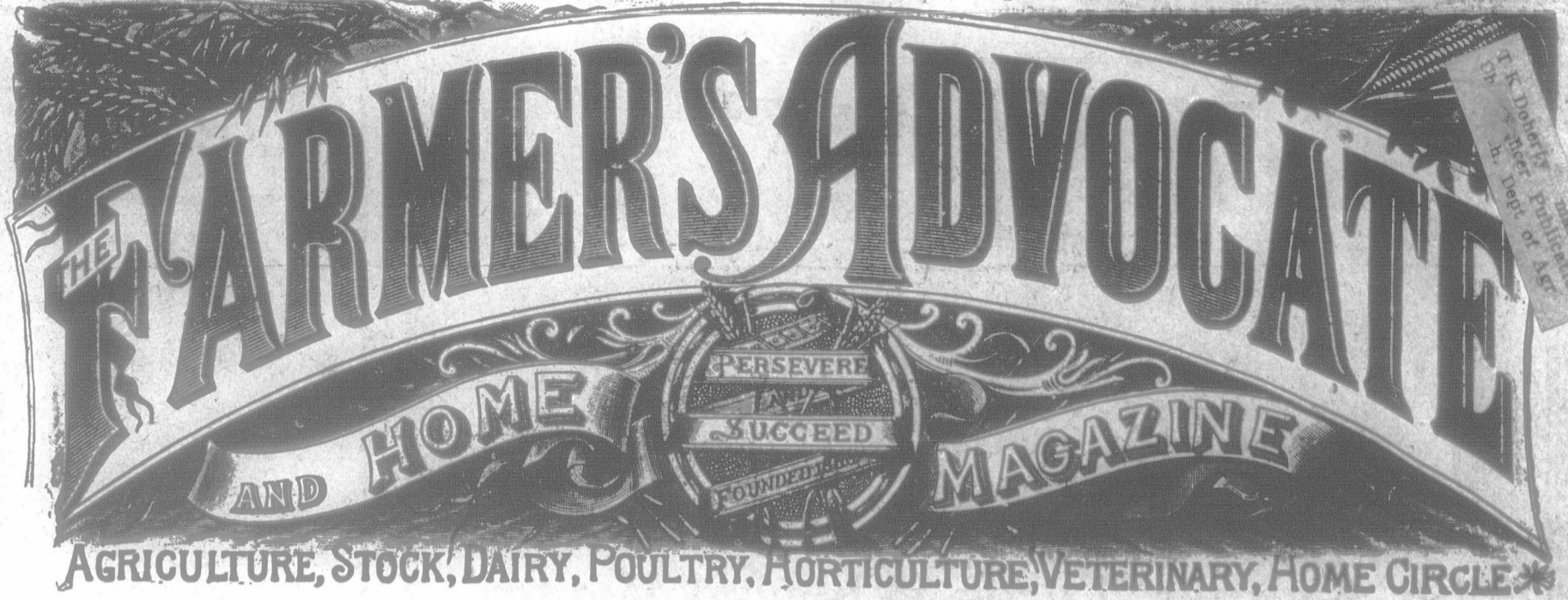


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Vol. XLVIII.

LONDON, ONTARIO, NOVEMBER 6, 1913.

No. 1075

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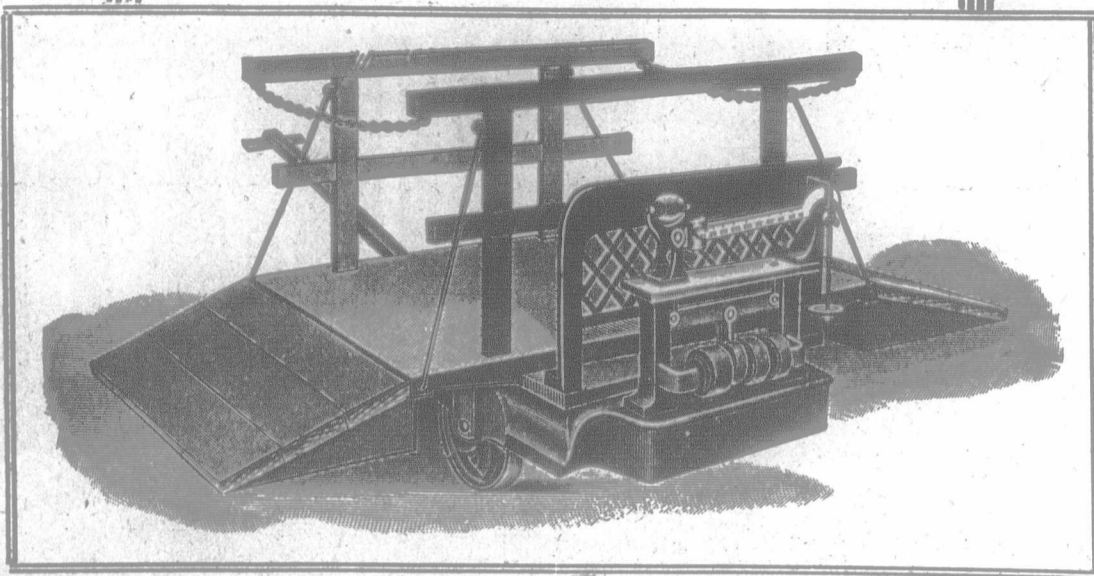
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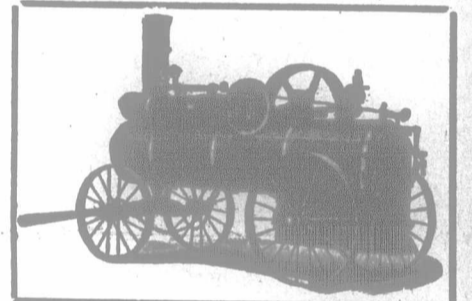
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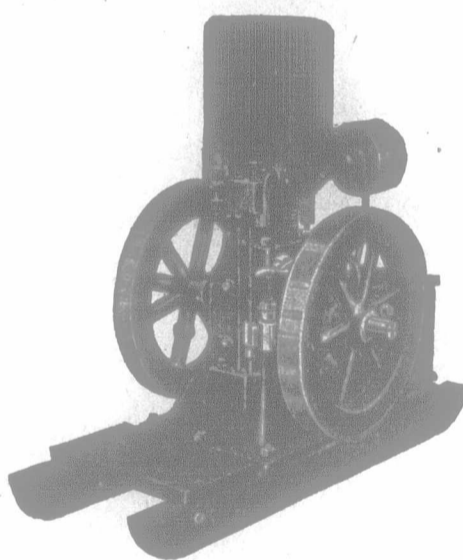
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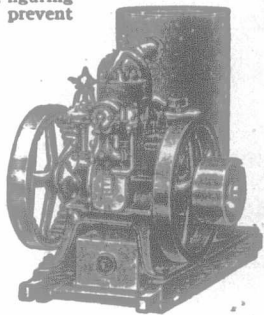
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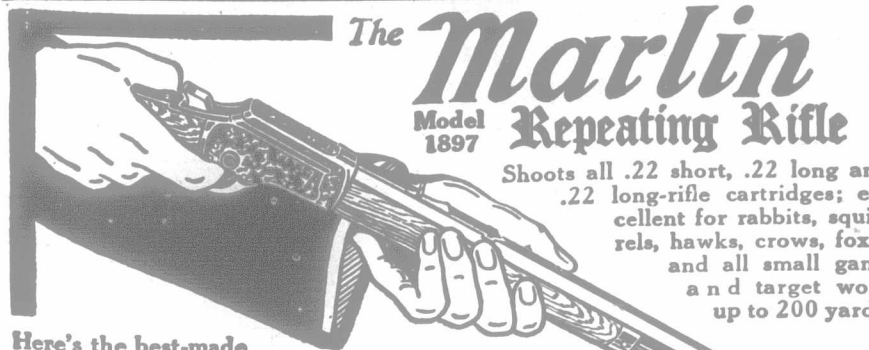
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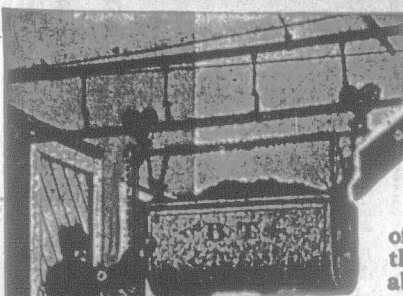
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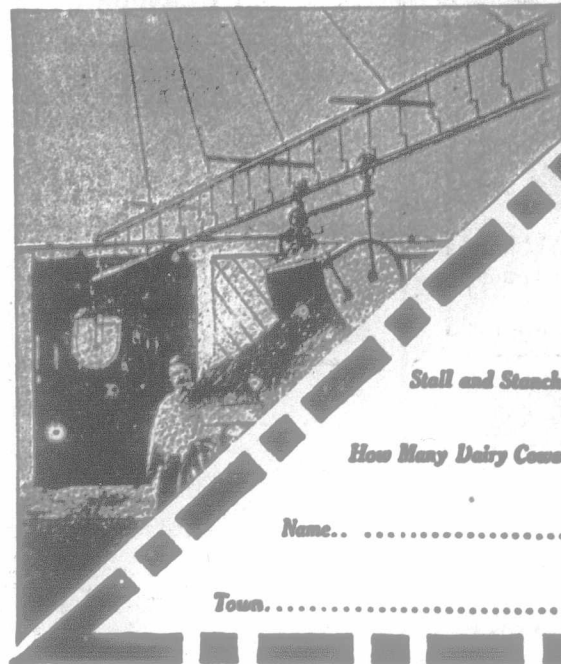
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January 13th to January 24th, 1914

Judging horses, sheep, cattle and swine; slaughter tests; lectures on breeding, feeding, etc. Judging grains and seed of other farm crops; selection, germination, purity, etc.

