expect that such trouble can become a door of hope?

Look back at the day when the valley of Achor received its name—a sad day enough. You will find it vividly described in the seventh chapter of Joshua.

A man had yielded to the sin of covetousness, and had hidden his spoil in the ground under his tent. The spoil of Jericho—the first city won in the Promised Land—belonged by right to God. The first fruits were to be devoted to Him. Achan tried to rob God, and thought that his secret was securely hidden—a foolish hope. The secret sin brought trouble in the whole army

of Israel, and God Himself revealed it publicly. Swift and terrible punishment followed. Joshua said to Achan: "Why hast thou troubled us? The Lord shall trouble thee this day. And all Israel stoned him with stones.....and they raised over him a great heap of stones.....Wherefore the name of that place was called, The Valley of Achor."

There seemed little prospect for Achan that the terrible valley of sorrow would prove a "door of hope." As little did the condemned thief dream that the cross of agony and shame would open into Paradise. A wise woman once said to King David: "Neither doth God take away life, but deviseth means, that he that is banished be not an outcast from Him."—2 Sam., XIV, 14, R. V. The Father's love for Achan was not killed.

We are often told that "Nature is careless of the individual, but careful of the type." Certainly the Lord of Nature is not careless of the individual. Even the hairs of your head are numbered. God deviseth means to bring back His loved prodigal sons. He is not a stern, unmerciful Judge, but a Father running to meet His penitent son—a son who found that the valley of trouble was the door of home.



An Interested Canine Observer.

It might be thought that the execution of Achan showed no love for him, that he was only made an example to keep others from sinning, and that the punishment was coldly retributive. That was the old idea of punishment, which is fast giving way to a more Christian idea. Now society is learning that each criminal is also a brother, that punishment is intended to heal the disease of sin, not to express the fury of respectable citizens against their weaker brothers. The imprisonment may be necessary, but it should never be an end in itself. The industrial farm for criminals may be a valley of trouble, but it is also the door of hope—and it is intended to inspire hope.

Why is this Bible of ours the great Book of Joy? Because, from cover to cover, it declares the forgiveness of sins and the restoration of the sinner—and we are all sinners, though we sometimes don't realize our sins until we are forced to pass through the valley of trouble. In the chapter from which my text is taken Israel is compared to an unfaithful wife. She had turned from God and followed after other lovers. The gifts of corn, wine, oil, silver and gold, which God had lavished upon her, were accepted as her right—she calls them "my" bread, "my" wool, "my" oil, etc.

But the God she had deserted loved her still, in spite of her unfaithfulness, and He showed His love by leading her into the valley of trouble. He hedged her way with thorns, and made a wall to imprison her. He turned all festival days into days of mourning, and the

lovers she had pursued treated her with scorn and contempt. Then her eyes were opened—like the eyes of the prodigal when he had lost all his wealth—and she said: "I will go and return to my first husband; for there was it better with me than now." Would she be received by Him she had despised and deserted? Yes—strange and wonderful is the love of God!—He promised to allure her with His Presence in the wilderness, to speak to her heart there, to change the valley of Achor into a door of hope, until she could answer Him with a song of joy as in the days of her youth. She should be given the right to say "Ishi", that is, "my Husband"; and God promised to betroth her unto Himself for ever.

If such unfaithfulness as is here described cannot break the bond which binds the heart of man and the heart of God together, if His sternest punishments are proofs of undying love and intended to bring back those who have made themselves outcasts, then those who are struggling through the valley of trouble need not despair—it is always a door of hope, always a proof of God's Love.

We must not make the mistake of those who fancied that a man was born blind as a judgment for special sin. Our Lord rebuked them for that false notion. Very often it is true that the most saintly people have the hardest trials, as Christ Himself had the heaviest cross to bear. God does not explain to us—as yet—the object of each particular trouble; but it is certainly intended to work out our eternal good. It is never a meaningless fate.

Whether the trouble comes plainly as a result of our own sinful folly and disloyalty, or not, we are always in the hands of the Divine Lover. He will not leave us in the Valley of Achor a moment longer than is necessary. The door of hope stands open, and we can look through it and see the glory that is waiting beyond—waiting for us. Therefore we can sing, even in the midst of trouble, because—like the three young Hebrews in the furnace—the One who loves us with an everlasting love is with us there, and is drawing us by the pain nearer to Himself. He knows what training we need, and we can trust Him.

"A dreary desert dost thou trace,
And quaff a bitter bowl?
The desert make thy Holy Place,
Sing as thou drinkest, Soul!

"Or walkest thou 'neath shinning skies,
A garden all the road?
Sing, Soul, and make thy paradise
The Paradise of God."

DORA FARNCOMB.

GIFT FROM A READER.

Since writing the above I have received a gift of \$2.00 from one of our readers, "for some needy woman or girl." There is a poor sick girl of my acquaintance, who is in a very depressed, hopeless state. Perhaps this gift may revive her faith in the love of God and so do far more than supply a temporary bodily need. Many thanks.

HOPE.

Why Mitford Wept.

It was the habit of Lord Eldon, states Vanity Fair, in recalling the time when that great but not entirely noble Englishman was attorney-general, to close his speeches with some remarks justifying his own character.

At the trial of Horne Tooke, Eldon, speaking of his own reputation, said: "It is the inheritance I have to leave my children, and by God's help, I will leave it unimpaired."

Here he shed tears, and to the astonishment of those present, Mitford, the solicitor-general, also began to weep.

"Just look at Mitford!" said a bystander to Horne Tooke. "What on earth is he crying for?"

"He is crying to think what a small inheritance Eldon's children are likely to get!" replied Tooke, whose wit was ready and biting.

Fashion Dept.

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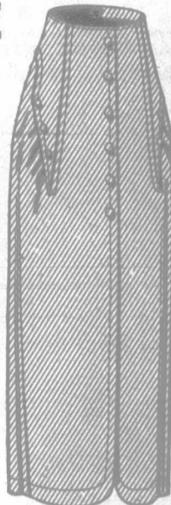
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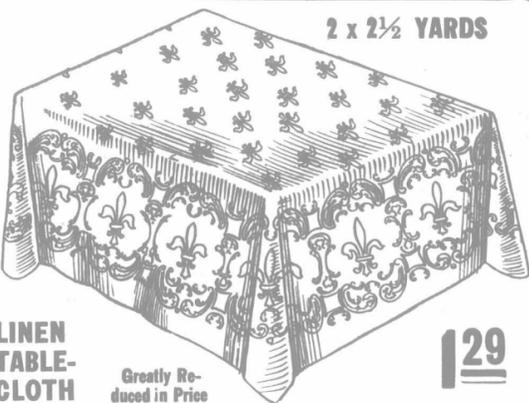
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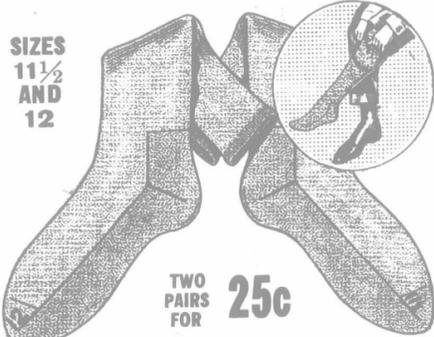
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We don't believe it necessary to go into details and explain the good points of our flours. We believe it is sufficient to say that they are sold with the understanding that if they are not right in every respect back goes your money.

Note the special prices in the right-hand column. Remember, we cannot make any reduction on these prices, even if you purchase five or ten tons. The only reduction we could make would be on car-load orders.

TERMS.—Cash with order. Orders may be assorted as desired. On shipments up to five bags, buyer pays freight charges. On shipments over five bags we will prepay freight to any station in Ontario east of Sudbury and south of North Bay. West of Sudbury and New Ontario, add 15c. per bag. Prices are subject to market changes.

FREE: To buyers of three bags of flour we will give free "Ye Old Miller's Household Book" (formerly Dominion Cook Book). This useful book contains 1,000 carefully-selected recipes and a large medical department.

If you already possess this book, you may select from the following books: Ralph Connor's—"Black Rock," "Sky Pilot," "Man from Glengarry," "Glengarry School Days," "The Prospector," "The Foreigner," Marion Keith's—"Duncan Polite," "Treasure Valley," "Lisbeth of the Dale," J. J. Bell's—"Whither Thou Goest." If you buy six bags of flour you get two books, and so on. Enclose 10c. for each book to pay for postage.



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The Fun Cure.

"Don't shoot butterflies with rifles," is pertinent advice to those—and how many there are—who continually make tragedies out of little things. There is often apt to be cases of strenuousness in any family, and the best cure is the fun cure. A good laugh is a solvent. It can quickest unwind a tangle or smooth a rough bit of roadway. Happenings in daily life are likely to be tragedy or comedy, as we look at them, and the habit of seeing the comic side grows without looking for it.

"Does your work get into kinks?
Laugh it off.
Are you near all sorts of brinks?
Laugh it off.
If it's sanity you're after,
There's no recipe like laughter—
Laugh it off."

NAE A MASTERPIECE.

Tom MacPherson, a Scotchman who does carpentering for a living, asked his foreman for a day off, which was readily granted. Later the latter was informed that the workman had taken the holiday to get married, and upon his return to work questioned him about it.

"Aye, sir; I was awa' gettin' married."

"That's fine" replied the foreman. "I hope you got a right, good wife, Tom."

"Weel, I maun say she is God's handiwork, but she is nae His masterpiece," answered the bridegroom with the air of one determined to do perfect justice and yet adhere to the truth.—Lippincott's Magazine.



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When Common Weeds are Money.

Close by an Old Country farm lay a field of more than two acres of land. The greater part of this field was covered with tansy, just that old-fashioned garden weed that our grandmothers called "bitter-buttons."

My friend who lived on this farm had heard that this weed had a medicinal value, and that large wholesale drug firms purchased large quantities of the dried leaves and blossoms yearly, for their output.

Upon consulting with a firm, she found that she could dispose of the entire lot for five cents a pound. The tansy was then cut and the leaves and blossoms carefully dried and shipped.

It is a pretty little weed, with its fern-like leaves, and its yellow flower heads blooming gaily from June to September.

Besides having a medicinal value, tansy is a valuable help to the housekeeper, for, if spread around where red ants have been known to frequent, it will rid the place entirely of this pest.

Years ago, our grandmothers' large attics were never without a great quantity of it strewn on the floor and among woollens, as a preventive of moths and buffalo bugs. Many use it for this same purpose now, for it is a never-fading remedy.

In the State of Massachusetts, it is a very frequent sight to see Italian women along the roadsides in the country, cutting this tansy weed. They have learned that it has a money value, and are now offering it in quantities to druggists and firms that manufacture medicines.

There are many other plants growing wild in the fields that have a money value to druggists. Among these is catnip, a very well-known aromatic herb, claiming relationship to the mint family. Old Country homes were never without a quantity of this on hand, for grandmothers pronounced catnip-tea a cure for all ills. Many are the pains, of infant and elder alike, that have been soothed by the qualities of this decoction.

The catnip flower first appears in small clusters in the early part of June, and continues its blooming until far into September. It should be gathered from July until September, picking both leaves and flowers, spread on a clean piece of linen or white cotton cloth, and put away in a clean attic to dry.

It should be protected from dampness, as well as the direct hot sunlight, and dried very slowly. Every other day turn over the flowers and leaves, so that the drying will be equal. From three to seven cents a pound is the price that catnip brings in the drug market.

Burdock, that plant with its over-sticking burs which we dislike so much, is another wild weed that cures many ills. It is the root of the burdock plant that is used—the thick, fleshy, wrinkly root that has a slightly unpleasant odor to it. Usually it is gathered in the early fall and carefully washed, split and dried, ready to be sold in market.

Burdock leaves are very frequently used for poulticing swellings and inflammations, as great soothing and drawing qualities are contained in them. The plant has a quantity of seeds which are also used for medicinal purposes. This root brings, in market, about four cents a pound, and the seeds eight cents a pound. Of late years, our own country has not been able to supply the demand of the drug firms for this plant, so that it is now being imported annually in great quantities.

Dandelion is another universally known weed with many medicinal qualities. In the early spring it is gathered and sold in the markets for table greens, and may well be termed "the broom of the stomach," for it is one of the best spring tonics known.—Gladys Partelow, in Suburban Life.

Brown was an easy-going old fellow. He believed in taking things as they came. Not so Mrs. Brown.

"Don't you think," she remarked one day, "that we should be considering Mary's future? It's time she was married—she is already 35 years of age."

"Oh, I shouldn't worry," replied old Brown. "Let her wait until the right sort of man comes along."

"Why should she wait?" retorted Mrs. Brown. "I didn't."



SEALED TENDERS addressed to the undersigned, and endorsed "Tender for Supplying Coal for the Dominion Buildings," will be received at this office until 4.00 P.M. on Monday, July 6, 1914, for the supply of coal for the Public Buildings throughout the Dominion.

Combined specification and form of tender can be obtained on application at this office and from the caretakers of the different Dominion Buildings.

Persons tendering are notified that tenders will not be considered unless made on the printed forms supplied, and signed with their actual signatures.

Each tender must be accompanied by an accepted cheque on a chartered bank, payable to the order of the Honourable the Minister of Public Works, equal to ten per cent (10%) of the amount of the tender, which will be forfeited if the person tendering declines to enter into a contract when called upon to do so, or fail to complete the contract. If the tender be not accepted the cheque will be returned.

By order,
R. C. DESROCHERS,
Secretary.

Department of Public Works,
Ottawa, June 2, 1914.

Newspapers will not be paid for this advertisement if they insert it without authority from the Department.—62371.



Condensed advertisements will be inserted under this heading at three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order for any advertisement under this heading. Parties having good pure-bred poultry and eggs for sale will find plenty of customers by using our advertising columns. No advertisements inserted for less than 50 cents.

DUCKS—Records exist where Indian Runner ducks have produced 300 to 320 eggs in 365 days. True Indian Runner ducks, trios \$10, baby ducks 75 cts. each. Fertile eggs, \$2, \$3 and \$5 per setting. Mrs. E. C. Cattle, Weston, Ont.

WHITE Wyandottes exclusively—Eggs \$1 per 15. Good hatch guaranteed. Thos. F. Pirie, R.R. No. 3, Ingersoll, Ont.

WHITE Wyandotte eggs from especially selected vigorous stock. Laying strain \$2.00 per setting. Weldwood Farm, Farmer's Advocate, London, Ont.

S. C. White Leghorns—Great laying and prize-winning strains, eggs \$1 per 15, a hatch guaranteed, \$4 per 100. GEO. D. FLETCHER, R. R. No. 2, Erin, Ontario. Phone Erin.

Italian Bees for Sale—Colonies that are first-class in every respect; ready for prompt shipment. In 10-frame Langstroth hives, \$10; in 8-frame Langstroth hives, \$8. Cash with order.
R. B. PETTIT, Guelph, Ont.



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

TERMS—Three cents per word each insertion. Each initial counts for one word and figures for two words. Names and addresses are counted. Cash must always accompany the order. No advertisement inserted for less than 50 cents.

FARM TO RENT—First-class dairy farm of 240 acres, known as "Riggfoot Farm," being rear of lot 16, concession 9, Markham Township; 1 1/2 miles from C.P.R. station and creamery at Locust Hill; 3 miles from G.T.R. at Markham; about 20 miles from Toronto; the farm has 2 sets of buildings; stabling for 18 horses and 60 cattle; water in stables; necessary outbuildings and good houses; about 200 acres under cultivation; 40 acres pasture, with running water. For further particulars apply to John Isaac, 31 Parkwood Ave., Toronto.

FARM For Sale of 300 acres on main road, near market, crops all in; two sets of buildings; will sell in block or in part; immediate possession; might consider a small farm in exchange. Apply: Box W, Farmer's Advocate, London.

FOR SALE—Collie pups; \$3 each. Apply Vincent McNeill, Wainstead, Ont.

TWO young men seek situation on same farm, if possible, in Ontario, Western Ontario preferred, July 1st; good experience. J. Channing, Minnedosa P.O., Manitoba.

PEDIGREED Scotch Collies—Extra choice litter puppies, direct from imported championship stock; splendid workers; one white, rest sable and white. B. Armstrong, Codrington, Ont.

WANTED—A firm of the highest standing to handle a few English Pedigree Horses (Shires and Clydesdales). Applicants should send full particulars of the facilities they have for disposing of them, and also send Bankers and trade references; none but first-class firms need apply. Live Stock Co., 6 Holborn Viaduct, London, England.

Beeswax—Have forty pounds light brood foundation more than I can use, made by Ham & Nott, Brantford. Has not been unpacked. Will sell for fifty-five cents a pound. Need the cash. R. A. Fowler, Moorefield, Ont.

Please mention "The Farmer's Advocate."

Self-Conceit.

One of the absurdest and most comical things on earth is the self-conceited man or woman. An over-weening opinion of one's own doings and endowments ever thrust in other people's faces, or forced upon their attention, soon makes one abnoxious as well as ridiculous. George Elliott speaks of such a one as being very much like a rooster which thinks the sun rises in the morning on purpose to hear him crow. There seem to be some people who think that the world, or at least the little part of it in which they move, exists for the purpose of perceiving and admiring their brilliant capacities; and that it is a great pity that all creation could not be cognizant of their supreme abilities. The afore-said rooster usually has his conceit cured by having his neck wrung, and some people never, we fear, learn their true position during life. But we are glad to believe that many self-conceited young people awake, either gradually or suddenly, to a true valuation of themselves. They find out that other people have brains and know how to use them, and that they themselves will be entirely out-distanced, if they do not gird themselves for the struggle with earnest and persevering endeavor.

We must distinguish, however, between the self-conceit which is empty-headed vanity and aimless self-congratulation and that self-confidence born of high aims, definite experience and untiring industry. When Lord Nelson, a young man then, found his name omitted from a newspaper paragraph detailing an action in which he had been engaged, said: "Never mind, I will one day have a gazette of my own," it was not mere conceit. Amid the hard knocks of a seaman's life he had accurately measured his own capabilities. Rubbing closely with others and being brought into competition with them often takes the conceit out of people; while, at the same time, they attain such a proper estimate of their own abilities as qualifies them to become leaders of men.—Oward.

Little Things That Cheer.

Just to bring to those who need the little word of cheer,
Just to lift the drooping heart and check the falling tear,
Just to smooth a furrow from a tired brow awhile,
Just to help dispel a cloud, just to bring a smile,
O, the kindly little deeds,
As on through life we go,
How they bring the sunshine
Only those who do them know.

Just to do the best we can as o'er life's path each day,
With other pilgrims homeward bound, we take our steady way;
Just to give a helping hand some weary weight to bear,
And lend a heart of sympathy some neighbor's grief to share;
O, those kindly little deeds!
Our dear Lord notes each one,
And sheds His blessings o'er our way
Toward life's setting sun.
—Mary D. Brine, in Christian Endeavor World.

The Ingle Nook.

[Rules for correspondence in this and other Departments: (1) Kindly write on one side of paper only. (2) Always send name and address with communications. If pen name is also given, the real name will not be published. (3) When enclosing a letter to be forwarded to anyone, place it in stamped envelope ready to be sent on. (4) Allow one month in this department for answers to questions to appear.]

A writer in the New York Independent, while commending women for on the whole preferring good literature, even though a few of them have written abominable books, goes on to make a few statements which one scarcely likes to accept without question. "Of course," he says, "we must allow for the tendency to exaggerate the amount of serious reading done by women because they are apt to make a fuss about it. A man who is addicted to reading poetry keeps



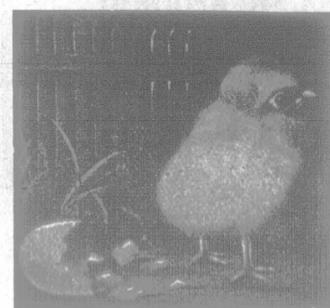
Two-thirds of all rural barn claims settled by forty insurance companies in Ontario in twelve years were due to lightning. If your buildings are rodged you cut off two chances out of three of fire.

LIGHTNING RODS
properly installed are almost absolute protection

Some day you will rod. Why not this year?
Would you like to see our new catalogue?

THE UNIVERSAL LIGHTNING ROD COMPANY
HESPELER, ONTARIO
The Rod with a LOCK JOINT

Poultry Wanted



WE ARE OPEN TO HANDLE Live Broilers or Live Spring Chickens in large or small shipments. Highest market prices paid according to quality, and prompt weekly returns made. Write us for quotations.

Henry Gatehouse
348 West Dorchester St., Montreal

Fish, Poultry, Game, Eggs and Vegetables

Royal Oak Stock Farm, Muirkirk, Ontario

G. A. ATTRIDGE, Proprietor, offers for sale the following

CLYDESDALES



- 5 Imported Mares (4 with foal at side).
- 3 Yearling Fillies (1 imp. and 2 Canadian bred).
- 1 Canadian-bred Yearling Stallion.
- 1 Canadian-bred 2-year-old Stallion.
- 1 Canadian-bred 6-year-old Stallion.

These horses have been prizewinners at the leading exhibitions in Canada, and will win again. Parties wishing to complete their show string should inspect this offering or communicate with me. Muirkirk is on the P. M. and M. C. Ry. L.-D. phone, Ridgetown.

Indian Runner Ducks

—The kind that lay all year round; prize-winning stock; eggs \$1 and \$1.50 per setting.

Phone Fingal, via St. Thomas. A. WATSON & SONS, R.R. No. 1, St. Thomas, Ont.

it to himself as though it were the morphine habit. His best friend may not suspect it. But a woman, when she wants to read poetry, will organize a club and put a card in the paper, stating how many verses she will read on Wednesday afternoon. Women are naturally co-operative and gregarious; men individualistic and solitary in their habits."

The imputation in all this is, of course, that women are more shallow than men, less given to quiet thought, more to show; that, in short, a woman never thinks of serious reading for the reading's sake, but that she takes to it, if at all, simply that she may have something to fuss over, or that she may flatter herself or inveigle others into the belief that she is intellectual.

Surely this is to a great extent wrong. Surely such shallowness is not typical of women. Surely there are women in plenty who read serious literature for the sake of the literature, receiving but incidentally the self-development and breadth of outlook that comes therefrom, and never dragging the subject into conversation except from the impulse that comes of enthusiasm, or with the unselfish wish to pass a good thing on. Surely women are not, as a class, more

fussy, more shallow than men. If it should be that there is a tendency, however slight, that way, should it not be guarded against, fought against? Commonsense and sincerity are qualities to be sought for, cultivated, clung to as treasures too precious to be lived without.

The last assertion of the passage quoted, that women are naturally more co-operative and gregarious than men is not, perhaps, very material to the question under consideration, yet one cannot but pause to take exception to it. Judging by what I have seen of men in this city, I should say that the balance might be the other way. The women have, it is true, their afternoon teas, their musicales, and card-parties, but the men have also their clubs, their societies, their banquets and dinners galore, their curling, and bowling and what not. As a matter of fact, while the women must, willing or not, stay in of an evening unless there is a special invitation or a special function on hand, it seems that there is always somewhere where men may congregate, and where many of them do congregate even to a rather persistent neglect of the home.

Passing to the country, who can say that the woman there does not know

FARMS FOR SALE



OUR LIST CONTAINS EXCELLANT FARMS FOR THE PURPOSE OF RAISING STOCK, GRAIN, FRUIT OR MARKET GARDENING

- 6 ACRES—ABOUT ONE MILE FROM CLARKSON STATION, on Erindale Road, suitable for fruit growing or poultry raising. Considerable tree fruit. Seven-roomed house. Small stable. Price five thousand.
- 19 ACRES—NIAGARA TOWNSHIP, Lincoln County, seventeen acres orchard, peaches, plums, cherries, pears; well cared for; also small fruit. Frame house, verandah all round. Bank barn. Price seven thousand.
- 200 ACRES—FIVE MILES NORTH OF COOKSVILLE. A number one stock and grain farm; fair buildings. Excellent situation. Price nineteen thousand. We can supply almost anything you require in stock, grain or fruit. Sign and mail this coupon for further particulars.

The Dovercourt Land Building & Savings Company, Limited,
82-88 King Street East, Toronto.

Gentlemen,—Kindly send me price, terms and full particulars of the above.....acre farm.

Name.....

Address.....

30 YEARS IN BUSINESS

DOVERCOURT LAND BUILDING & SAVINGS COMPANY-LIMITED
W S Dinmick, President
82-88 King St East Toronto
LARGEST OWNERS & DEVELOPERS OF REAL ESTATE IN CANADA



Auction Sale OF 50 HEAD OF Pure Bred HOLSTEIN CATTLE AT FROME ONT., (ELGIN COUNTY) TUESDAY, JUNE 16th, 1914 AT 2 O'CLOCK SHARP (LUNCH AT NOON)

For Catalogue and Particulars, apply
Neil McGugan, Proprietor
Shedden, E.R. No 3.

how to make the best of what is called solitude? How many women there are who stay in the home day after day, evening after evening for practically the year round, yet who manage to keep busy, and, I believe quite as happy if not happier than the woman of the town who, with no especial duties on her hands, is in constant need of exterior diversion.

At the same time, while I believe that every woman should have time for quiet reflection, and that she should see to it that she gains some time for reading "serious literature." I do not believe that too much solitariness is good for anyone, either man or woman. We need to rub 'up against people occasionally, that we may keep ourselves at a proper estimate. Besides, too much solitude is likely to breed crochets, narrowness in some particulars, and in some natures fretfulness.

These lives of ours are queer things. We need to handle them with great commonsense; to know, or to find out—for we are not likely to know intuitively—just what is needed to keep our best selves on top; how much we should "go out," how much we should stay in with our books and our own thoughts; how much physical exercise we should take, and the precise point at which we should let the work involving that exercise drop lest it threaten to overdo these bodies of ours, things too precious to be injured in the accomplishment of any ordinary routine of labor.

But I must stop. Other things are suggesting themselves, but you can follow them out for yourselves, can you not?
JUNIA.

Dear Junia:—With kind remembrances of "Auld Lang Syne," we again enter the Ingle Nook, for its motto is truly "This hearth glow shines for you." And here we may meet and discuss freely the problems which confront us on the farm. How many of the Chatterers have joined the great army of women who have adopted for their motto "Home and Country." And how many of the number are endeavoring to interpret intelligently this slogan, in their daily lives. As summer looms on the horizon we members of the W. I. might well turn our thoughts toward the great problem of "Fresh Air Missions." For how can we hope to better serve our Country and its homes than by removing the little ones from the poverty-stricken quarters of our city slums for a time at least, to the healthful environment of rural life. For otherwise the grim reaper will be a frequent guest in the crowded tenement districts when the intense heat is upon us. We have had the sad privilege of observing and studying at close range this picture from life's other side, and are firmly convinced that too great a value cannot be placed upon the work of our "Fresh Air Missions." The delights of the wild raspberry field and the broad meadows are the heritage of the country-born, therefore let it be considered our duty as well as a privilege to share these gifts with the less fortunate inhabitants of the congested slums. And through Nature's beauties uplift to Nature's God.

"Up to the hills where our tired hearts rest,
Loosen and halt and regather their dreams."

In the busy round of life we may feel that we have scarcely time to extend the hand in this way, but at our hands will be required a rendering of our stewardship when finally the goal is reached, and the poor we have always with us and may do them good.

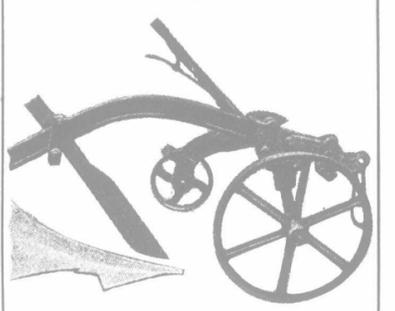
"There are forests that kneel forever
Robed in the dreamiest haze,
That God sends down in the summer,
To mantle the gold of its days;
Kneeling and leaning forever,
In wending and sinuous bays.
There are birds that like smoke drift over,
With a strange and bodiful cry,
Into the dream and the distance
Of the marshes that southward lie;
With their lonely lagoons and rivers
Far under the reeling sky."

Wishing your department every success,
WINNIFRED AUGUSTINE,
Hamilton Co., Ont.



St. Lawrence Sugar
For Preserving
—buy St. Lawrence Extra Granulated by the bag. You get the choicest, pure cane sugar, untouched by any hand from Refinery to your kitchen—and FULL WEIGHT GUARANTEED
Bags 100 lbs., 25 lbs., 20 lbs.
Cartons 5 lbs., 2 lbs. 3
Best dealers can supply you.
St. Lawrence Sugar Refineries, Limited, Montreal.

DICK LEVER PLOW WHEELS



OUR LEVER WHEEL Attachment will fit nearly all plows. This Attachment is superior to all others, in that, by the lever you can change the depth of the furrow and in finishing the last furrow, you can throw the land wheel up over the plowed land, whilst with other wheels you have to unscrew a set screw and take off the land wheel in order to finish the last furrow. Another advantage is, the land wheel is opposite the point of the share, thus allowing the plow to go down and take up low places. The wheels are easily adjusted to the to the width of the furrow.

Write for full particulars and illustrated catalogue of everything we manufacture.
Buy from us and you save middleman's profit.

DICK AGRICULTURAL WORKS
BOLTON - - - - - ONT.

DO YOU NEED FURNITURE?

Write for our large photo-illustrated Catalogue No. 7—it's free to you.
The ADAMS FURNITURE CO., Limited
Toronto, Ontario

SEND for wholesale catalogue to Lancashire's Cheapest Drapery Warehouse, and learn how to increase income. Make money selling British goods, tablings, towellings, ready-mades, dress materials, ladies' overalls, pinafore muslins. Cochran's Warehouse, Victoria Bridge, Manchester, England.

Hampshire Swine I have a choice lot of belted hogs for sale. Will be pleased to hear from you, and give you description and prices.
J. H. Rutherford, Box 62, Caledon East, Ont.

Please mention "The Farmer's Advocate."

Beeton, Ont.
 Dear Junia:—Well, here I come, like many others asking for information. I would like to know if you could give me any information with regard to making beads which are sometimes made from the rose petals. Also I would like to know how they are made with flour, salt and water. I think I read in your paper some time ago about the rose petal beads, but have lost trace of it. Well, I must close now, thanking you for any information I may receive.

Yours sincerely,
 JUDY.

For full directions for making rose beads, refer to answer to Sweet Marie, page 717, issue of April 9th. Possibly some of the readers may be able to give you the directions for making the salt and starch beads. I have seen them—and very pretty they are, dyed to match the costume in color—but do not know how they are made.

Dear Junia:—May I, through the "Ingle Nook" thank all those who wrote in reply to my request for the words of a song; "Sunshine on the Hill."

PEARL L. PADDICK,
 Lambton Co., Ont.

The Beaver Circle

Song of the Summer Wind.

By Marian Greene.

Out in the shade of the apple-tree
 A cool wind sang this song to me:
 "Up from the meadows of waving grain,
 From flowers, new washed with
 the summer rain,
 Where swift clouds dapple the golden
 plain,
 Dear little child, I have come again."

He lingered a moment, and then was
 gone,
 But he murmured these words as he
 hurried on:
 "Off where the hills meet the bending sky
 A hot town waits to be cooled, and I
 Can bring them the rest for which they
 sigh,
 So, dear little child, good-by!"

The Garden Competition.

(Open to both Seniors and Juniors.)

LIST OF COMPETITORS.