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January 27th to February 7th, 1914

Varieties, nursery stock, spraying, fertilizers, pruning, marketing, etc.

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Three months' course in factory and farm dairying
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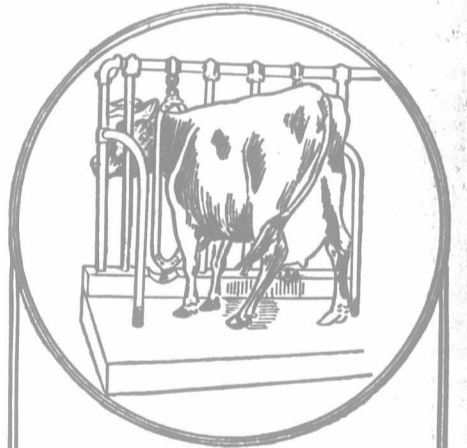
For safety's sake—Eddy's "Safeguard" Matches—ONLY—should be in every home.

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IF you intend planting trees next spring, be particular of the kind and grades you order, be sure they are grown right, are healthy, clean and backed by a dependable and reliable company. E. D. Smith's trees are grown from stock known to be true to name, and produced on the choicest land in the Niagara fruit belt. The Nurseries (900 acres) have been inspected thoroughly by government inspectors, and pronounced free from injurious pests, so that we are able to guarantee our stock "absolutely clean and healthy." This stock costs no more than inferior, poorly grown trees of doubtful parentage. If you are not familiar with the best varieties for your section, will be pleased to assist you, and any assistance from us will cost absolutely nothing, and does not place the writer under any obligation to purchase.

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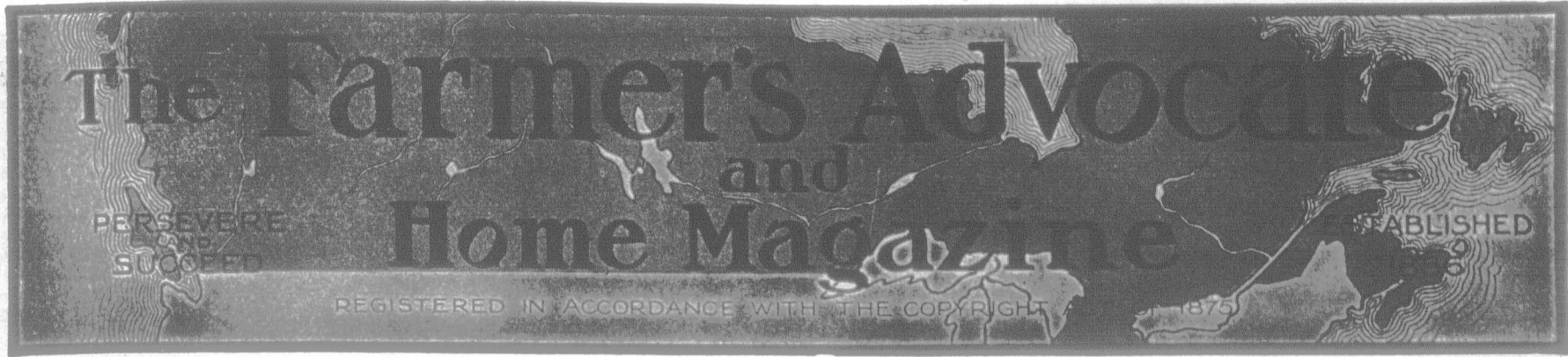
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VOL. XLVIII.

LONDON, ONTARIO, NOVEMBER 6, 1913.

No. 1048

EDITORIAL

Have the feeders been placed in the stalls yet?

In important respects the farmer is a manufacturer.

Let us bear in mind that the cost of production on the farm has been steadily rising.

A few townspeople appear to be still laboring under the illusion that the farmer's own table is spread without money and without price.

Who is to till the soil for the hungry multitudes if people all persist in living in town where they can attend vaudeville shows six days in the week?

High-priced feeders must be fed low-priced rations to make the most profit. Feeding problems give the stockman plenty of scope to exercise his ability.

Reports from Saskatchewan state that the increasing interest in stock raising in the West is likely to cause a keen demand for good breeding horses next spring.

While the farm population of England has enormously fallen off in recent times, there is little comfort in remembering that the army of gamekeepers has risen from 9,000 in 1851 to 28,000 in 1911.

Platform economists sometimes tell us that we cannot regulate prices—all the farmer has to do to make good is by better methods to pull down the cost of production. This is one of those half-axiomatic statements calculated to keep the farmer's eye solely on his own grindstone and not to worry about parliaments, railroads or financiers who are all the while putting fresh spokes in the wheel of production.

Scientific investigation with all its great achievements and all its labor-saving devices has so far failed to very materially lower the temperature of the farm kitchen. Men's appetites do not diminish generation after generation, but female farm help grows scarcer and scarcer. The brains of inventors and scientists could find ample scope for further sensational and useful findings in appliances to lighten the work of the woman on the farm.

The county fairs are over for another season. Most of them were favored with good weather this fall, and reports indicate that an unusually large number of people attended these fairs. Well-conducted agricultural exhibitions, managed by local men in each county, are deserving of patronage, and the man possessing stock or farm products sufficiently high-class to make a creditable exhibit, should bring them out that the sightseer may be the better repaid for coming to the exhibition. This season and last have brought home the fact that weather is one great limiting factor in fall fair success, but fine weather, big crowds and increased entries, as was the case this year at most of the smaller fairs, should stimulate exhibitors and fairgoers, and ensure more enthusiasm and greater success next year. A good fair deserves support.

The New Farm Power.

With the development of engineering skill and the extension of electric transmission lines, it looks possible that the whole country may, in the near future, be served with electric heat, light and power. We are acquiring the advantages that older European countries enjoy without sacrificing, in the least, our democratic relations and freedom and independence of spirit which is so characteristic of the American. There are now in Ontario six systems where power of falling water is being converted into energy that will not only serve the towns and cities within the reach of the tentacles which they are throwing out, but the country may draw upon it as well to light their houses, thresh their grain, fill the silos, milk the cows, wash their clothes and cook their food, and warm their beds. What more should a farmer of the twentieth century ask? When the epoch of electrified farming is here in earnest, the cry of, "Back to the Farm" will meet with a hearty response.

Count the Cost in Feeding.

The cost of living soars and city dwellers look over long lists of possible menus with a close scrutiny to settle upon some diet palatable, nutritious and wholesome, and with this, moderate in price. The producer worries less about these things, for his granaries contain the wheat for bread and biscuits, the stables shelter the cattle, sheep and swine from which he may get his roasts, steaks, leg of mutton and pork chops, and his poultry pens are alive with busily scratching pullets—regular egg machines—while cockerels are fattening for the table, and cellars contain fruits, roots and vegetables in variety. The owner and producer of all this often does not fairly estimate its value, nor does he consider the cost as he should. The city consumer almost invariably holds that all these good things cost the producer practically nothing, but we know that they do. The cost of feeding the farmer's family depends largely upon the cost of crop production and the cost of feeding live stock.

The 1913 crop has been harvested and the problem now before the producer is how best to dispose of it. The stockman believes in feeding all he grows and often more. This is constructive agriculture—a building-up process. But live-stock feeding to be the success it should be must always be done with skill to show a balance on the right side of the ledger. Because the price of products of the farm is high enough to make the urban consumer feel the pinch of "the high cost of living" is no proof that greater profits may be obtained by haphazard farming or careless methods of live-stock rearing. The stock must be fed economically or the season's returns will not meet the expenditure for feed and labor. The consumer must ponder over the menu for the table; the producer must wrestle with the problems of feeding his stock at smallest cost and to best advantage.

The list of live-stock foods available is not as long as that from which the housewife chooses daily rations, but it is often more complicated. Market prices of the feeds on hand must be reckoned, their comparative values estimated, and besides this the feeder should have a price list before him of the feeds not on hand. It very often occurs that home-grown feeds may be sold to advantage and others bought to fill their place. This is in no sense "robbing" the farm. It is

good business to buy and sell at a profit. A careful survey of the whole situation should be made by every feeder at the beginning of the feeding season and from time to time throughout its entire duration. Now is the time to size it up. It is a complicated business, requiring knowledge ripened through experience. Prices of all feed stuffs must be known or carefully estimated, values of various feeds must be understood, this demanding a knowledge of their composition, intimacy with all market conditions and likely fluctuations is essential, and with all this a liking for the work sufficiently strong to develop an interest in each individual animal is necessary to greatest success. This knowledge and ability is not cheap. Men rightfully boasting it in high degree are scarce and have reached the high plane which they have attained through years of experience often expensive. Home-grown feeds themselves are produced at great cost in these days of high-priced land, expensive farm equipment and scarce labor. The high cost of feeding applies to the live stock as well as to the human race, and at this the commencement of another season of feeding, fitting and finishing farm stock for market the feeder should count the cost, consider the conditions, calculate the composition of each feed and the best combinations, select the most suitable keeping in mind the prices and production values, and feed these to the class or kind of stock which is most likely to make the greatest gains and command the readiest sale at highest prices when finished. Truly the high cost of feeding applies with all its force to live-stock feeding and truly the successful live-stock man requires a more than ordinary knowledge of feeds and feeding and skill to carry out what he knows.