1. Claire Harrett (age 12)
 Wallaceburg, Ont.
2. Anna Harrett (10), Wallaceburg, Ont.
3. Ernest Harrett (8), Wallaceburg, Ont.
4. Lucille Moore (11), Strathroy, Ont.
5. P. L. Williams (14), Ilderton, Ont.
6. Hazel Leggett, Rainham, Ont.
7. Margaretta Williams, Larchwood, Ont.
8. Mabel Gunning, Science Hill, Ont.
9. Hazel E. Lishman (13),
 Hagersville, Ont.
10. Evah Leigh, Hawkestone, Ont.
11. Annie Condy (16), Greenock, Ont.
12. Robt. Ripley, Wallacetown, Ont.
13. Pearl Wallace, Spencerville, Ont.
14. Coleine Eunice Treacy,
 Berlin, Germany
15. Myrtle Skakel (14), Thamesville, Ont.
16. Elsie MacKay (13),
 North Gower, Ont.
17. Cecil Simpson (12),
 Hunter River, P.E.I.
18. Elaine Simpson (10),
 Hunter River, P.E.I.
19. Oscar Oxley, Canfield, Ont.
20. Robert Kennedy, Stirling Falls, Ont.
21. Hazel Yelland, Port Hope, Ont.
22. Clyde Campbell (11), Sussex, N.B.
23. Jean Graham (12), Claremont, Ont.
24. Alfred Stone (11), Highgate, Ont.
25. Cecil Baxendale, Grand Valley, Ont.
26. Catherine Delany (14), St. Malo, P.Q.
27. Howard Jamieson, Camborne, Ont.
28. Jean Graham (13), Barrow Bay, Ont.
29. Olga Guest (12), Ballycroy, Ont.
30. Margaret Sorley (14), Ottawa, Ont.
31. Ruby Breadner (14), Fort Erie, Ont.
32. Myrtle Simpson (12), Bright, Ont.
33. Murdie A. McLennan (13),
 Lancaster, Ont.

FARMER AGENTS WANTED



**Stops
 Lugging
 Pulling
 AND
 Bolting**



P. HARVEY FLYNN'S
 LITTLE GIANT CONTROLLER
 U. S. PAT. JULY 16 1901
 CANADA PAT. APRIL 22 1902

Patented
 June 11th, 1911

Why try to control your fractious horse with old-style bits, curb chains or straps?

Flynn's Little Giant Controller

It is a genuine speed-producer, and stops open mouth and tongue lolling. Is equally effective with driving and riding bridles, and is splendid for colts.

You can control your horse easier than ever before, and stop the runaway, with

Is the only bit recommended by Humane Societies the world over.

Price \$2.50 for nickel plates, \$3.00 for anti-rust metal.

Send for one to-day. If not entirely satisfied, fire it back and your money will be returned quick.

W. F. Frampton, 32 Front St. Toronto, Ont.

Harab FERTILIZERS

Write for Free Fertilizer booklet and prices
 THE HARRIS ABATTOIR CO., LIMITED
 Strachan Ave., Toronto

CREAM

Toronto consumes the milk and cream from over 14,000 cows, and the butter production of over 70,000 cows. We need your cream, and expect to pay well for it. Drop a card.

The Toronto Creamery Co., Limited
 Toronto, Ontario

Cream Wanted

We pay express charges on cream from any express office within 200 miles from Ottawa. We also supply cans. Sweet or sour cream accepted. Write for particulars to
 Valley Creamery of Ottawa, Limited
 Ottawa, Ontario

Five Reasons Why Men Change Tires

Goodyear Users This Year Increase 55 Per Cent

Faster than ever men are changing from other tires to Goodyears. There are more tire users—that is true; perhaps 20 per cent more than last year. But Goodyear sales have increased 55 per cent. So legions of these new users have discarded other tires.

any one of these features. Yet every tire user knows he needs them all.

Why They Change

Some change to end rim-cutting. And No-Rim-Cut tires offer them the only feasible way to do it.

Resent Extra Prices

Some resent extra prices. There are 18 U. S. and Canadian makes which this year cost you more than Goodyears—up to one-half more. And those prices are unjust.

Some have suffered needless blow-outs, due to wrinkled fabric. The only way to prevent them is the "On-Air" cure, and we alone employ it. It adds greatly to our own cost.

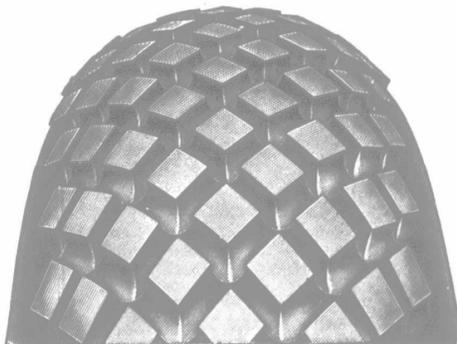
No-Rim-Cut tires hold top place in Tire-dom. They outsell any other, after millions of mileage tests. At least in the four ways cited they excel any rival tire. Then why should men pay for other tires from \$5 to \$15 more?

Some fear loose treads. By a patent method we reduce this danger by 60 per cent in No-Rim-Cut tires.

There is no reason. It is easy to build tires to undersell Goodyears, but none ever built tires worth more.

And some want our All-Weather tread. A double-thick tread, as smooth as a plain tread, but with deep, sharp, tough projections. It grasps wet roads with a bulldog grip.

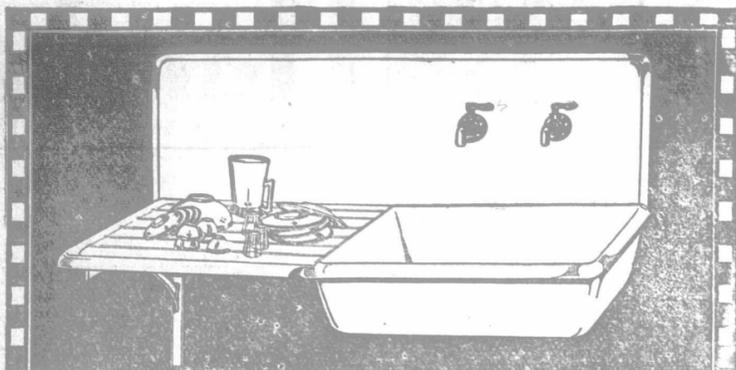
Goodyear prices are due to output, to efficient methods and to modest profit. Every added penny is an utter waste. Tell your dealer you want Goodyears, and at Goodyear prices. He will give them to you.



GOOD YEAR
 TORONTO
No-Rim-Cut Tires
 With All-Weather Treads or Smooth

THE GOODYEAR TIRE & RUBBER CO. OF CANADA, LIMITED
 Head Office, TORONTO
 Factory, BOWMANVILLE, ONT.

For Sale by all Dealers.



Keep The Sink Clean!

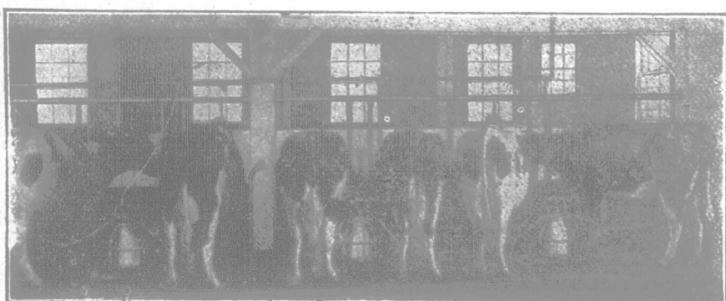
It's so important!—yet easy and simple when you use Panshine. Removes all grease and grime. Works like magic—quickly, easily, thoroughly. Panshine is a pure, white, clean powder without any disagreeable smell. Does not hurt the hands.



PANSHINE

keeps pots and pans sweet and appetizing. Cleans woodwork and paintwork.

Large Sifter 10c. At all Grocers



Read What A Satisfied User of a B-L-K Has To Say:---

Ottawa, Ont., Nov. 4, 1913.
Messrs. D. Derbyshire & Co., Brockville, Ont.
Gentleman: Re your favor of recent date asking for a report of results on my "B-L-K" Milker, would say: I am still perfectly satisfied with same. I have been using the machine for about eight months, and have not lost a single milking, and would not think of going back to the old method of hand milking.
I may add that previous to making my decision in choice of machines I had another make in on trial for thirty days, but had no hesitation in making a decision in favor of the B-L-K as it suited me best in every way.
Wishing you every success with the machine.
I remain,
Yours truly,
(Sgd.) E. A. PARSON.

P.S.—If you know of any person in my district who would like to see the machine working I should be pleased to take him out to my farm and show him all.—E. A. Parson.
The object of a milking machine is not simply to draw some of the milk. Almost any kind of a sucking or squeezing device will do that. A successful milker must continue to get all the milk and do it in such a way that the milk giving ability of the cow will be developed and the maximum yearly yield of milk be obtained.
A good milker must be simple, easy to keep in order and to operate, and so constructed that the milk is kept free from dirt.

Every one of these requirements is fully met in the present Burwell-Lawrence-Kennedy Milker

To those interested we shall be happy to send circular matter describing our "Simplex" Link-Blade Cream Separators, "Simplex" Regenerative Pasteurizers, "Simplex" Combined Churn and Butter Workers, "Simplex" Cream Ripeners, Facile Babcock Milk Testers, and other apparatus and supplies for Dairies, Creameries and Cheese Factories.

D. DERBYSHIRE & CO'Y.
Head Office and Works - BROCKVILLE, ONT.
Branches: PETERBOROUGH, Ont. MONTREAL and QUEBEC, P. O.
We Want Agents in few Unrepresented Districts.

When writing advertisers, kindly mention "The Farmer's Advocate."

Several of the Beavers have forgotten to give their age. Will the delinquents please supply this information as soon as possible. Several, also, of those who wish to compete have asked for the rules and particulars of the competition. We would refer these to page No. 721 in our issue of April 9th, where the competition is announced and full particulars given.

Greenfield, Ont.

Dear Puck and Beavers,—As this is my first letter to the Beaver Circle, I hope it will escape that monstrous w.-p. b. My father has just begun taking "The Farmer's Advocate" and we find it very good. I love to read the letters from the Beavers.

I am eleven years old, and I am in the fourth class. I have two brothers and one sister. I have a little colt called Dexter, a dog named Carlo, a cat named Queenie, and a little white hen which I call Biddy. Every summer, a friend of mine comes to spend the holidays at our neighbor's and we have much fun together. There is a river flowing through our farm and we love to wade in it and gather pretty shells.

I will tell you about a little garden which I had last summer. I had one flower-bed which was seven feet long and four feet wide. I planted two rows of phlox, one row of carnations, a row of portulacas, a row of asters, a row of pansies and a row of nasturtiums. I also had a bed in which I planted vegetables. I planted lettuce, carrots, beets, radishes and cauliflower. I took good care that nothing would happen to my garden, and in a few days the leaves were peeping out of the ground. I was kept rather busy after that, keeping the weeds from growing. Soon after my flowers began to bloom and they were very pretty. When the seeds were ripe I gathered all I could find, and I will have another garden next year if nothing happens.

I would like very much if a girl of my age would write to me. As my letter is getting long I will close. Wishing you every success.

CASSIE SMITH.
Greenfield, Ont.

Dear Puck,—Well, Puck, as I never have written to your charming circle, I now take the pleasure of writing you a letter. My father has taken "The Farmer's Advocate" for many years and finds it a great help.

I live on a farm of one hundred acres and would not live in the city for a good deal.

I go to school nearly every day, and I am in the fourth book, there are only five in my class. I have one mile to go to school, and we have lots of fun. We play all sorts of games, we mostly play "cut the cheese", and sleigh-riding down hill. Our teacher's name is Miss Powell.

I like reading books like a lot of other beavers. Some of the books I have read are the "Wapping Old Chairs," "The Tiny Little Night Cap," "The Basket of Flowers," and many other ones.

For pets, I have not very many. I have a baby brother which I think far more of than any pets you could name.

My grandmother has a dog which will go in a handsleigh and draw me all over. I guess I will close for fear this letter will pop into that horrible w.-p.-b. Wishing the circle all kind regards.

I remain, your friend,
VERNA SMITH,
Maple Ridge, Que. (age 12)

R.R. No. 5, Ingersoll, Ont.

Dear Puck and Beavers,—I have written two letters before, and saw them both in print. That gave me courage to write again. Say Puck, I would like very much if we could have a drawing competition. As Mable Gunning said; I always like to get hold of "The Farmer's Advocate" when I get home at night, and read the letters. I have two brothers and a sister, they are all older than I. Their names are Will, Archie, and Jean. We have eleven horses, their names are, Bob, Mike, Bill, Nell, Maggie, Jess, Star, Fire, Floss, Clip, and Fan. Fire is my own. We are expecting to sell him next Saturday, at a horse sale

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TRADE MARK PRO-FAT L. E. PROFIT



FEED DRIED BREWERS GRAINS AND WATCH THE MILK FLOW INCREASE

As a body builder and Milk Producer there is nothing like "PRO-FAT" for your cows. "PRO-FAT" is a wholesome, nutritious feed. It increases the milk flow and ensures the quality. Every milking counts in real profits.

"PRO-FAT" FEED

is scientifically prepared from DRIED BREWER'S GRAINS. They have proven their food value to hundreds of leading dairymen.

For Hogs, Try Our Malted Corn Feed.

Let us send you the names of some of the big users, together with our booklet. It tells how to increase the milk flow. Write now.

The Farmers' Feed Co., Ltd.
108 Don Esplanade, - Toronto

Prove it Yourself Without Cost



I will send you a "1900" Gravity Washer for 30 days,

Free Trial

—not a cent of cost to you—I pay freight. Everybody who has used this washer says it is the "best ever." Write me to-day personally for booklet and particulars.

"1900" Gravity Washer H. H. MORRIS,
Manager, "1900" Washer Co.,
355 Yonge Street. Toronto, Can.

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Millets	Per bus. Bags free
Hungarian	\$1.60
Common	1.60
Siberian	2.25
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Buckwheat	Per bus. Bags free
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Rape	
Dwarf Essex	6c. lb.

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Seed Merchants Since 1866
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MAIL CONTRACT.

SEALED TENDERS, addressed to the Postmaster General, will be received at Ottawa until noon, on Friday, the 3rd day of July, 1914, for the conveyance of His Majesty's Mails, on a proposed contract for four years, 120 single trips per week between Woodstock Post Office and Grand Trunk Railway Station from the Postmaster General's pleasure next.

Printed notices containing further information as to conditions of proposed contract may be seen and blank forms of tender may be obtained at the Post Office of Woodstock, and at the office of the Post Office Inspector at London.

G. C. ANDERSON, Superintendent.
Post Office Department, Ottawa.
22nd May, 1914.

Let "Sunlight" Dispel the Gloom

THE shadow of a blue Monday does not fall across the path of those who use Sunlight Soap. For this soap cuts labor in half.

And the nightmare of clothes being "rubbed to shreds" disappears when you learn the gentle Sunlight way.

Sunlight Soap is as pure as sunlight itself. A \$5,000 guarantee says you cannot find a single adulterant or impurity in this cake of concentrated cleanliness.

Sunlight Soap

Sold by all grocers. 132

Worth thinking about

When you take out a policy in The London Life, you are figuring on certainties, not surmises.

Write for information

The London Life Insurance Co.
LONDON CANADA 58



in Woodstock. He is coming two-year-old, and was born on my birthday. We are milking fourteen cows. My father is a Holstein breeder. We have eleven calves, seven heifers, and four bulls. Well as my letter is getting pretty long I will close. Hoping to see this letter in print. I would like if some of the Beavers would write to me.
STEWART RIVERS,
Aged 11, Sr. Third Class.