Fight the Insect Foes.

Few seasons pass without the introduction of some new insect pest or plant disease. Each individual section of the country has destructive insects and plant diseases peculiar to itself besides having many of those common to all districts. Each new pest adds to the expense of crop production, adds to the troubles of the producer, and ultimately adds to the prices to the consumer, especially where such pests become so established as to destroy large portions of any crop. A few days ago we read that Canada is threatened with two or three more destructive insects, one attacking potatoes, one wheat and a third alfalfa. Fruit growers know how difficult it is to produce clean fruit and in some places where San Jose scale has gained a foothold they realize what care is necessary to save the trees. There are scores of insects and diseases of fruit; there are grubs, weevils, stem-maggots, midges, worms, bugs and beetles galore attacking farm crops, to say nothing of rusts, smuts and other destructive and common diseases which yearly lower average yields and sometimes almost entirely destroy the crop of large sections of fertile lands. Animal diseases are prevalent and must be guarded against at all times.

With the large number of scourges now known the producer seems to have plenty with which to contend. But still they come. They spread from district to district notwithstanding that a large number of trained men do everything in their power to stop them. Many are very effectively kept in control by State laws rigidly enforced. Investigations by biologists have rendered invaluable service in keeping some of the most destruc-

The Farmer's Advocate

HOME MAGAZINE.

LEADING AGRICULTURAL JOURNAL IN
THE DOMINION.

PUBLISHED WEEKLY BY
WILLIAM WELD COMPANY (LIMITED).

JOHN WELD, MANAGER.

Signed for "The Farmer's Advocate and Home Journal,"
Winnipeg, Man.

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13. WE INVITE FARMERS to write us on any agricultural topic. We are always pleased to receive practical articles. For such as we consider valuable we will pay ten cents per inch printed matter. Criticisms of Articles, Suggestions How to Improve "The Farmer's Advocate and Home Magazine," Descriptions of New Grains, Roots or Vegetables not generally known, Particulars of Experiments Tried, or Improved Methods of Cultivation, are such and all welcome. Contributions sent us must not be furnished other papers until after they have appeared in our columns. Rejected matter will be returned on receipt of postage.
14. ALL COMMUNICATIONS in reference to any matter connected with this paper should be addressed as below, and not to any individual connected with the paper.

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tive insect and plant disease pests out of our country, but these cannot be expected to do it all. Their findings and suggestions must be acted upon by the man on the land. It is his duty to familiarize himself as opportunity affords with all destructive pests, to as far as possible avoid introducing them onto his property by buying only clean, pure seeds and the best of fumigated fruit trees from clean nurseries, and in case they do obtain a foothold to find out the best methods of control and eradication and act upon them. He should not resist protective regulations under Government sanction, but should co-operate with the men vested with authority in the control and extermination of pests. These officers are not meddlesome minions of the law, irksome and vexatious, but friends. Investigators through studies of life histories and habits generally evolve a practical method of control. Spraying, rotation of crops, cultivation, disinfection and many other methods are outlined to keep the farm and orchard free of pests of all kinds. Study the different formulæ from time to time recommended for specific plant diseases or insect pests; be familiar with insect life histories and habits and try to keep the farm clean. One man in a neighborhood, careless and indifferent, may perpetuate the scourge and spread it year after year. It is the duty of all to put up a game fight and if this is done the worst of the insect tribe or the most persistent plant disease must yield and by following up advantages gained the defeat may be turned into a complete rout.

Plowing, the Basis of Cultivation.

We often hear the remark made that plowing is not as well done in these days as was the case some years ago. Many are the men well on in years who claim that they are much better plowmen than their sons or their sons' sons. Whether their contention is warranted or not the fact remains that much careless, indifferent work is done with the plow in these days when excessive expenditure should stimulate every effort to



Fig. 1.—Longitudinal section of a spike of the tree club moss, showing sporangia containing spores.

do all things agricultural to best advantage. There seems to exist in many of the younger men of the time an apathy towards plowing which must have been acquired in most cases for it could never have been inherited seeing that their forefathers took great pride in the straight, even and well-turned furrow. The rush of modern times seems to have extended to this important farm work, for is it not the case that many look upon plowing as an operation where skill is not required and where the main consideration is to change green or brown fields to black? Have you ever heard the expression, "We got fifty acres blacked over?" How truly it applies in many cases. The field may be "blacked over" but it could not be called "plowed."

There is an old adage which applies well to plowing, "A thing well done is twice done." In many cases one good plowing would do more good than two of the uneven, crooked-furrowed, cut-and-covered variety so common. If there is any farm operation which should be well done it is plowing. Consider what it means. Plowing is the first and main operation in the preparation of the soil for a crop. It is most important in the destruction of noxious weeds. Without it under most conditions other farm implements could not satisfactorily prepare a field for future crops. It consists, or should consist, in the deepest and most thorough stirring the soil gets throughout an entire season. Upon it depends

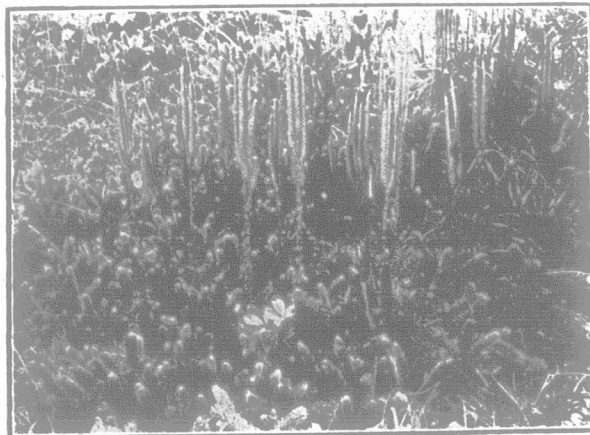


Fig. 2.—The common club moss.—Photo by Klugh.

the tilth of the soil when all cultivation is completed, and upon it depends largely the amount of extra cultivation necessary to produce good tilth. It is a difficult task to make a good finish with the cultivator and smoothing harrows where a bad beginning has been made with the plow. Good plowing is the basis of all good cultivation. This being true there is every reason to encourage young men and older men also to take more interest in this by many considered the most enjoyable and most important spring and fall (more particularly fall) operation.

Properly conducted plowing matches serve to keep up interest and are worthy of support. A man who plows well enough to win at one of these generally plows well on his own place, for good plowing requires care and the man who is indifferent ninety-nine days cannot turn a perfect furrow on the hundredth afternoon. It will pay to take more pride in our plowing. We have heard plows condemned when in reality it was the fault of the person between the handles that satisfactory work was not being done. Plows will not

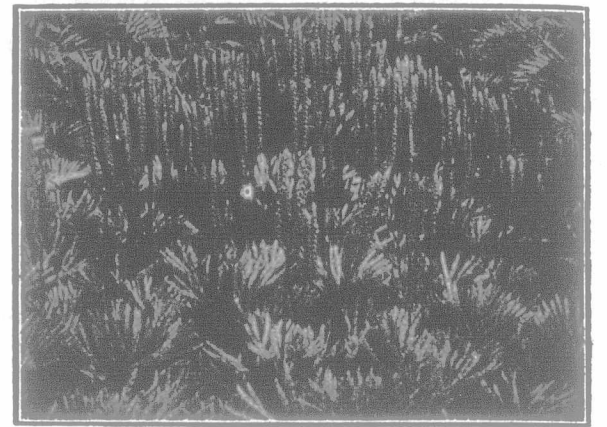


Fig. 3.—The ground cedar.—Photo by Klugh.

operate themselves. Land may be made black without much attention to the plow and the driver may slouch along carelessly steadying the handles or if it be a two-furrowed plow may not even take hold of these. Handles were made to hold. If they were not required they would not be there. Even with riding plows skill is necessary in their operation. The plow must be set to turn an even, true furrow and the driver to do good work must pay particular attention to his horses, have his lands started straight so that he can, by exercising care, keep them straight and each time across the field turn the same width of furrow. A careless plowman is usually careless with all cultivation and his crops generally show the effects of slighted work. The plow is not a plaything with which to pass the time, it is the first agricultural implement and upon the work done with it depends to a large extent, far more so than many seem to believe, the success or failure of farm operations. Try to plow the first furrow straight, an even width and an even depth and endeavor to make each succeeding furrow just like it, varying only where imperfections are noticeable in the first and as furrow lays on furrow straighten out all defects until each is straight and all the same width and depth.

Nature's Diary.