Dear Puck and Beavers,—This is my first letter to the Beaver Circle. I have been reading the letters every week, but never got up courage enough until now. But seeing the two snaps of the girls in the Garden Competition, made me think that I would write and tell you about my photography. I have a little Brownie camera it is not a new one by any means, but nethertheless it will take pictures as good as a new one. I have taken about fifty snaps. This is one of our cows on pasture. My camera has travelled across the Atlantic, and so have I, although I am a Canadian. If any of the Beavers wish to correspond with me I would be very pleased to hear from them. If any of them are amateur photographers I would also be glad to get a snap of them. I will do the same. As my letter is getting rather long, I will close wishing the Beaver Circle best success.

Yours truly,
EDITH ROGERS.

Derry West, Ont. (age 13, Jr. IV. class)
Thanks for the photograph, which is very pretty, but not quite sharp enough for reproduction.

Sandy Point, Shelburne Co., N. S.
Dear Puck and Beavers,—This is my first letter to your circle. My father has taken "The Farmer's Advocate" for a number of years. I always look for the Beaver Circle when it comes. I enjoy reading the letters from the boys and girls. I have one mile to walk to school. I am not going very regular. I was operated on for appendicitis last year, on the 24th of May. I have two brothers and one little sister. For pets I have a white cat called Snowball, my brother has a black one called Darky. We also have a dog called Don. I hope this will not be too long to publish.
ELLA F. COFFIN.
(Grade V. age 10)

Dear Puck and Beavers,—This is my first letter to your charming circle. I live on a farm of 150 acres. My grandpa lives right across the road from us. I have a brother older than myself. My father has taken "The Farmer's Advocate" for about fifteen years. I like the Beavers' letters very much and I would like to hear some more about "The Wild Animals of Western Ontario", by Victor Woollings. We keep ten horses and also thirty-two head of cattle and have four little calves. I have a pony. His name is Czar. I have a nice collie dog, also three bantam hens and a rooster. We have to watch him when the hens are laying, or as soon as he can he will eat the eggs.

I would like to join your circle, may I, Puck? If you consider this worthy to print, I will write again and tell about a pair of raccoons which we had for about a year. Well, my letter is getting quite long, so I will close, wishing the circle every success.

Your friend,
MATTIE McBETH,
(age 11, Jr. IV. Book)

Salford Ont., R. R. No. 1.
Plenty of room in the Circle for everybody. Will be glad to hear about your raccoons.

Our Junior Beavers.

[For all pupils from the First Book to Junior Third, inclusive.]

Dear Puck and Beavers,—I have been reading your letters and thought I would write to you. I like to go to school every day; our teacher's name is J. E. Dawson. I read in the Third Book. Our school is one of the largest public schools in the county of Dundas. I hope this will escape the w.-p. b.
WILFRED CARRUTHERS.
(Age 10 years.)

Elma, Ont.

TRADE MARK Wilkinson Climax B REGISTERED Ensilage and Straw Cutter

Our "B" machine, built especially for the farmer. A combination machine—it will cut and deliver green corn into the highest silo or dry straw or hay into the mow. 12-inch throat, rolls raise 6 inches and set close to knives—solid, compact cutting surface. Can change cut without stopping. Can be reversed instantly. Direct pneumatic delivery. Knife wheel carries fans. No-lodging, everything cut, wheel always in balance. Steel fan case.

Made in two styles—mounted or unmounted. We also make larger type machine for custom work. Ask your dealer about this well-known machine and write us for new catalog showing all styles.

THE BATEMAN-WILKINSON CO., LIMITED
418 Campbell Ave.
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FORTNIGHTLY SAILINGS
— BY —
TWIN-SCREW
MAIL STEAMERS
FROM
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AND
Halifax (N.S.)
SPECIAL FACILITIES
FOR TOURISTS

For Illustrated Folders, Rates, etc., apply to the Agents of The Royal Mail Steam Packet Company; or in HALIFAX (N.S.) to PICKFORD & BLACK, Ltd.

Better Butter— Bigger Profits!



If you wish your butter to be smooth and uniform, use the

"BRITISH" Butter Worker

Adopted by the best dairies in Gt. Britain and Canada. Makes the butter firm—even—consistent all through. Results in better butter and bigger profits!

Sold by dealers everywhere. Three sizes—14 in., 17 in. and 20 in. wide.

MAXWELL'S, Limited St. Mary's, Ont. 4

MOLES, WARTS

Hair on the face, neck and arms, red veins, brown growths on elderly people's faces, and other disfiguring blemishes can always be permanently eradicated in an almost painless manner by our antiseptic method of electrolysis. Booklet "E" and sample of toilet cream mailed free.

HISCOTT INSTITUTE, 61 College St. Toronto Established 1892

Richard's QUICK NAPTHA THE WOMAN'S SOAP

Deering New Ideal A Money Saving Binder



THESE Deering binder features appeal to the farmer. The elevator, open at the rear, delivers the grain properly to the binding attachment. Because the elevator projects ahead of the knife it delivers grain to the binder deck straight. A third packer reaches up close to the top of the elevator and delivers the grain to the other two packers. A third discharge arm keeps the bound sheaves free from unbound grain.

The T-shaped cutter bar is almost level with the bottom of the platform and allows the machine to be tilted close to the ground to pick up down and tangled grain without pushing trash in front of the knife. Either smooth section or serrated knives can be used. The Deering knotter surely needs no recommendation.

The Deering local agent will show why Deering New Ideal binders are the standard of binder construction. See him, or, write to the nearest branch house for a catalogue.

International Harvester Company of Canada, Ltd

Hamilton, Ont. London, Ont. Montreal, Que.
Ottawa, Ont. Quebec, P. Q. St. John, N. B.
These machines are built at Hamilton, Ont.



Put the difference in the bank. The saving between Ford cost and heavy car cost is "velvet" for the prudent buyer. He knows the Ford not only saves him dollars but serves him best. It's a better car sold at a lower price and backed with Ford service and guarantee.

\$600 for the runabout; \$650 for the touring car and \$900 for the town car—f.o.b. Ford, Ontario, complete with equipment. Get catalogue and particulars from any branch, or from Ford Motor Co., Ltd., Ford, Ont.



One Minute Washer

Best Machine Made—Easy to Operate
Washes Clean—Moderate in Price

Write to-day for Catalogue

ONE MINUTE WASHER COMPANY, Toronto

Dear Beavers,—My father has taken "The Farmer's Advocate" for a number of years, and we like it fine. I have for pets three cats, and one pet calf born a few months ago. I have two sisters; their names are Ethel and Mary. Mary and I go to school every day we can. Our teacher's name is Miss Short. We all like her fine. We have three horses, three cows, one calf, and six little pigs. We had more, but we had a sale, and we have just that many left. We have rented our farm. We had a farm of a hundred acres. At Christmas we had a Christmas tree at our school, and I got a few things. My teacher gave me a book called "Putting on the Screws." I will close with a riddle.

What has four eyes and can't see?
Ans.—Mississippi River.

What has ears and cannot hear?
Ans.—Corn. SADIE CLARK.
(Age 10, Jr. III.)

Kippen, Ont., R. R. No. 2.

Dear Puck and Beavers,—I am sending you a little poem that I think is very pretty. My brother takes "The Farmer's Advocate" regularly, and says that he would not be without it. We live on a bush farm. My brother's homestead is two and one-half miles from the C. P. R. depot. My father and brother both say that the Eagle River District is the best clover country in the Dominion.

BEATRICE JOHNSON (age 10).
Box 38, Eagle River, Ont.

DO IT NOW.

(Sent by Beatrice Johnson.)

If you have a gray-haired mother
In the old home far away,
Sit down now and write the letter
You put off day by day;
Don't wait until her tired steps
Reach heaven's pearly gate—
But show her that you think of her
Before it is too late.

If you've a tender message,
Or a loving word to say,
Don't wait till you forget it,
But whisper it to-day;
Who knows what bitter memories
May haunt you if you wait?
So make your loved ones happy
Before it is too late.

We live but in the present
The future is unknown—
To-morrow is a mystery,
To-day is all our own;
The chance that fortune lends to us
May vanish while we wait,
So spend your life's rich treasure
Before it is too late.

The tender word unspoken,
The letter never sent,
The long-forgotten messages,
The wealth of love unspent,
For these some hearts are breaking,
For these some loved ones wait—
So show them that you care for them
Before it is too late.

Riddles.

What goes in and out and yet it never stops? Ans.—A rail fence.

A man was at the end of a ten-acre field, and yet he was on the other. Ans.—Yet was the dog's name.—Sent by Pearl Simpson (age 12, Jr. III).
Corunna, Ont.

Why is the moon never rich? Ans.—Because it spends all its quarters in getting full.—Sent by Percy Walker (Jr. III, age 10), Eramosa, Ont.

The Ivory Snuff Box.

By Arnold Fredericks.
(Copyrighted.)
Chapter XX.
COERCION.

Grace had remained upon her knees beside the prostrate figure of her husband but a moment when she was torn away by Hartmann and his assistant. Before she realized their intention, the former had slipped about her waist the broad, leather strap he had brought from the room above, and was busy securing it to an iron staple fixed in

It Pays to Spray

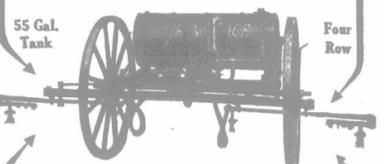
Not only for protection from bugs and blight but to increase the yield. Practical farmers and experiment stations have clearly proven that the yield is increased enough with every spraying to pay for solutions, time and labor many times over.

IRON AGE Traction Sprayers

Have capacity, power and adjustment to suit every need and pumps with the least slippage of any in use on any sprayer.

They are made with single or double acting pumps, 55 or 100 gallon wood tanks, wood or steel wheels regular or wide spray bars, combination pole and thills, or either separate.

There are special spray bars for many different crops, potatoes, tomatoes, pickles, cantaloupe, grain, cotton, tobacco, etc. This list includes a new one with drop nozzles that cover the underside of the

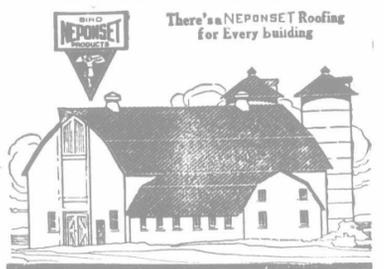


leaves as well as the top. A six-row bar enables potato growers to cover large acreages thoroughly and in less time.

An orchard attachment increases the value of these machines to the man who also owns an orchard.

See them at your dealers and write for "Spray" booklet showing full line of Hand, Knapsack, Bucket Barrel, Traction and Power Sprayers.

Bateman - Wilkinson Co'., Limited
419 Symington Avenue,
TORONTO, ONTARIO



What protection will your roof afford eight, ten or fifteen years from now?

Most roofings look alike. Many are made to sell. A few to last. If you let service—not salesmanship—sell you roofing, there's but one choice—NEPONSET ROOFING.

NEPONSET records life these: "One NEPONSET Roof rimped up after giving 8 years of the best kind of service and re-laid a second time"; "NEPONSET Paroid now giving its 16th year of excellent service"; "not a single leak in 13 years," are due to just this—NEPONSET Roofing is "slowly made." This is why it is so slow to wear out. Dollar-for-dollar,

NEPONSET PAROID ROOFING

gives best, longest and safest service. Surely send for ROOFING BOOK—Free.

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THE Sherlock-Manning 20TH CENTURY PIANO

"Canada's Biggest Piano Value"
SAVE \$100; write Dept. 4 for catalogue L—which tells how.
THE SHERLOCK-MANNING PIANO CO.,
London, (No street address necessary) Canada

the wall at one side of the room. Then he stood back and surveyed the scene with a smile of satisfaction.

"You see, Mayer," he observed grimly, "my purpose. The wife sees the husband's suffering. If he refuses to speak she will. One or the other will tell us what we want to know, of that you may be sure. Let us leave them to talk matters over."

He and his man at once left the room, and in a few moments Grace heard their footsteps upon the floor of the laboratory above.

"Richard!" she cried softly. "Are you suffering very much?"

"Never mind, dear," he said, trying vainly to turn his head so that he might see her. "What has happened—why have they brought you here?"

She told her story brokenly, with many sobs.

"I could not help it, Richard," she moaned. "I did my best. I could not help their finding out everything."

"I know it, dear. You have done all you could. Is there any news from outside?"

"None. They told me to play the phonograph to send you a message. Did you hear it?"

"Yes. I heard and understood."

"Understood? Then you know something; you have some hope?"

"I do not know. It may be, although I cannot see what to do now. I dare not tell you more than that—these scoundrels are undoubtedly listening in the room above."

"Richard, what is that light? What is it they mean to do now? Dr. Hartmann showed me his hand; it was all scarred and burned. He said it came from that." She looked toward the glowing cone of light with bitter anger.

"I do not know—exactly. I am not sure. The agony of the thing is very great; it burns into my eyes—into my brain. Hartmann says it will produce insanity. I do not know whether this is true or not. I begin to feel that perhaps it may be; not that the light itself can produce it, but that inability to sleep, pain, nervous exhaustion, the constant glare and brilliance before my eyes—those things might cause a man to go insane—if they were kept up long enough."

"But—he—he will not dare to do that."

Duvall groaned, striving in vain to turn his head to one side.

"He intends to keep me here until I tell him where he can find the snuff-box."

"Richard!" Grace fairly screamed out his name. "Then you must tell—you must. You cannot let yourself go mad—not even for M. Lefevre."

"I shall not tell—no matter what comes," he replied.

"Then I will. I refuse to let you suffer like this. I can't do it. I won't. If you do not speak, I shall. Oh—my God—don't you see—I love you—I love you so—what do I care about this foolish snuff-box? I want you—you—and I won't let them take you away from me."

"Grace. You shall not tell them."

"I will."

"I forbid it."

"I cannot help it, Richard. I am ready to disobey you, if I must, to save your life. Even if you turn from me—afterward—I cannot help it. I refuse to let them go ahead with this thing."

He groaned in desperation. "Please—please—my girl—listen to me. You must not speak. We must think of our duty to those who have trusted us. Wait. I implore you. Don't do this."

"I will. I have a duty to you which is greater than my duty to them. Dr. Hartmann!" she screamed. "I will tell everything—everything." She collapsed against the wall and sobbed as though her heart would break.

In a few moments they heard Hartmann and Mayer descending the steps, and the door was thrown open.

"Ah, so you have come to your senses, have you?" the doctor cried. "Well, what have you to say?"

High Quality Builds Big Telephone Business

THIS business was organized to manufacture telephone equipment for independent local and municipal systems. Right from the start our equipment made records for efficiency. It did not take long for our goods to acquire a reputation for quality and reliability. As a result, our business has grown by leaps and bounds.

It is a well-known fact that we have been securing over 80% of the new telephone business in Ontario. The business, too, has been secured with less effort than business secured by competitors. The satisfaction our telephones and equipment have given under all conditions has paved the way for easy business getting.

To judge how fast our business is growing, you'll remember we stated in a previous announcement that our business last year doubled that of the year before. Well, this year the first two months' sales total more than twice the 1912 sales for the same period. More and more is it being recognized by those in the local telephone business, that we are the legitimate people to deal with. There are those in the telephone business who are interested in depreciating the success of the independent telephone movement and the development of municipal systems. On the other hand, our business lies wholly and directly with the independent telephone systems, and it is to our own best interests to look after

those systems well, as on their success depends the growth of our business.

If you would like a list of the large independent telephone systems built in Ontario during the last twelve months, just drop us a line. We would be glad to send you a list of the systems, with the make of the telephones they are using. In fact, if you'll name over the large independent systems built during the last year in Western, Northern and Eastern Ontario you'll find that nine out of every ten are using our telephones and equipment.

You are absolutely safe in equipping your system with our telephones. We guarantee them as regards material and workmanship. In fact, we guarantee all our equipment and materials. And in addition, we offer to send your telephones for **Free Trial**, so you can test and compare them with others right on your own lines before risking a dollar.

Ask for our No. 3 Bulletin—containing the latest information about building telephone lines. Also No. 4, describing our magnetic telephones, is free on request. Send for a copy.

Let us quote you on your year's supply of Dry Cell Batteries.

Canadian Independent Telephone Co., Limited

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Also manufacturing agents for the Magnaphone Co., under Mr. George R. Webb's Canadian Patents, No. 123363, No. 124537, No. 131145.

You save time and money

Patented Brace Block

A heavily ribbed malleable iron block attaches to the truck arms just below the track, and the bolt connecting the sides of the carrier frame passes through the lower end. This takes all strain off the bolt and increases the strength of the truck arms. No load can spread them.

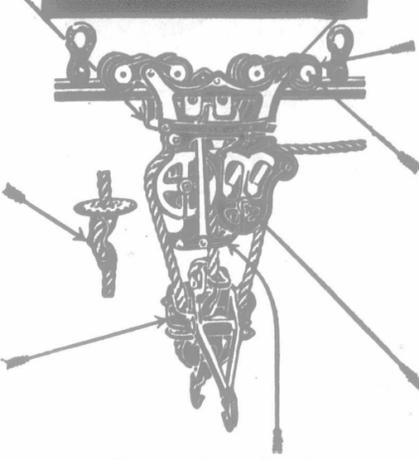
Adjustable Trip

Used when desired to carry the load into the mow without elevating to the track. Slip it up or down on the centre draft rope as desired. A simple, effective adjustment without complicated parts. This trip is supplied when ordered without extra charge.

The Great Triple Purchase Feature

Three ropes lifting the load instead of two, as with the ordinary carrier; gives the horse one-half more power, reduces the strain on the ropes and lengthens the life of the outfit.

LOUDEN Junior Sling Carrier



Sure to Work

A trip stirrup extends below the carrier frame and attaches to the locking mechanism. It is impossible to keep the horse going on the draft rope and not bring the sling pulleys in contact with the trip stirrup. Once this is done the car is bound to leave the stop block and run back into the barn with the load. Side winds or uneven loads, cannot affect the proper working of the LOUDEN JUNIOR SLING CARRIERS.

Write for catalogue and special descriptive circular dealing with above Carrier.

LOUDEN MACHINERY CO., Dept. 31 GUELPH, Ont.

Hay Tools, Feed and Litter Carriers, Stable Equipment, Barn Door Hangers.

(3)

Engine Trucks

Distributes the load well along the track, increases the strength of the carrier and causes the load to run more steadily. No four-wheeled carrier, however much spread out, is so easy on the track or runs so steadily.

Short Truck Arms

The Truck Arms are only 5 inches long, nearly straight and extremely well braced. They cannot be sprung.

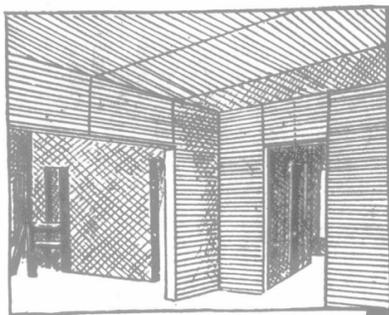
The Unbreakable Axle

These Axles are simply an extension of the main frame. Note how they are shouldered out at the frame; impossible to break them. No riveted or bolted pin axles are used on Louden Carriers. Such axles are always causing trouble.

Patent Bushings

The Pulley Sheaves run on Patent Bushings, recessed into the side of the frame. This takes all the strain off the bolt and puts it on the frame where it belongs. The sheaves are large, of extra strength and easy running.

For Walls and Ceilings



Bishopric Sheathing Board is a combination of lath, asphalt-mastic and heavy, rosin sized, high-grade cardboard. Walls and ceilings made of "Bishopric" are satisfactory in every way and your house will be warm in winter and cool in summer because the Asphalt-Mastic is absolutely moisture and temperature proof.

Lath side out "Bishopric" makes a back-ground for plaster that is without a creditable competitor. The laths are keyed by a patent process, each lath is undercut in a "V" shade and the plaster curls under and locks itself securely.

Bishopric will cut the cost of applying plaster, cement or Stucco, in half.

If your dealer does not handle our products we will gladly send you samples and a booklet showing houses built of our materials together with full details as to cost delivered at your home. 53

BISHOPRIC WALL BOARD CO., LIMITED
CANADA LIFE BUILDING, - - - OTTAWA, Ont.

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INTER-PROVINCIAL FAIR BRANDON, MANITOBA

JULY 20 to 24, 1914
THE BIG FAIR!

Where the BEST in Live Stock, Agricultural Products, Art and Manufactures are to be seen, exhibited in the Best-Equipped and Most Beautiful Fair Grounds in Canada.

\$50,000 IN PREMIUMS AND PURSES \$50,000

The ATTRACTION FEATURES include
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Magnificent Pyrotechnical Displays
and High Class Music

Attractive Programme of Speed Events Each Day
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Excursion and Single-Fare Rates on all Railroads
ENTRIES CLOSE JULY 11

Write for Prize List



J.S. GIBSON, President

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For Your New House Save 50% of the price of ordinary clay brick by using cement brick made with the

NEW WETTLAUFER IMPROVED 6-BRICK MACHINE

If you have lots of sand and gravel, you can, with one of our machines, make cement brick which will cost you less than half what clay bricks do. Your only outlay would be for cement and labor. Cement bricks are all the same strength and become harder the longer they set, so that your house would not fall in pieces like old clay brick houses will. Hundreds of farmers have been using these machines with the greatest success, producing over 2,000 bricks per day. They save on the kiln charges, and the saving on brick is a great one, especially for the machine. Then you can sell your surplus bricks to your neighbors, which will be profitable for you.

We specialize in the manufacture of all kinds of Concrete Machinery. Write for Catalogue to W. 3.

WETTLAUFER BROS.
178 Spadina Ave. TORONTO

Grace raised her head. "If I tell you where the ivory snuff-box is hidden," she said, "will you let my husband go?"

"Yes. Your husband, and yourself, and the rat we've just caught sneaking around outside. He's up in the laboratory now. You can all take yourselves off as quickly as you like when once the snuff-box is in my hands. Now speak."

"First let my husband up."

Hartmann went to the wall, switched off the violet rays, turned on the electric lamp, then nodded to Mayer. "Unbind him," he said.

Duvall staggered to his feet, half blinded. As he did so, Hartmann turned to Grace.

"Speak," he commanded. "We are wasting time."

Before Grace could reply, Duvall turned to her.

"I forbid you," he cried. "If you do this thing, I will never see you again as long as I live. You are destroying my honor. I refuse to let you do it. Stop."

The girl hesitated, and Hartmann swore a great oath.

"Take her out of here, Mayer," he cried. "She'll never speak as long as her husband is present to dissuade her. Up with her to the laboratory. She'll talk there, quick enough."

"No!" Duvall staggered toward her. "You shall not." His movements were slow and uncertain, due to the blinding pain in his eyes, and his stiffened, nerve-racked limbs. Hartmann pushed him aside angrily.

"Be quiet," he growled. "Let the woman alone."

Meanwhile Hartmann's companion had torn away the strap which bound Grace to the wall and was leading her to the door. Her husband's efforts to detain her, weak and uncertain, were easily frustrated by Hartmann. In a few moments the door had swung shut upon the detective, and she was led up the steps to the room above.

Here she fell into a chair, and looking about, saw huddled on a couch in the far corner of the room, a little, bent, old man, who sat with his white head bowed upon his breast, his hands tied behind his back. Hartmann went over to him and unfastened his bonds.

"You will be happier in a moment, my friend," he laughed. "This lady is going to set you free."

Dufrenne—for it was he—sprang to his feet.

"How?" he demanded. "How?"

As he spoke he crossed the room, his eyes gleaming, and faced Grace as she sat in the chair.

"Wait and see, old man," said Hartmann roughly. "Stand aside, please." He pushed Dufrenne impatiently away. "Now, young woman, where is the snuff-box?"

Grace raised her head to reply, when the little, old Frenchman turned to her, pale with anger.

"No!" he shouted, starting forward. "You shall not do this thing. Would you be a traitor to France!"

Grace looked at him and shuddered. His face was quivering with emotion. His eyes burned with piercing brightness; he seemed about to spring at her in his rage. In a moment Hartmann had turned on him.

"Be quiet!" he roared. "I want no interference from you, Mayer!" He pointed a trembling forefinger at the old Frenchman. "Take this fellow away."

Mayer took Dufrenne by the arm and twisted it cruelly.

"No nonsense, now," he growled, thrusting the old man toward the couch upon which he had been sitting. "Hold your tongue, or it will be worse for you."

Dufrenne resisted him as best he could, but his age and feebleness rendered him helpless. He sank upon the couch, with tears of anger starting to his eyes.

Grace dared not look at him. The enormity of the thing she was about to do appalled her. Yet there was Richard, her husband; Richard, whom she loved with all her soul, in the room below, facing madness, death. The love she felt for him overmastered all other considerations. She turned to Hartmann with quivering face.

"The box is in the room below," she cried, in a voice shaking with emotion. "Mon Dieu, mon Dieu!" she heard

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Dufrenne gasp, as he started from the
 couch. "You have ruined us all!"

Hartmann and Mayer gazed at each
 other incredulously. "Impossible!" the
 former gasped. "Impossible!" then
 turned to Grace. "Girl, are you tell-
 ing me the truth?"

She nodded, bowing her head upon
 her hands. She could not trust herself
 to speak.

"Where? Where in that room could
 it be hidden? Tell me!" He shook
 her angrily by the arm. "Haven't we
 wasted enough time over this thing?"

Still she made no reply. Now that
 she had told them, a sudden revulsion
 swept over her. She hated herself for
 what she had done, hated Hartmann,
 hated M. Lefevre for placing her in this
 cruel situation.

Hartmann dragged her roughly to her
 feet.

"If the box is in the room below,
 come with me and find it." He hurried
 her toward the staircase. "Come along,
 Mayer," he called over his shoulder.
 "Bring that fellow with you. It won't
 be safe to leave him."

As she descended the steps, Grace
 heard the other two close behind her.
 The Frenchman staggered along like a
 man in a daze, offering no resistance.

When they burst into the room in
 which Duvall was confined, they found
 the latter standing beneath the electric
 lamp, a look of determination upon his
 face. He regarded them steadily, in
 spite of his reddened and burning eyes.

Hartmann paid little attention to him.
 He was too greatly interested in the
 movements of Grace.

"Now," he said, "where is it? You
 say the snuff-box is here—in this room.
 Find it."

She hesitated, looking at her husband
 pitifully. What would he think of her?
 Would he, too, regard her as a traitor,
 a weak and contemptible creature, fore-
 ever barred from love and respect, false
 to her duty, her honor? His face told
 her nothing. He was regarding her im-
 passively.

She remembered now that he had said
 that he would never see her again if she
 disobeyed him. Then she turned away,
 her mind made up. She would save
 him, come what might. He had told
 her that the box was hidden in an
 opera-hat, in one corner of the room.
 She glanced about quickly, trying to
 discover its whereabouts in one of the
 dark corners.

Duvall saw her intention. He took a
 step forward, and addressed Hartmann.
 "You have forced this girl, through
 her love for me, to betray a great
 trust. I prefer that, if any one here
 is to become a traitor, it shall be
 myself." He thrust his hand into the
 pocket of his coat, and extended a
 round, white object toward the astonish-
 ed doctor. "Here is the snuff-box."

Dufrenne, for the moment left un-
 guarded by Mayer, sprang forward with
 a fierce cry.

"No—no—no!" he screamed. "You
 shall not—you shall not!"

"Out of the way!" exclaimed the doc-
 tor, brushing the old man aside as
 easily as though the latter had been a
 child. With eager hands he took the
 box, and going to the light, bent over
 it. As he saw the pearls, the cross, his
 face lit up with delight.

"This is it, Mayer. Just as the valet
 described it."

He gave the ring of pearls a swift
 turn, then pressed immediately upon the
 larger one of the circle and slid the
 top of the ivory cross to one side. Du-
 vall, who was watching him with inter-
 est, concluded that from some source,
 probably through M. de Grissac's dead
 servant, Dr. Hartmann had learned
 thoroughly the secret of the box.

With a cry of satisfaction the latter
 drew out from the tiny recess the slip
 of folded paper, glanced at the row of
 numbers written upon it, then passed it
 over to Mayer. The latter nodded his
 head.

"Now we are all right," he muttered.
 "This is easily worth a million francs."
 "Money doesn't measure its value, my
 friend," the doctor remarked gravely, as
 he replaced the slip of paper beneath the
 cross and put the box carefully into
 his pocket.

During these few moments, Dufrenne
 had been observing the doctor with bul-
 ling eyes. Suddenly he turned on the
 detective.

"May God curse you and your woman

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for this," he cried hoarsely, "until the day of your death. May He turn all men against you, and make your name a despised and dishonored one forever. You have been false to your duty—false to France. You are a traitor, a contemptible dog of a traitor, and you deserve to die." His whole body shook with passion as he poured the fury of his wrath upon the man before him.

Duvall sank weakly against the packing-case behind him. Suffering, loss of sleep and food, the burning pain in his eyes, his brain threatened to overcome him.

"Let me alone," he gasped. "I am so tired, so very tired." He almost fell as he uttered the words and, indeed, would have done so had Grace not gone quickly up to him and passed her arm lovingly about his shoulders. Turning to Dufrenne, she regarded him with a look of defiance.

"He is not guilty," she cried. "It is I—I who have been false. I made him do it—I made him do it. Go away, and tell the others what you please. I know that my husband has done his best." She fell to soothing him, kissing him upon his hot forehead, his burning cheeks.

Dufrenne looked at Dr. Hartmann, who was regarding the scene before him with impatience.

"Do I understand, monsieur," he asked in a ghastly voice, "that I am free to leave this place?"

"Yes. Out with you. I could hold you for trespass upon my grounds, for attempting to break into my house, but I don't want to be bothered with you. Go!" He went to the door and held it open.

"Mayer," he said, "show this fellow the road. And as for you," he turned to Duvall and his wife, "get away from here, and from Brussels, as soon as you like. I advise you not to stay in the town. I rather think that through the evidence of Seltz I can make it slightly uncomfortable for you. Tell what story you please. I have done you no injury. You came here of your own free will—you could have escaped and you would not. As for the light," he laughed harshly. "An ordinary arc, focused on your eyes with a powerful lens. It would probably have blinded you, in time, and if it kept you awake long enough, you would no doubt have gone mad, but so far you are not hurt much. I can swear that it is part of my treatment for a disordered mental state. My man here will agree with me. What are you going to do about it? How are you going to explain your robbery of Seltz in my office, the deception your wife had practised upon me and upon the United States minister? And above all, now that I have the secret I desire, I am quite willing to have a cast made of the snuff-box and return it to you, but I fancy that neither M. de Grissac nor my friend Lefevre will want to have the matter made public in the courts. You'd better leave here quietly and take the first steamer to America. I don't fancy you'll find a very flattering reception awaiting you in Paris."

He turned to the door.

"Come, I'll have your belongings put on a cab, and be glad to be rid of you." He paused beside the doorway, waiting.

Grace turned to her husband.

"Come, Richard," she said. "Let us go at once."

He made no reply, but followed her blindly. His spirits seemed broken, he walked like a man in a heavy sleep.

It was just dawn when half an hour later Richard Duvall and his wife drove silently through the ghostly streets of Brussels toward the railway station. The detective did not speak. He sat solemnly, dolefully, ruminating over the strange events of the last few days.

Richard Duvall, realizing, held one of the hands of his wife, who gazed at him with a look of the wildest at the thought of what he had done.

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The Right Hon. Earl Cadogan's celebrated flock of Southdown Sheep, at Culford Bury St. Edmunds, Suffolk.

Tuesday, July 21
Choice selection from Mr. J. Ellis Potter's celebrated herd of Pure-Bred Dairy Shorthorns, at Moor Hall, Aughton, Ormskirk, Lancs.

Catalogues and particulars may be had of John Thornton & Co., 7 Princes Street, Hanover Square, London, England, who will execute commissions and attend to insurance and shipment.