By A. B. Klugh, M. A.

The Club-mosses are attractive plants at any time of the year, but they are particularly so in the late fall, when green things are not as common in the woods as they are during the spring and summer.

Though called "Club-mosses" these plants are

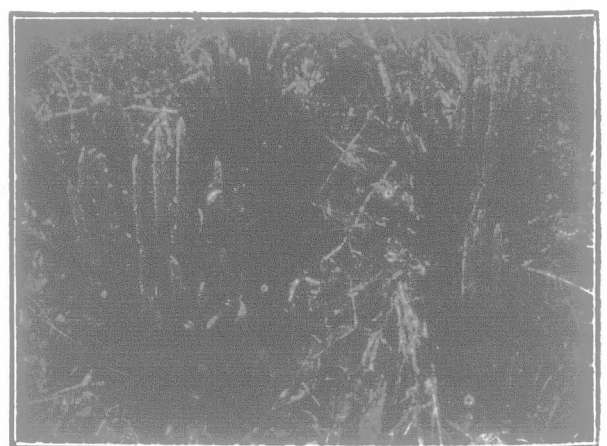


Fig. 4.—The tree club moss.—Photo by Klugh.

really allies of the ferns. The spores are borne in little pouches, known as sporangia, which are arranged in the axils of scales in a spike. These spikes show very clearly in the illustrations. The spores upon germination do not grow at once into a plant like that which produced them, but develop into a small structure known as a prothallium, on which are borne the male and female organs. The egg upon development produces once again the plant as we find it in the woods.

Fig. 1 is a longitudinal section of a spike, showing the sporangia containing the spores. This photograph was taken through a microscope and the section is magnified seventy-five times.

These plants are also called "Ground-pines," "Staghorn-mosses," "Running-pine," and "ground cedar."

Probably the most abundant species is the one called the Common Club-moss, which is shown in Fig. 2. It grows in woods and also on dry heaths. The main stem often reaches a length of ten feet or more. At the growing end it is usually above ground and covered on all sides with the green leaves; at the opposite end it is more or less hidden under an accumulation of dead vegetation, and the stems and leaves are yellowish. Here and there, throughout its length, single, stout, cord-like roots are given off, which extend downwards until they enter the soil, where they usually branch once or twice. Frequently the main stem is branched, and these branches, like the axis from which they spring, maintain a course parallel with the earth.

At short intervals along these stems other branches are produced which extend upwards. During the first year they are from one to three inches long and are simple, but at the next growing-season they add to their length and at the same time put out short branches. This continues for several years until the older branches are several times branched, with occasional roots springing from the portions nearest the earth.

The leaves are evergreen and persist for several years. They are arranged on the stem and branches in about eight longitudinal rows, and so close in the rows as to overlap. They are about a quarter of an inch long, very narrow, and each ends in a long soft bristle. The old leaves are dark green in color, but the new growth is light, silvery green, and very noticeable in the early summer.

About midsummer the plant begins to put up its fruiting spikes, which are always borne at the tips of the branches of the previous year. The spores ripen in early autumn, and are bright yellow in color. The lycopodium powder of the drugstore, which is used to dust pill-boxes to keep the pills from sticking together, consists of these spores.

This species is one of the most widely distributed of the genus. It is common in the Arctic and Sub-Arctic regions of both hemispheres, and has also been reported from tropical America, Brazil, Cape of Good Hope, Madagascar, India, Java, New Guinea, the Hawaiian Islands and Eastern Asia. In North America it ranges from the Arctic Circle southward to Oregon, Iowa, Michigan, and New Jersey, and also occurs in the mountains of North Carolina.

In Fig. 3 is shown another common species of Lycopodium, known as Ground Cedar or Ground Pine, the former name appearing to me by far the most appropriate. Like the Common Club-moss, this species has a long, running main stem which may reach a length of from eight to ten feet. The branches are erect, those of the season being from two to five inches long and consisting of a short main branch terminating in a bud-like point with a pair of opposite fan-like lateral branches just below it. The leaves of this species are of two kinds. Extending lengthwise of the branches on the underside is a row of very short, pointed leaves, in a similar row on the upper side is a series of larger leaves with the leaves closely appressed.

The Tree Club-moss (Fig. 4) is well named,

and its tree-like aspect is heightened by the fact that the main stem is deeply underground and the branches arising at some distance from one another seem to be different plants instead of several branches of one individual. The spikes of fruit are borne singly on the tips of the old branches, often as many as fifteen spikes on a main branch.

Our Club-mosses are the diminutive descendants of the giant, tree-like forms, known as Lepidodendron, which flourished in the Carboniferous period. Recent investigations have shown that the great bulk of coal is made up of the spores of these extinct plants.

THE HORSE.

Be kind to the horses.

Good care is doubly repaid.

Brood mares often stock; exercise and laxative food are needed.

Read "Whip's" article in this week's issue and care for the horses accordingly.

The big horse sells for the big price. Do not lose sight of this fact in breeding and raising colts.

Nights are growing longer, colder, and damper. Horses outside must feel the need of shelter at this season.

Do not pamper the colt. Feed him well, but let him take care of himself outside in daytime, unless too stormy.

When the colt is brought in from the pasture field, if he has not already been halter broken, do it at once. Tie him securely and teach him to lead, but plan after he yields to let him loose in a box stall.

There is little to be gained by letting the foal run with his dam this late in the season if he has reached four or five months of age. Especially is this the case where the mare is working daily or is again with foal.

Some Common Fall Ailments of Horses.

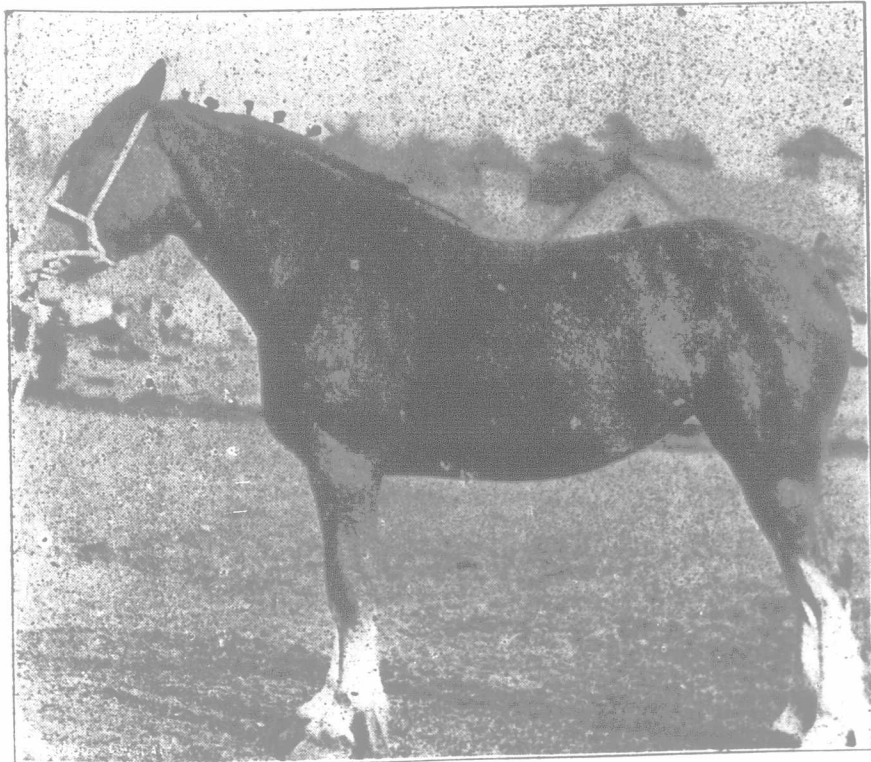
Change of weather, change of surroundings, change of food and change of usage are often responsible for derangement in the health of horses.

Swelling of the limbs, commonly called stocking, may appear in any horse from some of these causes. It appears in colts and horses that have spent the summer and fall months in idleness on grass as well as in horses that have been regularly worked. It is due to sluggish circulation in the limbs. The general health of the animal is not usually noticeably interfered with; one or more limbs from the knee or hock to the foot be-

come swollen; there is practically no soreness to pressure and no lameness. Exercise dissipates the swelling in most cases, but after a night in the stable the swelling has re-appeared. This condition is usually confined to horses that have usually spent the nights on pasture, but is not unknown in horses that have been stabled all the time. In the former cases, regular work or exercise and moderate feeding on laxative food will, after a time, usually result in a cure, but in any case a cure is hastened by treatment. The animal should be fed nothing but a little bran (either dry or moist) for about 12 hours, then a purgative of 6 to 10 drams of aloes (according to size) and 2 to 3 drams of ginger should be given, and nothing but bran be given to eat until the purgative begins to act, when hay and grain in small quantities should be given until the bowels have regained their normal condition, after which daily exercise should be given, and when the animal is brought to the stable after exercise the limbs should be well hand-rubbed and bandages applied with only slight pressure. This tends to keep the limbs warm and stimulates circulation, but the pressure of the bandages should not be sufficient to cause too much pressure if slight swelling should take place. In addition to exercising and bandaging the patient should be given a heaped teaspoonful of Epsom salts in his food twice daily until the tendency to swelling has disappeared, and should be fed on food of a laxative character. A few carrots or a turnip or mangel once daily tends to keep the bowels in a healthy condition when no grass can be fed. Pregnant mares in many cases appear to be particularly liable to stocking. In such cases it is wise to avoid drastic purgatives. A pint of linseed oil may be given as a laxative and the other treatment the same as above. If the horses are idle, good health can be retained only by seeing that they get daily exercise, either in harness, saddle, on the line, or in a paddock. A horse that stands untied in a roomy box-stall will take considerable voluntary exercise, hence can stand idleness and high feeding much better than the idle horse that stands tied.