SHORTHORNS

Bulls all sold; choice females for sale. One yearling Clyde stallion, one yearling Clyde stallion, big, best quality and breeding. CARGILL LIMITED. JOHN CLANCY, Manager Cargill, Ontario Proprietors

CHOICE BULLS

Have two excellent bull calves left, which are 9 and 10 months old. They are both deep, low set calves, besides being good handlers, and their breeding is gilt edge. Also a number of heifers, all ages. WM. SMITH, Columbus, Ont.

Good Shorthorn Bulls not all sold. I have 2 roans, 17 and 12 months, respectively; a dark red, 12 months; a white, 11 months; a red roan, 10 months; all straight, smooth, wide, fleshy, strong-boned bulls, showing breed character; some from heavy-milking dams; also five yearling heifers. Priced on easy terms for quick sale. STEWART M. GRAHAM, Lindsay, Ontario

Oakland—52 Shorthorns Present offering: one red bull; just past two year old. Three crosses from imp. stock, ancestors all good individuals and good milkers. He is a sure calf getter and in good condition, \$165. Also good heifers and cows, all ages. We sell cheap. JNO. ELDER & SONS - Hensall, Ont.

Spring Valley Shorthorns

Herd headed by the two great breeding bulls, Newton Kinglesider (Imp.) 73783, and Nonpareil Ramsden 81422. Can supply a few of either sex. KYLE BROS., Drumbo, Ontario Phone and Telegraph via A.V.

THE MANOR Shorthorns and Lincolns

Bulls and rams all sold; a few females for sale. Inspection sold first. J. T. GIBSON :: Denfield, Ontario

FLEETCHER'S SHORTHORNS Present offering: 15 choice bulls, suitable for high-class herd heads; 8 to 11 mos., and females all ages. Present black bull, "Royal Bruce" (Imp.) 73783. GEORGE D. FLETCHER, R. R. No. 2, Erin, Ont. Erin Station, C.P.R. Leno, Ont. Phone

Please mention "The Farmer's Advocate"

Gossip.

The T. E. Bissell Company, Limited, whose advertisement runs in these columns are featuring a new steel stone-boat for the farm. Every farm must have a stone-boat, and all should have the best. See the advertisement of other lines of implements and machines as well and write the Bissell Co., Elora, Ont., or the John Deere Plow Co., Toronto, Ont.

There has been only one objection to steel cow stalls and stanchions, and that has been rust. Beatty Bros., of Fergus and Winnipeg, whose advertisement runs in this paper, claim to have remedied this by galvanizing their stalls and this galvanized steel never rusts. No extra charge is being made. See the advertisement.

A combination sale by auction of Ayrshires, held at Madison Square Garden, New York city, May 21st., proved a decided success. The highest price realized was \$875 for the two-year-old heifer Ryanogue Gwinette. Ryanogue Big Nancy, three years old, sold for \$650. Two other cows brought \$550 each, and the average was \$196.60. The highest price for a bull was \$500, for the three-year-old Ryanogue Peter Pan imp., purchased by R. R. Ness, Howick, Que.

EXHIBITION DATES.

- Calgary Industrial Exhibition, June 29-July 4.
- Lethbridge Exhibition, July 6-9.
- Canadian Industrial Exhibition, Winnipeg, July 10-18.
- Interprovincial Exhibition, Brandon, July 20-25.
- Agricultural and Industrial Exhibition, Regina, July 27-Aug. 1.
- Saskatoon Industrial Exhibition, Aug. 3-8.
- Edmonton Exhibition, Aug. 10-15.
- Prince Albert Industrial Exhibition, Aug. 25-27.
- Canadian National Exhibition, Toronto, Aug. 29-Sept. 14.
- Western Fair, London, Ont., Sept. 11-19.
- Central Canada Exhibition, Ottawa, Sept. 11-19.

The Western Fair, London, Ontario.

The Western Fair management have commenced operations already at Queen's Park in preparation for the great Exhibition which will be held this year, Sept. 11th to 19th. The buildings that were hurriedly built last year after the fire, are being made permanent. Another horse barn will be built. Cement floors will be put in the Machinery Hall and Stove Building and everything done to make the buildings comfortable for exhibitors and visitors. The track was re-clayed last fall and will be one of the best in Ontario for this coming Exhibition. Full information regarding the Exhibition will be given on application to the Secretary, A. M. Hunt, London, Ontario.

Questions and Answers.

- 1st—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.
- 2nd—Questions should be clearly stated and plainly written, on one side of the paper only, and must be accompanied by the full name and address of the writer.
- 3rd—In veterinary questions; the symptoms especially must be fully and clearly stated, otherwise satisfactory replies cannot be given.
- 4th—When a reply by mail is required to urgent veterinary or legal enquiries, \$1.00 must be enclosed.

Veterinary.

Partial Dislocation of Patella. Mare has something wrong with right hind leg. When she trots or pulls she drags the leg and throws it outwards. W. H. McE.

Ans.—The stifle bone becomes partially dislocated. Get a plaster made of 2 drums each of benzolite of a strong and camphorated, mixed with 2 oz. of vasoline, slip the hair off the front and inside of the stifle joint. Then get so that she cannot lift the patella. Rub well with the plaster over twice for two days. On the third day wash with warm water and get plaster on. Get a few more of the same plaster and use them on the other side of the joint. This will hold it in place and after that you can get a better result as long as you can get it. Be patient, cases of a complete cure are not infrequently cured.

Make this Windmill Pump for You

Our Airmotor solves the farm pumping problem. It costs nothing for power, and only needs oiling once a month. Use it to pump water into one of our high tanks or steel pressure tanks. From the tank, run a set of water pipes to your house, carriage shed, stable and garden. In your stable, fit each stall with our Woodward Water Basin, so every cow, steer or horse will have lots of water. This means more milk, quicker fattening, or better condition of your team, and no work or loss of time for watering. Have handy hose attachments to wash carriages, stable floors, hog pens, etc., at the barn, also pipes to water lawn and garden. You produce more truck, yet save labor.

Write us for our Airmotor Catalogue—We sell everything you need Get Airmotor, pumps, pipe fittings, water basins and stalls. You save wages, and do more and better work with these city conveniences at hand.

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Ontario Wind Engine & Pump Co., Ltd. 66 ATLANTIC AVENUE, TORONTO

Branches: Montreal, Winnipeg, Calgary

SHORTHORNS AND CLYDESDALES

We have seven yearling bulls and seven bull calves from 7 to 12 months. All reds and roans, and of choice breeding. We have some extra good imported mares for sale, also some foals. If interested, write for catalogue of their breeding.

W. G. PETTIT & SONS, Freeman, Ont. Burlington Junction, G. T. R. Bell 'Phone

"THE AULD HERD"

We have a select lot of females of all ages, and of the best Scotch families for sale. Also a March bull calf, red, little white, an Orange Blossom by Broadhooks Ringleader.

A. F. & G. AULD, Eden Mills, P.O. Guelph or Rockwood Stations

Willow Bank Stock Farm Shorthorns and Leicester Sheep. Herd established 1855; flock 1848. The imported Cruickshank Butterfly Roan Chief—60865—heads the herd. Young stock of both sexes to offer. Also an extra good lot of Leicester sheep of either sex; some from imported sires and dams. James Douglas, Caledonia, Ontario

Maple Grange Shorthorns

Pure Scotch and Scotch topped Breeding unsurpassed. A nice selection in young bulls, and a limited number of thick, mossy heifers. R. J. DOYLE, Owen Sound, Ont.

SHORTHORNS I have ten young Shorthorn bulls, some fit for service now. Part of them are bred and made so that they are fit to head the best herds in any country; some of them are of the thick, straight, good-feeding kind that will produce money-making cattle; some of them are bred from the best-milking Shorthorns, and the prices of all are moderate. I have SHROPSHIRE and COTSWOLD rams and ewes of all valuable ages. Write for what you want. I can suit you in quality and price. Robert Miller, Stouffville, Ont.

Shorthorn Cattle of the popular families for sale. Nine heifers just ready for breeding; 7 two-year-old heifers in calf; 10 young cows with calves by side or close to calving; 10 bulls ready for service, of good colors, at prices within the reach of all. Jno. Miller, Jr., Ashburn, Ont. Blairgowrie Farm, Myrtle, C.P.R. and G.T.R.

SHORTHORNS Our present offering consists of Nonpareil Lord—87184—Dam Imp. Dalmory Nonpareil 6th; 7 young bulls from 6 to 12 months old; 15 cows and heifers of choicest quality and breeding. A. J. HOWDEN & CO., COLUMBUS, ONTARIO. Myrtle, C.P.R. and G.T.R. Long-distance 'Phone.

SHORTHORNS and CLYDESDALES We have a nice bunch of bull calves that will be year old in September and are offering females of all ages, have a choice lot of heifers bred to a famous sire—87809—One stallion, 3 years old, a big good quality horse and some choice fillies all from imported stock. A. B. & T. W. Douglas Long-distance Phone Strathroy, Ont.

Salem Shorthorns Herd headed by Gamford Ideal and Gamford Perfect, sons of the great Gamford Marquis. We are generally in shape to supply your wants in calves, etc. J. A. WATT, Elora G.T.R., C.P.R. Telephone and Telegraph

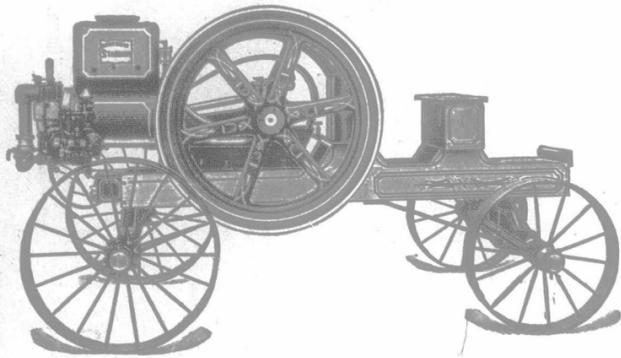
BELMONT FARM SHORTHORNS We are offering 20 heifers from 1 to 4 years of age bred to the 1000 lb. sire, Grand Champion Marquis 77713. Scotch and pure bred sires, also a number of choice cow heifers. FRANK W. SMITH & SON R. R. No. 2, Scotland, Ont. Scotland, Ont. T. H. & B. I. D. Phone

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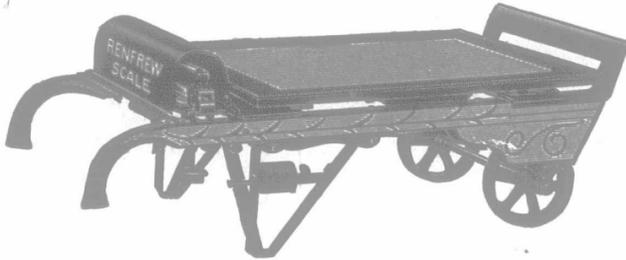
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The Only Way

to prove to you that you literally must have a **Renfrew Handy Two-Wheel Truck Scale** is to show you how much money it will make for you and save for you. This we have done in our scale booklet, which also shows how handy and how durable the **Renfrew Truck Scale** is. Write for your copy.



Put One of These Money-Makers

in your creamery and make each cow worth \$15.00 more to you each year. The **Standard Cream Separator** skims down to .01 per cent. It gets all the butter-fat but one-tenth of a pound in every 1,000 pounds of milk skimmed. You cannot beat the **Standard** for close skimming. And it will give rich cream with either cold or warm milk. It turns easily. Automatically oils itself. Absolutely sanitary. Gives cream without a taint in hot weather. No other separator so fully meets all the requirements of the Canadian dairyman. The demand for the **Standard Separator** is now more than double what it was three years ago, proving that Canadians know a good thing when they see it. Write for our new separator catalogue. It's different and interesting.

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Has No Vacuum In The Pail. It Has a Visible Milk Flow and Independent Pump, with the Natural Suction Principle

PRICE—\$50.00 PER UNIT

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Buchanan's Self- Compressing Long Sling



—the result of 33 years experience in making Pitching Machines. Consists of three slings and sectional pulley for drawing ends together. Easy to operate, quick to work, and exceptionally strong. We make all kinds of Pitching Machines—Swivel Carriers and Tracks, Slings, Harpoon Forks, etc. Write for catalogue.

M. T. BUCHANAN & CO., INGERBOLL, ONT. 2

We also manufacture Steel Cow Stalls and Positive Lock Cow Stanchions.

Auction Sale of Jersey Cattle

At OAK GROVE FARM, Union, Ont., on

Tuesday, June 30th, 1914

There will be offered for sale the entire herd, consisting of 25 head of A. J. C. C. Jersey cattle, among which are seven head of 2-year-old heifers to freshen in June. This herd is headed by Lady's Jolly of Don, a grand bull.

The proprietor is giving up business and is offering the product of 25 years' careful breeding.

The sale will commence at 2 o'clock, on arrival of the London & Lake Erie Traction car, leaving London at 12.30 o'clock.

Oak Grove Farm is seven minutes' walk from the station at Union.

LOCK & McLAUGHLIN
St. Thomas, Ont., Auctioneers

ROCK BAILEY, Proprietor
R.R. No. 4, Union, Ont.



"La-Lo" Animal Spray

Protects Cattle and Horses From Flies

ENDORSED BY

Dominion Experimental Farm Authorities

and Prominent Dairymen as being Superior to all other products of its kind.

NO OBJECTIONABLE FEATURES:

Does Not Blister—Will Not Discolor—Is Not Gummy—Has Agreeable Odor.

Dealers wanted in every town: Exclusive territory given.

LA-LO MANUFACTURING CO. LIMITED, - 365 Aqueduct Street, Montreal, Que.



Glenhurst Ayrshires

bulls, the result of a lifetime's intelligent breeding; 45 head to select from. Let me know your wants.

Summerstown Stn., Glengarry.

ESTABLISHED OVER 50 YEARS AGO, and ever since kept up to a high standard.

We can supply females of all ages and young

James Benning, Williamstown P.O.

Brampton Jerseys

Record of Performance cows. These bulls are fit for any show ring.

R. H. BULL & SON,

BRAMPTON, ONTARIO

Questions and Answers. Miscellaneous.

Pruning Evergreens.

When is the proper time to trim evergreen trees, also cedar trees, so as they will not bleed? W. J. R.

Ans.—Prune evergreens in the late fall, and cedars in June or September. A little bleeding will not impair the trees as much as is generally supposed.

Orchard Grass on Pasture.

I have a small field that I sowed with peas and oats last spring, and seeded down with red clover and timothy. What I would like to know is, would it be of any use for me to sow orchard grass on top now and harrow thoroughly as the clover and timothy stand very thin on it and I would like to have it for cow pasture. G. L.

Ans.—It is getting rather late for seeding, but it might come on all right if the season keeps showery. It would have done much better sown earlier in the season.

Weak Foal.

I have a colt which is two weeks old, it tips over forward on its two front fetlocks. It is getting no better, but is growing fine. It puffs below knee-caps. Please give me a remedy. J. P.

Ans.—As the colt gains in strength and grows its joints usually straighten and strengthen. Not much can be done in the way of the administration of drugs, but bandaging and hand rubbing has been used with some success. Allow the mare and foal to run out-doors during the day but do not leave it too long exposed in the heat of the sun, see that it gets sufficient nourishment and it will probably become strong in due time.

Breeding Mare—Knuckled.

1. I have a mare five years old. She was ruptured when a suckling colt, but grew out of it, except a slight small hole. She has never been bred. Is strong and healthy. Would it be advisable to breed her?

2. Also have a horse that is knuckled over in the right front leg, caused by standing in the stable. What is the best remedy for it?

A SUBSCRIBER.

Ans.—1. If she is a good mare in every other particular it would be advisable to breed her.

2. You might try blistering and letting the animal out on pasture afterwards.

Cement Foundation.

Will you please tell me through your valuable paper the best way to put a foundation under a cow barn, 30 by 40 feet. It is to be of concrete. Would it do to lay the walls right on the ground or have you to have a solid wall three or four feet under ground, or would three or four feet of loose stone in the bottom do? READER, F. P.

Ans.—The footings should be down in the ground some distance, and on a solid foundation. Dig a trench and for this stones may be used with the cement to make it solid. It is better to get down so that there is little danger from frost. Two and one-half to three feet is generally considered enough.

Pruning Young Fruit Trees.

Will you kindly inform me how to prune fruit trees—just how to go at it. Last year I walked out to my young apple trees with my pruning knife, looked hopelessly at them and finally cut off several inches off every twig within sight—and I am no wiser this year. I see so much that is useful in your magazine, and hope you will oblige me by giving me the desired information. J. H. H.

Ans.—Much has been written about the pruning of fruit trees and in our number of April 9th, 1914, on page 706, you will see this treated and illustrated more fully than one could do through the columns of our question and answer department. If you once get a conception of what your tree should be like when it has grown up you will have no trouble in working with the small trees. The illustration makes the branches appear rather bare but they are not really so. They are not cleaned out to the point but all spurs and buds are left on the branches. This article discusses the two types of pruning and answers your question quite fully.

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The Sire of King Segis Walker

Was the first sire of the breed to have a 30-lb. dam and 30-lb. granddam. He is the only sire of the breed having a 30-lb. daughter whose dam, granddam and great granddam have each produced a 30-lb. daughter. His three nearest dams have each produced a 30-lb. daughter, and also a son that has produced a 30-lb. daughter, something that can be said of no other sire that ever lived. He is the only living bull having a two-year-old daughter with a record over 925 lbs. butter in one year. Just one of his sons for sale from the only cow in the world to have two 31-lb. daughters and herself a 31-lb. cow.

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GOOD LUCK CALF MEAL

A perfect milk substitute; put up in 25-lb., 50-lb. and 100-lb. bags and sold at all dealers for \$1.00, \$1.90 and \$3.60 respectively. If your dealer's asleep, write us.
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 Dovercourt Road - TORONTO

What Every Dairyman Needs

A clip to hold the cow's tail while milking. Handy and easy to use. Saves the milkers many a nasty blow in the face from the cow's tail while milking. Sent post paid to any address, with full information as to how to use them, upon receipt of 50c. (fifty cents). Address:

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 83 Bayswater Ave. Ottawa, Ontario

Holstein-Friesian Association of Canada

Applications for registry, transfer and membership as well as requests for blank forms and all information regarding the farmer's most profitable cow should be sent to the Secretary of the Association.
W. A. CLEMONS, St. George, Ontario

1 Holstein Bull, 16 mos., 3 Holstein Bulls 8 mos. and under. 2 Canadian Bred Clydesdale Stallions rising two.

R. M. Holtby
 Port Perry, R. R. 4
 Manchester, G.T.R. Myrtle, C.P.R.

Woodbine Holsteins

Young bulls and bull calves, sired by Duke Beauty Pietertje; sire's dam's record 32.52 lbs. butter, and his two granddams are each 30-lb. cows, with 30-lb. daughter, with 30-lb. granddaughter. Three generations of 30-lb. cows. If you want a bull that will prove his value as a sire, write
A. KENNEDY & SON, R.R. No. 2, Paris, Ont.
 Stations: Ayr, C.P.R.; Paris, G.T.R.

MAPLE GROVE HOLSTEINS

Herd headed by the unsurpassed, richly buttered King Lyons Hengerveld and King Lyons Colantha, who are proving themselves sires of exceptionally fine and promising stock, and females from the world renowned Tidy Abbekirk and Pontiac Korndyke families compose the Maple Grove herd, known far and wide over the American continent. If you want stock of this class at reasonable prices, come and see them or write.
H. BOLLERT, TAVISTOCK, ONT., R.R. No. 1

The Maple Holstein Herd

Headed by Prince Aaggie Mechthilde. Present offering: Bull calves born after Sept. 1st, 1913. All sired by Prince Aaggie Mechthilde and from Record of Merit dams. Prices reasonable.
WALBURN RIVERS
 R.R. No. 5 Ingersoll, Ontario

RIDGDALE HOLSTEINS—Only 1 young bull left ready for service, smooth and straight, richly bred, closely related to our champion cow. Will also sell our aged stock bull, Imperial Pauline De Kol, No. 8346, very sure and quiet. Myrtle Sta., C.P.R.; Manchester Sta., G.T.R. **R. W. Walker & Sons, R.R. No. 4, Pt. Perry, Ont.**

Minster Farm—Offers a light colored bull born April 11, 1914, whose jr. 2-year-old dam and two grand dams average 13,439 lbs. milk in one year. For full particulars write. **RICHARD HONEY & SONS, Brickley, Ontario**

Questions and Answers. Miscellaneous.

Sequel to Distemper.

Have a driving mare with a bad cough. She had a slight attack of distemper early in the spring. I blistered her throat, and gave her some powders which I got from a local veterinarian, but she still continues to cough. Please advise.
 J. A. S.

Ans.—Feed only food of first-class quality, and limit the amount of hay; dampen both hay and grain with lime water, and give to each night and morning, two drams solid extract of belladonna, one and a half drams gum opium, one dram camphor and twenty grains powdered digitalis, moisten with treacle, and give in a ball or shake up with a pint of cold water and drench.

Wall for a House.

I intend building a concrete cellar-wall for a house. Size 24 feet by 34 feet. Will you kindly tell me through your valuable paper how high to build the wall, how thick, how much stone fillers I can use, how many yards gravel, how many barrels cement, and what proportion of each?
 R. McP.

Ans.—A 7½-foot wall will give you ample room for ordinary purposes but if you wish to install a furnace an 8-foot wall will give you more room for the pipes. However, these calculations are based upon a 7½-foot wall. If by stone fillers you mean crushed stone which is much the same as gravel you will find it in the total amount, but if you mean cobble stones or large stones put in simply as fillers we would advise against that practice. Cement has a gripping tendency and it requires a much stronger mixture where such filler is used and it even then deteriorates the structure. A 10-inch wall should maintain this structure whether it be frame or mason work and one to eight should be strong enough mixture. This would require 26 cubic yards of sand and 22 barrels of cement.

Weak Foal and Retained Meconium.

1. I have a mare that has never raised a colt. She was bred last year to a first-class stallion. She carried the colt eleven months and twenty-three days. The colt was very weak, having very little use of its hind quarters. It lived three days and died with constipation in spite of repeated injections and a dose of castor oil. The mare was running milk for about ten days before she foaled. Would the trouble be caused by the mare having distemper last winter?

2. Would it be advisable to breed her again? Mare went dry in a few days, should she dry up so quickly?

3. Should she be purged?

4. How much water is it safe to inject into a young foal at once, and how often.
 R. V. K.

Ans.—1. Several circumstances may have entered into this trouble. Possibly the illness of the mare during the winter had something to do with the weakness of the foal, but since she regained her strength so well and was producing so much milk it would seem that the colt should have revived sufficiently. Perhaps the mare was being fed too well and not worked enough. Under these conditions food which should have gone for maintaining the body was diverted into milk production. Had she been worked steadily at easy work and given lots of exercise she and the foal may have been a little stronger constitutionally. In raising colts one can only give the mares rational treatment and leave the rest to nature. In leaking her milk the colostrum or first milk was lost. This is necessary to put the bowels of the newborn foal in proper condition and assist in the passing of the meconium. Constipation was the result.

2. It depends on the treatment she received whether she should have dried up so quickly or not. We would advise breeding her again.

3. Purging will hasten the cessation of the milk flow, but if the mare was right physically, and dried up so quickly we see little need of purging.

4. Inject three or four ounces at a time and after the foal voids the liquid, make another injection and repeat till the faeces becomes yellow.



PURE BRED SIRES

THE LIVE STOCK BRANCH

Dominion Department of Agriculture

Will purchase during 1914, a number of CANADIAN-BRED Stallions, Bulls, Boars and Rams.

Animals must be of right type, in good breeding condition and of the following ages:

- Stallions, three to five years.
- Bulls, not under one year.
- Boars, not under six months.
- Rams, not under six months.

All stallions will be purchased, subject to veterinary inspection and bulls subject to the tuberculin test.

Breeders in Eastern Canada having CANADIAN-BRED male animals for sale, filling the above requirements and registered or eligible for registration in the Canadian National Live Stock Records, are requested to communicate with the Live Stock Commissioner, Department of Agriculture, Ottawa.

The purchase of stallions and bulls will be made during the current spring months. The purchases of rams and bulls will be deferred until the autumn.

Communications must state age and breeding of animal offered and price asked.—60271.

TRADE MARK

Look for the Cat!
 THE Batteries that cost less and outlast all others are—
BLACK CAT
 BATTERIES
 because they have
Nine Lives
 Made in Canada by the world's expert—the oldest, largest and most reliable Battery Factory in the Dominion.
CANADIAN CARBON CO. LIMITED
 96 West King St., Toronto

LAKEVIEW HOLSTEINS

Senior herd bull—Count Hengerveld Fayne De Kol, a son of Pietertje Hengerveld's Count De Kol and Grace Fayne 2nd. Junior herd bull—Dutchland Colantha Sir Mona, a son of Colantha Johanna Lad and Mona Pauline De Kol. Third bull—King Canary Segis, whose sire is a son of King Segis Pontiac, and whose dam is 27-lb. three-year-old daughter of a 30-lb. cow. Write for further information to

E. F. OSLER - BRONTE, ONT.

FAIRVIEW FARMS

Can furnish you a splendid young bull ready for immediate service, and sired by such bulls as PONTIAC KORNDYKE, the greatest producing sire of the breed, and also the sire of the greatest producing young sires of the breed; one of his sons already has six daughters with records above 30 pounds, RAG APPLE KORNDYKE 8TH, now heading our herd, and a few by a good son of PONTIAC KORNDYKE, and out of officially tested cows. Come and look at them, and the greatest herd of Holsteins you ever saw over, or write me just what you want.

E. H. DOLLAR, Heuvelton, New York (Near Prescott, Ont.)

HOLSTEIN CATTLE

The only two world record Holsteins in Canada are owned by us. There are only three cows in the world that have made over thirty pounds butter, three years in succession; one of them is owned by us. The only bull in Ontario whose dam has given 116 lbs milk a day and made 34.00 lbs. butter in 7 days is owned by us. We have young bulls and females for sale bred on the same lines as our champions.

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ELMDALE HOLSTEINS

Headed by Correct Change, by Changling Butter Boy, 50 A.R.O. daughters; he is by Pontiac Butter Boy, 56 A.R.O. daughters. Dam's record, 30.13-lbs., a grand dam of Tidy Abbekirk, 27.29-lbs. His service for sale; also young females in calf to him. **R. LAWLESS - Thorold, Ontario**

Three Dandy HOLSTEIN Bull Calves

FOR SALE, FROM TESTED DAMS.

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Right Now You Need A Pair

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Don't wear ill-made inferior shoes and suffer with sore, tired aching feet. Send for a pair of our specially made, easy-fitting, durable harvest and plow shoes. We make them of our famous oil-tanned Skowhegan leather with full waterproofed sole leather soles and heels and solid insoles. They are particularly adapted for farmers, woodsmen, millmen, trackmen and laborers—any who require comfortable footwear having extra strength and durability.

Palmer's "Moose Head Brand"

are made by specialists, on easy fitting right and left lasts. If your dealer hasn't them, send his name and \$3 (postal or express order), stating size, and we will deliver a pair all charges paid to your address, anywhere in Canada or U. S. The same style 8 eyelets high, \$3.50. Write for catalogue.

JOHN PALMER CO., Limited,
Fredericton, N. B., Canada. 15

Cure your CHEESE with

Rice's Cheese Salt

It will bring you good results, and you will always use it.

Rice's Butter Salt

will increase your dairy profits. It is composed of fine crystals that work evenly through your butter, and add to its flavour. Use Rice's for best results.

NORTH AMERICAN CHEMICAL CO., LIMITED
Clinton Ontario

OXFORD DOWN SHEEP

We have the champion Oxford flock of America. Winners at Chicago International, Toronto, London, Winnipeg, Regina, Brandon and Saskatoon Fairs. Present offering: 100 ram and ewe lambs, and 50 yearling ewes by imported rams. Consult us before buying.

Peter Arkell & Sons, Teeswater, Ont.

Alloway Lodge Stock Farm

Aberdeen-Angus Cattle
Southdown Sheep
Collie Dogs

Four litters sired by Imp. Holyrood Marquis are expected shortly, three of them from imported bitches. Order now if you wish to secure a choice pup. **ROBT. McEWEN,** Near London. **Byron, Ontario**

TAMWORTHS

A choice lot of boars and sows from two to four months old.
HERBERT GERMAN, ST. GEORGE, ONT.

GILEAD STOCK FARM OFFERS: One litter **BERKSHIRES** three months old; another litter two months old; and a litter of **Yorkshires** six weeks old; from large deep-milking dams. Order early and get a choice selection. Write or call for particulars. **W. A. Martin & Sons, Corbyville, Hastings Co., Ont.**

TAMWORTHS—Some choice young sows, bred for April and May farrow; also a few boars. Write for particulars. **JOHN W. TODD,** R. R. No. 1, Corinth, Ontario

Duroc-Jersey Swine—Twenty-five sows bred for fall farrow; a few boars ready for service; also one Jersey bull, 11 months, and two bulls, 6 months old, out of high-producing dams.
MAC CAMPBELL & SON, Northwood, Ont.

Morrison Shorthorns and Tamworths Bred from the prize-winning herds of England. Have twelve young sows bred to farrow in June, dandies, and twenty young boars fit for service; also some choice cows and heifers of the best milking strain. **CHAS. CURRIE, Morrison, Ont.**

CLOVERDALE LARGE ENGLISH BERKSHIRES Present offering: Boars and Sows all ages, bred from imported stock. Prices reasonable.
C. J. LANG, R. R. No. 1, Hampton, Ont.

Sunnyside Chester Whites Last fall and winter shows' champions, male and female, as well as many lesser winners, are now breeding in our herd; young stock, both sexes, any age. **W. E. Wright & Son, Glanworth, Ont.**

Questions and Answers. Miscellaneous.

Horse Killed on Railway.

On April 30th, 1914, I was coming home from work at 5.30, and a freight train came along and blew no whistle and rang no bell, and I did not see them till I was close up to them. My horses became frightened and they started to pull—one each way—and broke their bridles and lines, and one of them got away from me and tried to jump over the cattle yards to get out of the way of the train. As she was doing this the train struck her and broke her neck. She was six years old; the railway company refuses to pay. Who is responsible for the loss? Can I make them pay for it?

Ontario. **CONSTANT READER.**

Ans.—It would seem from your statement of the case that the company are liable, and that you are in a position to recover damages from them by an action. You should consult a solicitor personally about the matter and without delay.

Low Wagon Rack.

Please give through the columns of "The Farmer's Advocate" the way to build a low wagon-rack that would be specially suitable for hauling corn stalks.

J. L. W.

Ans.—A correspondent wrote in our number of November 21, 1912, that he had a corn-rack which was approved of at all the silo-filling bees in his country. "The rack is made with spruce sills and spruce bottom; the bottom should be made of one-inch spruce boards; if tongued and grooved it will be more satisfactory. A narrow strip one inch high by two inches wide should be put around the edge of the rack, which will keep the grain from sliding off. Four rock-elm cross-pieces should be sufficient. The edging should be bolted on, one bolt for each cross-piece for the sides, and three bolts for the hind and fore edge. The bottom now needs very few nails; one or two for each board in the centre cross-piece should be ample. Two uprights should be placed at the hind end, and three cross-pieces, the width of the rack, should be bolted to them; this will do away with building to a great extent on the hind end. The same could be done to the fore end, but it gets somewhat in the way when handling the lines. A centre stake is, in my opinion, a clumsy, unnecessary affair, and should be done away with."