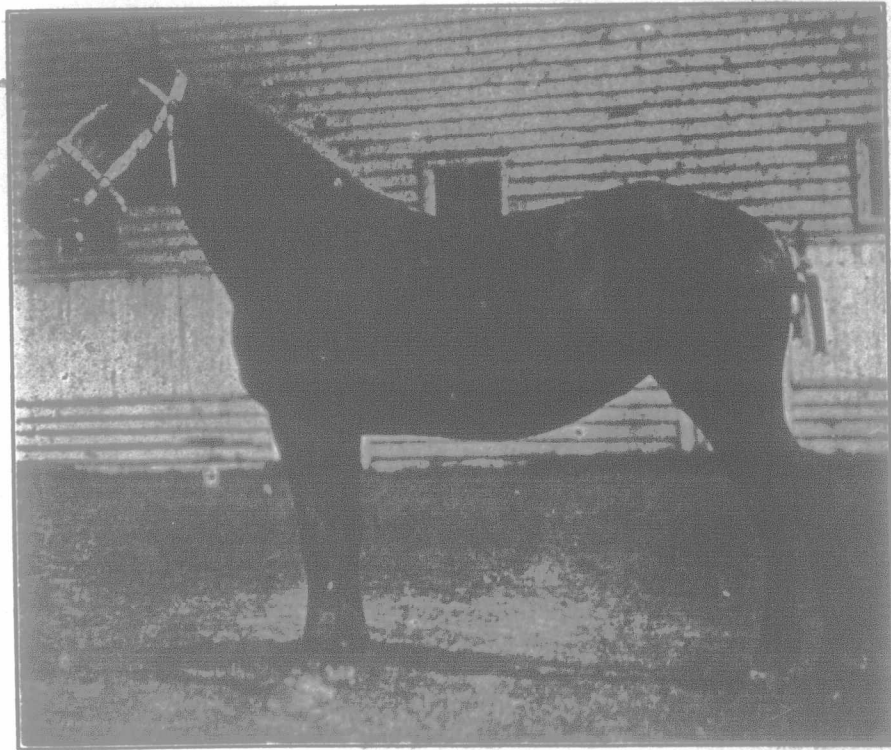
Scratches or cracked heels frequently appear. Some horses are pre-disposed to this trouble, especially those with heavy or meaty, often called "round" legs. Stocking is often the exciting cause, but standing in damp stables, frequent wetting of the legs and a failure to rub them dry and groom properly are also direct exciting causes. In cases where scratches are about to appear the stocking is accompanied by increased local heat and tenderness to pressure and usually by lameness for a few steps when taken out for exercise after standing for a few hours. After a variable time the skin becomes very tender, and cracks or eruptions, which exude a moisture, in greater or lesser quantities, appear and the general symptoms become more marked. If the exciting causes continue and treatment be neglected the case becomes worse, the cracks become deeper, the exudate more plentiful and foul smelling, and, of course, lameness becomes more marked.

Treatment.—Before eruption takes place the treatment advised for stocking along with care to avoid exciting causes will usually be sufficient. When cracks or exudation of fluid be noticed, in addition to the above treatment the parts must be kept as clean as possible by careful rubbing—



Lady McTaggart (imp.)

Clydesdale mare, grand champion at Ottawa, 1913. Owned and exhibited by Robt. Ness & Sons, Howick, Que.



Laheviniere.

Two-year-old Percheron filly; first at Toronto and London, 1913. Exhibited by T. H. Hassard, Markham, Ont.

(do not wash)—and dressed three or four times daily with an antiseptic and astringent dressing. For this purpose a mixture of 1 oz. acetate of lead and 6 drams sulphate of zinc with a pint of water is probably the best that can be used in moderate weather. In quite cold weather this dressing is too astringent and should be alternated with oxide of zinc ointment to avoid too much astringency, which tends to cause a recurrence of the cracks after an apparent recovery. In cases that have become aggravated, by neglect of treatment or other causes, it is good practice to apply hot poultices of linseed meal for a few days before using an astringent or ointment. Then if the cracks refuse to heal it will be noticed that there is generally what is known as "proud flesh" present, and this should be dressed with a caustic, as butter of antimony applied with a feather once daily until it disappears, after which continue treatment as above.

Catarrh or common cold is often noticed in young or idle horses that have been left on grass until late in the season. While it may appear peculiar it is a fact, that the removal of a horse from exposed and cold quarters to a comfortable stable often produces cold or catarrh. In such cases the patient is noticed to cough more or less, there is at first a slight, watery discharge from the nostrils, which soon becomes thicker and somewhat persistent, the appetite is impaired, the coat staring; there is an increase in temperature and a general unthrifty appearance, but when a careful examination is made there is no well-marked constitutional disturbance except a slight increase in temperature and in some cases slight stocking. In most cases good care and laxative food for a few days will effect a cure, but this can be hastened by the administration of 1 to 2 drams nitrate of potassium three times daily and if there be a tendency to stock hand-rubbing and bandaging the legs. Avoid drastic purgatives in these cases. Laxative food is usually all that is required, but if constipation is threatened $\frac{1}{2}$ to 1 pint of raw linseed oil may be given, but there being more or less soreness of the throat, hence a difficulty in swallowing, it is unsafe to drench unless great care be taken and it is safer to give the oil by means of a 2-oz. syringe, with which it can be forced well back in the mouth, and as the patient's head is not being held high, there is practically no danger of any of the oil gaining entrance to the windpipe.

WHIP.

Handle the Colts.

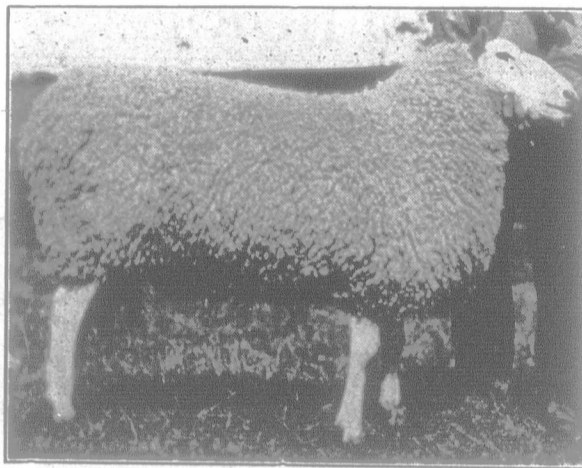
Too much cannot be said in favor of the early handling of colts. The earlier the better is the general belief, in these days a belief which was able set forth in an article in a recent issue of *The Live Stock Journal*, from which we take the following:

It was in times gone by a widely held theory, particularly among horse-breeding farmers, that young horses were best left entirely unhandled until the time came actually to break them in for use, on the supposition that, for some unexplained and occult reason, an unhandled and completely untamed horse, which still had to learn the very rudiments of control, could be more effectively broken and more satisfactorily trained to its work than one that had already received some previous gentling and handling. In these modern and more enlightened days we, of course, know better, and have relegated that notion to the limbo of old-fashioned ideas, like so many other curious and fallacious beliefs which in former generations were prevalent in regard to the management of horses. Even at the present time there are still some farmers of the old school to be found in remote districts who tenaciously cling to the above theory of a former and less well-informed age; but apart from these exceptions, it is nowadays generally recognized that the early handling of young colts, in order to inculcate a tractable disposition, is most desirable, and both much facilitates the work and lessens the trouble of breaking them in.

One cannot, in fact, begin to handle them too soon, and a commencement is best made already during foalhood, either while the foal is still running with its dam, or at weaning-time, its confidence being more readily gained at this early stage than at a later age. A little gentling at frequent intervals will soon dispel the inherent diffidence which foals so generally display, and serve to render them quite amenable to control. Such handling should include the haltering of the foal, and teaching it to lead, which last is a most convenient and desirable accomplishment in all foals, while a point should also always be made of handling its legs occasionally, so that it may learn to submit quietly to having its feet picked up and examined. One of the greatest difficulties experienced in the case of unhandled, young horses when taken up to be broken in is to get them shod the first time, on which occasion they very often cause endless trouble, to say nothing of the fact that they are apt to knock themselves about a good deal in their struggles to resist the blacksmith, which may very possibly

result in some injury being inflicted. But if a colt has previously been accustomed to having its legs and feet touched and picked up, all this trouble and risk of accident in connection with the first shoeing is entirely avoided, the way being smoothed for its easy accomplishment.

The beneficial results of handling young foals and the great convenience accruing from this course are demonstrated in a particularly conspicuous manner at horse and foal shows. Here the well-behaved, docile foal which has had plenty of practice in leading, etc., always has an advantage over the unhandled youngster in that it can be made to show itself to much better effect; whereas the other is a source of much trouble to



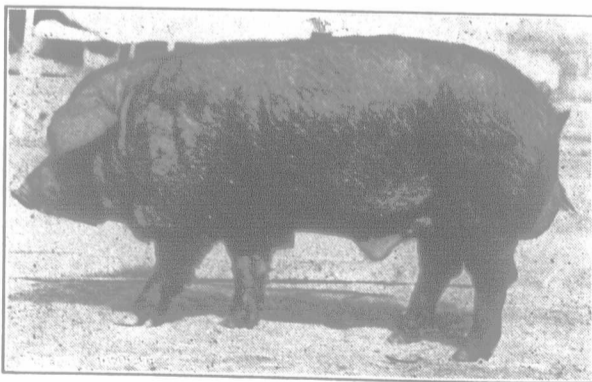
Leicester Ram.

Winner of the aged class at Toronto, 1913. Owned by A. & W. Whitelaw, Guelph, Ont.

its attendant, not only at the show itself but in journeying to and from it. Well-trained foals may be seen in the show-ring to comport themselves as steadily almost as mature horses, and are they not all the better for being thus disciplined at an early age? It may perhaps be questioned whether it is advisable to go to the length of teaching a foal to stretch itself out for inspection in the ring after the manner of older horses, for there is the possibility that this, as is averred by some to be the case, may be productive of harm to its tender frame, when frequently repeated, but this is a point which hardly concerns us here.

The use of a leather headstall is to be strongly advocated for the purpose of haltering young colts, this being the only suitable kind. A rope or hemp halter with a running rein should be eschewed, for the foal or colt generally runs back when haltered, which causes a halter of this kind to close tightly over the nose, with the result that the young animal is frightened, and severe struggling ensues, this having a most upsetting effect, and engendering a dislike to being haltered in it, which it will take some time and trouble to overcome.

By the time a colt is two years old it will be a suitable step to get it used to wearing a bit in its mouth, and to teach it to lead with a bridle instead of merely on the halter. There will be no difficulty in getting it to take to the bit if it has previously been well gentled, and if



Duroc-Jersey Boar.

Champion at Toronto, 1913. Owned and exhibited by Mac Campbell & Sons, Northwood, Ontario.

It is occasionally made to wear a bridle for a couple of hours or so, being accommodated in a loose box or straw yard for this purpose. This will prove a valuable preliminary to the mousing process later on when the time comes to take its education for work in hand in earnest. The colt should not, however, be reined back when this is done, or if side reins are put on these should be adjusted quite loosely. Occasionally biting a young colt in this manner also serves the further useful purpose of tanning the delicate skin of the mouth to contact with the mouthpiece of the bit and hardens it, which will help to prevent the mouth from developing soreness when the young horse is broken in, a contingency that is most apt to occur on breaking a colt that has not previously been used to having a bit in its

mouth. A plain, thick snaffle, or a colt mousing bit, with keys or players on it, is the kind of bit to use for such early biting, though a ring bit, as used by some breeders for their young colts, is also very suitable for the purpose. An improvement upon this bit a ring bit which has an attachment of keys that play on the tongue and with a certain mousing effect. While a ring bit is easy for the raw mouth of a young colt, it also confers good control over the animal when it is being led.

The Box Stall for the Colt.

Cold weather means stabling, and stabling in the case of the colt should mean a nice, roomy, light box stall. There is no better floor for such a stall, at least as far as the colt's welfare is concerned, than good, hard clay. A stiff, blue clay, dug and put down rather wet (if not wet enough add water) packed and then smoothed and allowed to dry will harden into a floor which will not prove so hard on the colt's feet as cement and not so drying as either cement or plank. Besides, the colt is not so likely to slip and injure himself, which is quite a consideration.

To develop a colt to best advantage feeding appliances are better placed low down. In fact, it would be better in most cases to feed the hay on the ground rather than from a high manger. Many good horsemen follow this practice with older horses as well as with colts. It is better to place the grain box at a good height, otherwise the colt will get his feet into it and waste some of the feed. Care is necessary to have nothing about the stall upon which the colt could in any way injure himself. Plenty of room, plenty of light, plenty of exercise and plenty of feed regularly given do much toward rapid development.

LIVE STOCK.

The problem is how to sell all the milk and at the same time raise good calves.

Interest seems to be centred in feeding cattle this fall, but lambs should not be lost sight of. Remember the profits which some successful lamb feeders made last winter.

Save the mangels for the calves and young stock. Nothing is more relished by a calf and nothing is better for its digestion than good, crisp, juicy mangels. Silage is all right, but silage and corn is better.

Some care is necessary that the young pigs are not overfed. It does not pay to underfeed a pig, but young shoats, especially where skim milk is not abundant, should not get too much strong grain. Shorts and a few finely-ground oats are better than corn or, too many peas or barley. Mixtures are preferable.

In starting to stall feed the steers it is not advisable to get over anxious. They must not be given too much grain at first. Start with a few pounds and make increase gradually. Do not be guided by the animal's appetites at first, for almost invariably they will eat ravenously of grain, upset their digestive organs and become "stalled," a condition from which it takes time and careful feeding to recover. After the feeding has reached a maximum basis the cattle's appetites and capacity for food may be used somewhat as a guide.

Breeding Herds and Tuberculosis.

Apropos of the discussion now going on in England re compulsory tuberculin testing, Sir John McFadyean, Principal of the Royal Veterinary College, in a recent address expressed the opinion that compulsory testing of all the cattle in the country to be followed by the slaughter of all reacting animals, is a plan no sane and well-informed person could recommend. This plan was once advocated, but, no country adopting it has continued in that policy. Speaking on the alleged prevalence of tuberculosis in dairy herds in England, the Principal stated that the means by which herds might be rendered free from the disease had been known for twenty years, but few attempts to eradicate the disease had been made, because of the inherent difficulty of the problem and the absence of any prospect of adequate reward for trouble and expense involved. "Against a certain class of cattle owners the charge of stupidity and lack of public spirit in this matter may, I think, be fairly made," continued Sir John. "I refer to the owners of the valuable pedigree herds in this country (referring to England). In the great majority of such herds the difficulties in the way of eradication are nothing like so great as on ordinary farms, and owing to the greater individual value of such cattle when

non-tuberculous, the owner who freed his herd from the disease could not fail to reap a handsome harvest."

Commenting on this statement one of the leading English agricultural journals says:

"This charge will certainly be sharply challenged and resented. Owners of pedigree herds have not generally adopted the course referred to, chiefly because they do not believe in the reliability of the tuberculin test, and they seem to be supported in that doubt by evidence of the eminent medical men. The question can only be settled by elaborate laboratory and other experiments. Doubtless, however, a large number of breeders are having their herds tested. The fact that the export trade in pedigree cattle has been successfully conducted and widely extended for the past twelve years under the tuberculin test—which is insisted upon against the cattle of this country, but not as regards their own by foreign and colonial governments—is evidence that British herds are able to emerge satisfactorily from the trial. Breeders have also been doing much more to establish the soundness of their herds, and it is on soundness that this important trade is based. They have been vigorously applying hygienic principles in the housing and management of their stock, and in other ways have been raising the health standard. The fact that with a vast increase in the consumption of meat and milk in this country, there is a great decline in human tuberculosis is a proof that these are not the chief sources of the disease, and of this the late Dr. Koch was fully convinced.

"The attack made upon breeders of pedigree cattle will make little difference to the action of the enlightened benefactors who have raised the reputation of British live stock to the highest point throughout the world, for they will continue, according to their own judgment, to breed robust cattle unsurpassed for the production of beef and milk, thus showing as they have always done that they are lacking neither in intelligence nor in public spirit. Breeders will do well to continue to accept with considerable caution much of the scientific advice which is being so liberally showered upon them, and not to go in advance of the more reliable teaching of experience which they have acquired in the management of their herds."

It is true that much is possible in the development of a strong, hardy, robust herd of cattle through the adoption of the best methods of feeding and housing. Hygienic principles must be followed to raise the standard of vigor, but where tuberculosis is prevalent in a herd, it cannot be eradicated without taking special means. Compulsory testing may not be advisable, but where a breeder owns and operates a large herd of pure-bred stock it would seem to be to his own interest to keep it healthy. The tuberculin test properly conducted we believe to be reliable, and it has been demonstrated that it is possible to keep calves from diseased dams free from the disease by a thorough system of isolation, never allowing them with diseased cattle nor to take the milk of their diseased dams. Slaughtering valuable breeding animals because they reacted to a tuberculin test could not be tolerated. Of course those far advanced and showing very marked clinical symptoms are not likely to be valuable to keep and might better be destroyed, but many react which go on for years in apparent good health and breed and milk to advantage. Such should be operated under the Bang system of tuberculosis treatment. Breeders of pedigree stock should be encouraged to breed clean herds, should not be driven by scientific investigation to do unreasonable things, but all changes of laws relating to testing should be so made that the investigator and the breeder may work hand in hand to exterminate bovine tuberculosis and all other contagious animal diseases which it is necessary to bring under the ban of the law.

Our English Correspondence.