Silage Cutter—Field Bindweed.

1. Will a 6 h.p. gasoline engine run an ensilage cutter with carriers attached, and elevate silage 20 feet into a silo? I have the engine and cutting box and would buy sufficient carriers to fill the silo if I were sure the engine would do the work.

2. I have three or four patches of a very persistent weed called Wild Morning Glory. What would be the best way to get rid of the pest. I think it is worse than quack grass. It was in the corn field last year and as often as hoed off would bob up smiling again in a day or two.

R. G.

Ans.—1. If your silage cutter is the ordinary size usually run by tractor power ranging from 15 to 30 h.p. it might over-work your engine, but you can operate a small size cutter with carriers with 6 h.p. engine. We have seen this being done with a 5 h.p. electrical motor, but it was in some cases developing more than 5 h.p. The carriers, of course, require less power than the blower and no doubt this engine will operate the outfit, but it will have a much decreased capacity.

2. Wild Morning Glory or field bind weed is indeed a persistent one. In the first place isolate the parts infested for when you cultivate the field you simply convey the roots of the plant to other parts and establish it in new areas. If they are small areas it might be expedient to cover them with a heap of straw or manure and even building paper, the paper held down with stones, and smother it out. One cannot depend on ordinary crop rotations to eradicate the weed. It will be wise to think of only in small sections of the field, and to do so very intensively. Digging and salt are the best remedies recommended. It takes a large quantity of them, but even the best remedies fail. Spraying is the most effective treatment.



The Roofing Question

SETTLE it once and for all. You don't want to have it coming up periodically—then why not decide on **Galt Steel Shingles**, and make a permanent job? The best service you can hope for from a roof of the ordinary, present-day wood shingles is from 10 to 15 years. **Galt Steel Shingles** will last a lifetime. Such a roof cannot burn, rust or decay, assuring permanent satisfaction and freedom from repairs. Write for literature and information on the roofing question. We will gladly furnish full particulars on request. Simply write the one word "Roofing" on a postcard, together with your name and address.

THE GALT ART METAL CO., Limited
150 Stone Road, Galt, Ontario.
Cor. Richard and Pine Sts., Winnipeg, Man.

THE OLD RELIABLE

Livingston Brand

[Pure Linseed]

Oil Cake Meal

A food to make cattle fat. Tones the system. Makes more butterfat. Try either pea size or coarse ground for sheep. If your dealer cannot supply you, write us for prices.

The Dominion Linseed Oil Co., Limited
BADEN, ONT. MONTREAL, QUE.

I have now for sale 30 extra large **100 Shearling Rams** and a very fine lot of **Lambs** well-covered **Shearling Rams** from my imported ewes. Will be pleased to book orders for delivery later, of any kind wanted. **JOHN MILLER, CLAREMONT, P. O., R. R. NO. 2.** **Claremont Station, C. P. R. 3 miles.** **Pickering Station, G. T. R. 7 miles.** **Greenburn Station, C. N. R. 4 miles.**



Berkshires

choice selection.

From our prize-winning herd of large English Berkshires we have a particularly choice offering in young boars and sows, many of them now of breeding age. Order early and get a

S. DOLSON & SON - Norval Station, Ont.

ELMHURST LARGE ENGLISH BERKSHIRES

From our recent importation of sows, together with the stock boar, **Suddon Torredor**. We can supply select breeding stock, all ages. Satisfaction and safe delivery guaranteed.

H. M. VANDERLIP, Breeder and Importer, CAINSVILLE P. O.
Langford Station on Brantford and Hamilton Radial.

Large White Yorkshires

Have a choice lot of sows in pig. Boars ready for service and young pigs of both sexes supplied not akin at reasonable prices. All breeding stock imported or from imported stock from the best British herds. Write or call **H. J. DAVIS, Woodstock, Ont.** Long-distance Phone. C. P. R. and G. T. R.



Sunnybrook Yorkshires and Holsteins

In Yorkshires we can supply either sex from a few weeks old up to breeding age, sired by our champion boar **Eldon Duke (32228)**, and out of prize winning sows. Also **100 best Houslein cattle of all ages.** **WM. MANNING & SONS, WOODVILLE, ONTARIO** Grasshill Station, C. P. R. and G. T. R.

NEWCASTLE TAMWORTHS, SHORTHORNS AND CLYDESDALES For sale at once:—Two choice sows in pig, 2 years old; one extra choice year-old sow bred; four best of service sows bred and ready to breed; choice lot of pigs nearly ready to wean; all from imported stock on both sides. 3 choice young bulls 10 to 12 months old; several heifers bred to a prize stock bull Broadlands; all from splendid milking dams. One registered 3-year-old fully one year old and a 12-year-old Brood mare, all of splendid quality; prices right.
A. A. Colwill, Newcastle, Ontario L.-D. Phone.



An Inexpensive Durable Roof

—a roof that is easy to lay, that looks well, that is suitable for any class of building, is fireproof and is guaranteed.

SAMSON ROOFING

fills every one of these requirements. The felt body of Samson Roofing is thoroughly saturated with the waterproofing compound. It is upon this thoroughness of saturation that the life of a roofing depends. Its surface is hard and absolutely unaffected by any weather conditions, and cannot be ignited by sparks or burning brands. The cost of Samson Roofing is much less than shingles, slate, tin, etc., and very little labor is required to lay it.

With your order for roofing we supply complete directions for applying, and a supply of nails, and lap-cement for cementing the joints.

We have prepared an interesting booklet "The Building and Roofing of Farm Buildings" which should be in the hands of everyone who thinks of building. It is yours for the asking.

Ask your dealer for Samson Brand.

H. S. HOWLAND, SONS & CO. Limited
142 Front St. West, Toronto

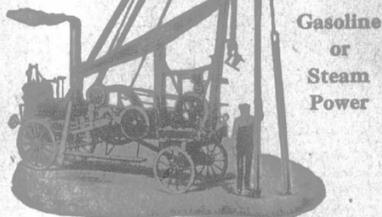
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WELL DRILLING BUSINESS

You make easy monthly payments.

Earn big money and be your own boss.

You can be independent in a few years.



Write at once for illustrated catalogue and specifications.

THE STAR DRILLING MACHINE COMPANY
478 Washington St., Akron, Ohio.

Sent on Ten Days' Test Trial.

Gasoline or Steam Power

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Effective May 31st

NEW LIMITED TRAINS "THE CANADIAN"

Via Can. Pac. Ry. and Michigan Central Ry.

Through Michigan Central Tunnel via Windsor, Ont.

WESTBOUND DAILY

EASTERN TIME	
Leave Montreal (Windsor St. Depot)	8.45 a.m.
Arrive Toronto	5.40 p.m.
Leave Toronto	6.10 p.m.
Leave London	9.35 p.m.
Arrive Detroit (Michigan Central Depot)	12.35 a.m.

CENTRAL TIME	
Leave Detroit (Michigan Central Depot)	11.55 p.m.
Arrive Chicago (Central Station)	7.45 a.m.

EASTBOUND DAILY

CENTRAL TIME	
Leave Chicago (Central Station)	9.30 a.m.
Arrive Detroit (Michigan Central Depot)	3.55 p.m.

EASTERN TIME	
Leave Detroit (Michigan Central Depot)	5.05 p.m.
Leave London	8.03 p.m.
Arrive Toronto	11.20 p.m.
Leave Toronto	11.40 p.m.
Arrive Montreal (Windsor St. Depot)	9.55 a.m.

Only One Night on the Road in Each Direction

Solid Electric-lighted Trains with Buffet-Library-Compartment-Observation Cars, Standard and Tourist Sleepers and First-class Coaches between Montreal and Chicago in each direction.

Standard Sleeping Cars will also be operated between Montreal, Toronto, Detroit and Chicago via Canadian Pacific and Michigan Central Railroads through Michigan Central Tunnel via Windsor on Trains No. 21 westbound and No. 20 eastbound.

Particulars from Canadian Pacific Ticket Agents, W. Fulton, C. P. A., London, or write M. G. Murphy, Dist. Passr. Agent, Corner King and Yonge Streets, Toronto.

Beautify and Protect Your Property

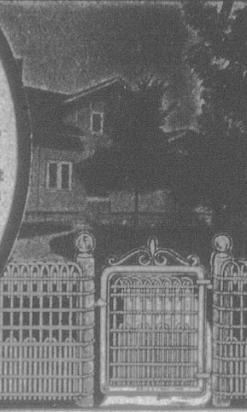
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Peerless Ornamental Fencing

is made of strong, stiff, galvanized wire that will not sag. In addition to galvanizing, every strand is given a coating of zinc enamel paint, thus forming the best possible insurance against rust. Peerless ornamental fence is made in several styles. It's easy to erect and holds its shape for years.

Send for free catalog. If interested, ask about our farm and poultry fencing. Agents nearly everywhere. Agents wanted in open territory.

Danwell Rocio Wire Fence Co., Ltd.
Windsor, Man.—Hamilton, Ont.



We are paying high prices for

Wool Calfskins AND Sheepskins

Ship at once to

E. T. CARTER
84 Front Street East
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and receive the high prices. We pay all freight charges. Write for tags if you require any.

JAMES HUTTON & Co., Manufacturer's Agents

796 Shaughnessy Building, McGill Street, - MONTREAL

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- JOSEPH RODGERS & SONS, LTD., Sheffield, Cutlery to His Majesty
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- THOS. GOLDSWORTHY & SONS, Manchester, Emery, Em Cloth, etc.
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- THOS. JENKINS & CO., Birmingham, Fuses and Fog Signals

FREEMAN'S BONE MEAL



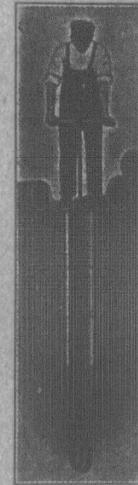
MORE PHOSPHORIC ACID TO THE DOLLAR'S WORTH THAN IN ANY OTHER FERTILIZER

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WATCH FOR THE TRADE MARK. The W. A. FREEMAN CO., Ltd. 222 HUNTER ST. E., HAMILTON.

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With Our Outfit At \$12.00



Write us to-day, and learn how you can start a profitable business, digging wells for others, on an investment of but \$12.00. Works faster and simpler than any other method. 100-foot outfits at \$25.00.

Write us for full information.

Canadian Warren Axe & Tool Co. Limited
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TO FARMERS Summer Season and Fall

Secure good help and make 12 months engagement to prevent disappointment next spring. Farm help supplied from the Old Country. Utmost care given in selecting the right class of help to fill each individual requirement. Write stating particulars.

New Magnificent Steamers for Direct Canadian Service
ANDANIA ASCANIA ALAUNIA AUSAUNIA
AURANIA 14,000 tons building. One Class (II) Cabin. Lower Rates.

Apply **Cunard Steamship Company Limited**
Immigration Dept.
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GRAND TRUNK RAILWAY SYSTEM

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Round trip tickets to points in Manitoba, Alberta and Saskatchewan via Chicago, St. Paul or Duluth, on sale each TUESDAY until October 27th, inclusive, at low fares.

Through Pullman Tourist Sleeping Cars to WINNIPEG on above dates, leaving Toronto 11 p.m. No change of cars.

RETURN LIMIT TWO MONTHS

The Grand Trunk Pacific Railway is the shortest and quickest route between Winnipeg, Saskatoon and Edmonton, with excellent through service to Regina. Trains now running into Calgary.

Berth reservations and particulars at all Grand Trunk Ticket Offices, or write C. E. HORNING, District Passenger Agent, Toronto, Ont.

Imperial Life ASSURANCE COMPANY

will appear in next week's issue, entitled, "A Monthly Income for Your Widow." Watch out for it.

An interesting advertisement for The

Agents wanted, wholesale and retail, in all unallotted territory. Splendid proposition for farmers, farmers' sons or other live men who can sell goods. Write quickly for terms and territory.

IMPERIAL BAG HOLDER

Will hold any sized bag or sack at any height—can easily be carried about—will stand anywhere—made of steel—lasts a lifetime—satisfaction guaranteed or money refunded—\$3.00 each. Send to-day, or ask your dealer. Imperial Bag Holder and Machine Co., Lucknow, Ont.

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Your talking machine will play Columbia Records even though it may not be a

Columbia Grafonola

THOSE who have made comparisons know that the reproducing tone of the Columbia Grafonola, playing either Columbia Records or other records, is so much richer and more musical, so completely natural and so much more satisfying, that nothing heard before, no matter how good, can approach it in tonal beauty and artistic merit.

But if your instrument is not a Columbia, its tone can be made to closely resemble the Columbia tone by playing Columbia Records on it.



COLUMBIA Records played on your talking machine (regardless of make) will be a tone-revelation to you; because the tone of an instrument depends as much upon the quality of the record making, as on the

reproducing mechanism of the instrument itself.

Vernon Castle
Says Columbia Dance Records are the best he has heard.

I want to congratulate you on the excellent dance records issued; they are the best I have heard. I am using a Columbia 'Grand' Grafonola and Columbia records at Castle House where they are attracting extraordinary attention; the records are played in perfect dance time and are frequently encored by our patrons.
VERNON CASTLE

Here are six double-disc records that are typical of the full thousand 85 cent records listed in the Columbia catalog—among them are two of the latest Columbia double-disc modern dance records:

- 1458 { Tres Chic. One step.
85c. { He'd Have to Get Under Get Out and Get Under. One step.
- 1467 { To my Manis. Tango.
85c. { El Sanducero. Tango.
- 1496 { Camp Meeting Band. Vocal Duet.
85c. { Buffalo Baby Rag. Peerless Quartette.
- 1387 { Endearment. Prince's Orchestra.
85c. { Cupid's First Love. Prince's Orchestra.
- 1494 { While The Rivers of Love Flow On. Tenor Solo.
85c. { As Long as the World Goes Round. Tenor Solo.
- A1281 { Omena. Banjo Solo.
85c. { Dream of the Rarebit Fiend. Accordion Solo.

Columbia Double Disc Records

Of the thousands of records in the Columbia catalogue, almost all of them are **double**, all of them are **guaranteed** for tone quality and long wear, and over a thousand of them are listed at 85 cents each. Also included in the catalogue are notable records by such great artists as Bonci, Fremstad, Destinn, Mary Garden, Slezak, Zenatello, Carolina White, Ysaye and Josef Hofmann—records that are **exclusively Columbia**.

The Columbia series of Dance Records **alone** is enough to give you an entirely new idea of the sort of dance music your instrument is capable of. They are not only among the most remarkable orchestral records ever produced in tone quality, volume and balance—but they are so absolutely perfect in rhythm and tempo that probably not one orchestra in fifty would be capable of providing you and your friends with music for dancing that would be so satisfactory in every way.

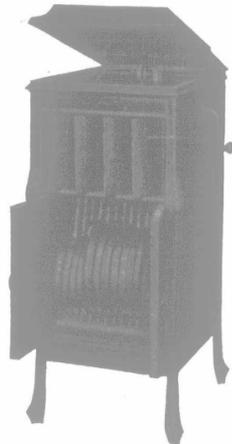
Send us 20 cents in coin or stamps, and we will send you our special sample Columbia Record which will play on your disc machine, no matter what make it is.

The Music Supply Co.

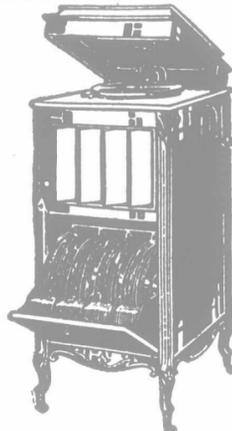
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"JEWEL"
The best known and most successful instrument at its price. Equipped with the exclusively Columbia tone-control "leaves" which have taken the place of the old double-door idea. **\$45**



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A complete and completely enclosed upright Columbia instrument. Equipped with the exclusively Columbia tone-control "leaves" which have taken the place of the old double-door idea. **\$100**



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