CATTLE FEEDING IN ENGLAND.

Recent researches made in England into the nutrition of animals have been proving many things of interest. It has been shown that if a number of animals in store condition are put on a fattening diet, at the end of a feeding period of twelve to twenty weeks about half of them will show live-weight increases differing by about fourteen per cent. from the average live-weight increase of the whole lot. In other words, the probable error of the live-weight increase of a single fattening ox or sheep is fourteen per cent. of the live-weight increase. This being so, it is obvious that very large numbers of animals must be employed in any feeding experiment which is designed to compare the feeding value of two rations with reasonable accuracy. For instance, to measure a difference of ten per cent., it is necessary to reduce the probable error to three per cent. in order that the ten per cent. difference may have a certainty of thirty to one. To achieve this, twenty-five animals must be fed on each ration. These consonant with the numerous reports of feeding trials which have been published in the last twenty years will agree that in

very few cases have such numbers been used. We must admit then, that many of the feeding trials which have been carried out can lay no claim to accuracy. Nevertheless, they have served a very useful purpose. From time to time, new articles of food come on the market, and are viewed with suspicion by farmers. These have been included in feeding trials and found to be safe, or otherwise, a piece of most useful information. Thus, for instance, Bombay cotton-cake, when first put on the market was thought to be dangerous on account of its woolly appearance. It was tried, however, by several of the agricultural colleges and found to be quite harmless to cattle. Its



The Head of a Champion.

Bonnie Brae 21st, champion Hereford bull at Toronto and London, 1913. Exhibited by Dudley Smith, Hamilton, Ont.

composition is practically the same as that of Egyptian cotton-cake, and it now makes on the market practically the same price. Soya-bean cake is another instance of a new food which has been similarly tested and found to be safe for cattle if used in rather small quantities and mixed with cotton-cake. The price is now rapidly rising to that indicated by its analysis. Work of this kind is, and always will be, most useful. Trials with ten animals, while they cannot measure accurately the feeding value of a new food, are quite good enough to demonstrate its general properties, and its price will then gradually settle itself as the food gets known.

GRAIN AS STOCK FOOD.

Of English cereal grains as food for live stock oats take pride of place, but it is not perhaps so commonly known that their nutritive value varies more than any of the others. Research has shown

water. Newly-harvested and also mouldy oats are both dangerous to stock; the former should be stored a couple of months before feeding, and the latter need steaming to be safe. Barley as a food for stock is chiefly used for pigs and cows in England, and the poorer the season is for producing a good malting sample the better it is for giving a good feeding kind. Barley that has been laid also furnishes a better feeding grain than it otherwise would do. For horses, barley is found to be too heating, and fails to keep up the animal's energy, but can be safely fed to the extent of one-fourth of the total grain ration. For other classes of stock it is almost always fed as a meal owing to it being harder than oats, and therefore less easily masticated. As regards its commercial feeding value, barley is not as rich in oil and albuminoids as oats, but is richer in carbo-hydrates. Wheat grain is not much used as a farm food owing to its value as a human food. A certain amount, chiefly what cannot be sold, is, however, used, and its composition shows it to be richer in albuminoids and carbo-hydrates than either oats or barley, and also more digestible. As a foodstuff for animals, however, wheat can only be used in small amounts, as otherwise it causes digestive troubles. Especially is this so with newly-harvested grain, or that from a crop which has suffered from a plant disease. Wheat cannot be substituted for oats as a producer of energy, being more adapted as a fattening food.

G. T. BURROWS.
London, Eng.

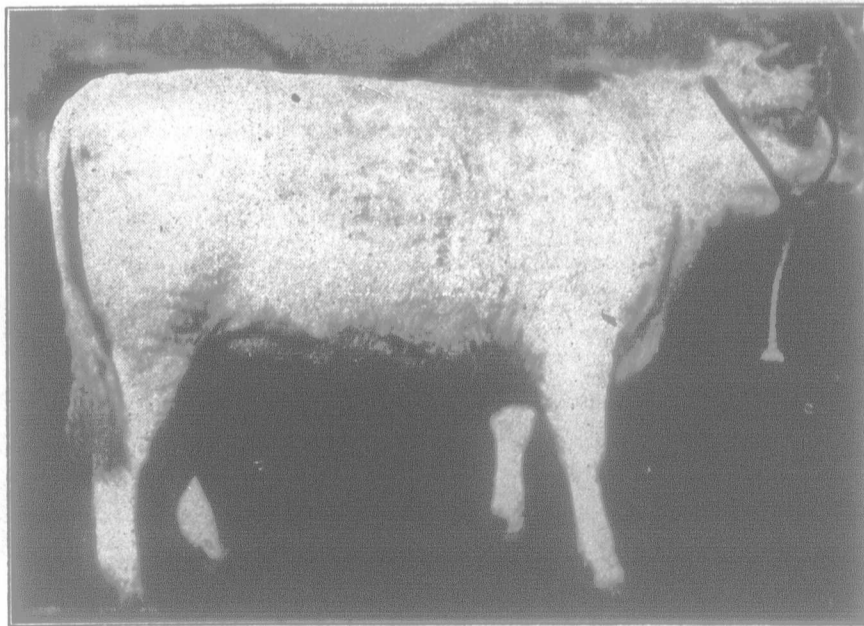
THE FARM.

Some Facts Concerning Lightning-Rod Efficiency

Some striking figures going to prove the protection afforded to buildings by properly-erected lightning rods were obtained by Prof. W. H. Day, of the Ontario Agricultural College, during 1912 and published in "The Farmer's Advocate" of April 24th, 1913. Statistics were collected from mutual fire-insurance companies insuring both rod-ded and unrod-ded buildings. Eight of these companies were in a position to furnish complete reports of their losses. During the year 1912 these companies wrote insurance on 10,644 farm buildings indicating that the total number of buildings insured would probably be about thirty thousand since the policies are renewable every three years. Of the buildings insured 21.1 per cent. were rod-ded. The eight companies had nineteen buildings burned, of which not one was rod-ded. Counting burned and damaged buildings both, there were 185 buildings struck, of which only two were rod-ded, or 1.5 per cent. Thus the comparison of rod-ded risks to rod-ded losses stands as 21.1 to 1.5. Or stating the data in another way, out of every 7,000 unrod-ded buildings insured by these

companies, lightning claims were paid on thirty-seven, while in every 7,000 rod-ded buildings insured, lightning claims were paid on only two, or in other words, the unrod-ded building is 18½ times as likely to be damaged by lightning as the rod-ded one. These results cover all kinds of rods used in Ontario, and doubtless include some improper rod-ding. To save 85 buildings out of an expectancy of 37 means an efficiency of 94½ per cent.

From these figures it would seem that the fire underwriters might well afford to allow a more favorable premium to owners of rod-ded buildings, if, indeed, they accepted unrod-ded risks at all. In the course of a recent visit to the United States, looking further into the subject, Prof. Day ran across one Farmers Mutual Company in Michigan which only takes risks on properly-rod-ded buildings and is known as a "Lightning Protected" Company. The Company's inspectors inspect the rod-ding on every building when application is received. If the rods are not properly installed the application is rejected. Another Farmers Mutual Company insures both rod-ded and unrod-ded buildings, and as a means of identification we shall call it the "Unprotected Company. For four years, 1909-1912, risks of the Protected Company totalled \$55,172,075, and all the lightning claims paid by the company during that period amounted to the small sum of \$32.00, all



Silver Queen.

A Shorthorn senior calf, winner of second in a class of seventeen entries, at Toronto, for J. A. Watt, Salem, Ont.

that the older varieties of oats give a richer grain than the newer ones. The chief characteristic in which oats differ from barley and wheat is their richness in oil of a very digestible nature, and it is this that makes oats such a capital foodstuff for working horses. Apart from this, oats are far more palatable and beneficial to animals than any other grain, and the husks by which oat grains are surrounded help to stimulate an abundant flow of the digestive juices in the stomach and intestines. When feeding oats to horses it is well to crush them first, or mix them with chopped hay or straw moistened with

THE DAIRY.

Feeding Cotton Seed Meal.

traceable to three small minor defects in rodding which had escaped the inspectors. During the same four years the risks on the Unprotected Company totalled \$59,567,272—a trifle more than those of the Protected Company—but the amount of lightning claims paid by this company during that time reached \$32,269, which is 1,008 times as much as paid by the Protected Company, and practically all of this large amount was paid to cover losses on unrodded buildings. During the past seven years this company taking unrodded risks has had only three small claims on rodded buildings, although twenty per cent. of the buildings on which they carry policies are rodded. Deducing these rodded risks, we see that the \$32,269 damage occurred on unrodded risks amounting to \$47,753,818. At this rate the loss on \$55,172,075 of unrodded risks would be \$37,282, which is 1.168 times as great as the loss on the same amount of properly rodded risks.

These two companies operate in the same field—the entire State of Michigan—so the comparison of their losses is clear evidence in favor of rodding. So phenomenal has been the success of the company carrying protected risks only that nearly every company operating in the State is now carrying its rodded and unrodded buildings in separate classes and each class is assessed for the losses sustained therein.

In the Unprotected Company above referred to both classes have been carried for five years and the assessments per \$1,000 risk have been much lower in the protected class, as shown by the following table:

Year.	Assessment per \$1,000 risk.	
	Unrodded.	Rodded.
1909	\$2.50	\$1.50
1910	3.33	2.50
1911	2.50	1.87½
1912	3.33	2.00
1913	3.33	2.00

This would indicate that from the standpoint of the insurance company, as well as from that of the owner of the buildings insured, it pays to rod.

It is interesting to compare the figures in the foregoing table with those in the following table, showing the assessments of the Protected Company for the same five years:

Year.	Assessment per \$1,000 risk.	
	Unrodded.	Rodded.
1909-1910	\$2.00	
1911	1.30	
1912	1.30	
1913	2.00	

These figures further drive home the point—Losses are fewer on rodded buildings.

Nine county and township companies were investigated, the smallest of which did only about one-eighth as much business during the four years as did the Protected Company previously mentioned, but during that time this small company taking unrodded buildings paid \$3,274 in losses, or 102 times as much as was paid by the large company doing eight times the amount of business, but accepting only rodded buildings. The reports of the other eight all told the same story as the largest and the smallest.

One company investigated, which took risks on both rodded and unrodded buildings, decided to allow a reduction of twenty per cent. in the rates where buildings were rodded. Judging by other companies where assessments were made according to the losses in each class this was not a sufficient reduction, there being nearer forty per cent. difference on the average.

Rodding has been proved to be efficient. So successful has the Protected Company been that it has drawn upon the business of other companies. In September, when Prof. Day was looking into the operation of the company, it carried \$32,000,000 in risks and business was increasing almost \$1,000,000 per month. Other companies have been practically driven to divide their business into rodded and unrodded classes.

The company first compared with the Protected Company has grown from \$12,507,801 in 1909 to \$18,500,000 insurance in September, 1913, but this company divided their risks into rodded and unrodded classes the very year that the Protected Company commenced business, viz., 1909. In spite of this the Protected Company is now doing nearly twice the business done by the Unprotected. Other companies which did not do this, lost business and during the past two years have made the change to the two classes.

The first two companies compared are the clearest proof of the efficiency of lightning rods. From their losses we see that when the damage to properly-rodded buildings amounts to \$1.00 the damage to unrodded ones amounts to \$1.168,00, or in other words rods have prevented \$1.167,00 out of an expected loss of \$1.168,00, which indicates 99.91 per cent. efficiency, considerably better than in Ontario, where improper rodding was included. This should be sufficient to convince the most skeptical that lightning rods properly installed are an effective protection.

Andrew M. Soule, President of the Georgia State College of Agriculture, in a bulletin on cotton seed meal recently published outlines tests in which silage, wheat bran and cotton seed meal when fed in opposition to silage, alfalfa hay and wheat bran, resulted in the production of a gallon of milk at a cost of 8.5 and 9.2 cents respectively. In other words, the results were in favor of using cotton seed meal as a source of protein rather than alfalfa hay. Virtually the same results were obtained when an attempt was made to substitute cowpea hay for cotton seed meal. It is true, these experiments were made several years ago, and while the cost of producing a gallon of milk may be somewhat higher now than at that period, the relative difference in efficiency was undoubtedly established by those tests. Since the experiments in question were made, alfalfa hay has increased relatively more in price than cotton seed meal, and the difference in favor of cotton seed meal as a source of protein has been increased thereby.

In experiments made on the College farm at Athens, Ga., the following rations were fed to groups of four cows each. The first group received cotton seed meal six lbs., silage 30 lbs., and corn stover six lbs. The second group received cotton seed meal four lbs., bran four lbs., silage 30 lbs., and stover six lbs. The third group received bran ten lbs., silage 30 lbs., and stover six lbs. In this test the attempt was made to demonstrate the relative efficiency of cotton seed meal as a concentrate in a ration for dairy cows when fed in conjunction with wheat bran and in direct opposition to it. Note that the same amount of silage and stover was fed all groups. The efficiency of the rations is determined by the relative cost of a gallon of milk, and the cost of the feed per cow per day. The first group made a gallon of milk at a cost of 5.97 cents; the second group made a gallon of milk at a cost of 10.07 cents. The cost of the feed per cow per day was with the first group, 12

concentrate to dairy cows for many years, it would appear that its use in the quantities indicated in this report resulted not only in the production of milk at a moderate cost, but has not impaired the health or longevity of the cows receiving it. Cotton seed meal has been fed in opposition to corn meal, corn and cob meal, chopped cowpea hay, alfalfa hay, beet pulp and wheat bran. In every instance it has proven the cheapest source of protein, and the most desirable concentrate to feed to dairy cows. Some have experienced dissatisfaction from its use, but these parties have, in most instances, fed it in too large quantities, or have not provided any succulent food for the ration, such as silage or good pasture may be made to furnish. Persons who simply feed cotton seed meal at random will not secure good results from its use. It should be fed according to the weight and size of the animal, and the quantity of milk she is giving. It is a simple matter to buy a pair of scales and a properly-gauged measure to enable this work to be done quickly and economically.

Dairy Methods and Rations.

From experience in Ontario and Quebec, and from observation and enquiry in other provinces, J. H. Grisdale in his new bulletin, "Milk Production in Canada," gives the following suggestions as applying to the Maritime Provinces, Ontario, Quebec and British Columbia:

Summer.—Cows on pasture from time grass is six to eight inches high. Pasture supplemented by soiling crops or ensilage as soon as cows show any signs of falling off in milk yield.

While on grass, feed small amount meal mixture, equal parts bran, crushed oats and corn meal, say from one to three lbs. per cow in full milk. Cows being fed ensilage may require somewhat larger portion.

Winter.—Provide liberal supply of succulent feed, as mangels, sugar mangels, sugar beets, turnips, swedes, corn ensilage, clover ensilage, etc.

Feed moderate amounts, clover hay, mixed hay, English hay, alfalfa, corn forage, corn stover, marsh hay, etc.

Feed with succulent feed some oat chaff, barley straw, etc.

Supply meal mixture made up of two or more of the following, one or more out of each group:

Group (a).—Crushed oats, corn meal, bran, shorts, buckwheat shorts, barley meal, gluten feed, brewers' grains, distillers' grains, etc.

Group (b).—Cottonseed meal, oil cake meal, gluten meal, peas, horse beans.

SUGGESTED RATIONS FOR 1,000 POUND COWS.

Ration 1.—Roots 50 lbs., clover hay 20 lbs., oat straw 5 lbs. Meal mixture: Bran 500, oats 200, corn 300, gluten meal 300. Feed one pound

to each four pounds milk produced.

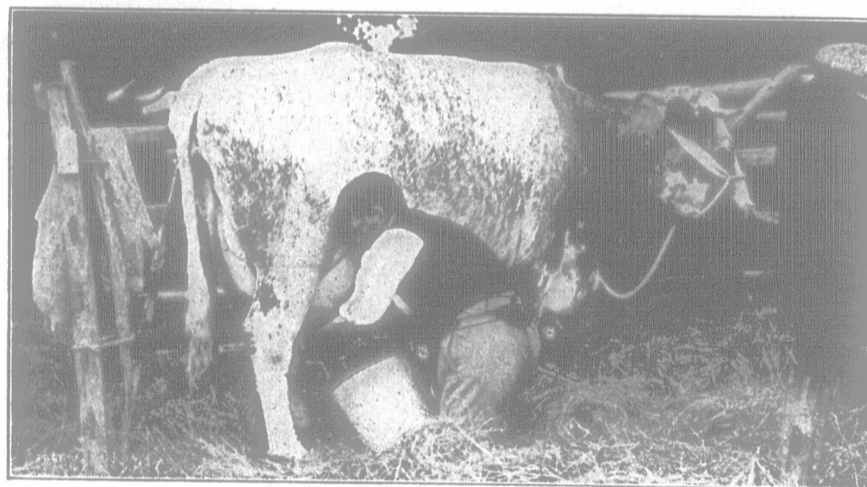
Ration 2.—Roots 20 lbs., corn ensilage 35 lbs., clover hay 10 lbs., oat straw 5 lbs. Meal mixture: Bran 500, oil cake meal 300, corn 200. One pound to each four pounds milk produced.

Ration 3.—Clover hay 20 lbs., oat straw 10 lbs. Meal mixture: Bran 500, oil cake meal 300, oats 200. Feed one pound to each three pounds milk produced.

Ration 4.—Corn ensilage 40 lbs., oat chaff 5 lbs., alfalfa hay 8 lbs. Meal mixture: Bran 500, gluten 200, oil cake meal 300, barley 200. Feed one pound to four pounds milk produced.

Ration 5.—Corn ensilage 40 lbs., alfalfa 10 lbs., oat straw 10 lbs. Meal mixture: Bran 500, oats 500, barley 500, cottonseed meal 500. Feed one pound to four pounds milk produced.

Reports indicate that the new United States tariff is, as foreshadowed in a recent editorial in this paper, drawing upon the supplies of dairy cattle in this country. The district around Toronto is said to have been scoured by American buyers, and two trainloads of cattle went out of it to the United States in one day last week and many of these were young heifers. Already dairy-men in the district are beginning to feel the scarcity of heifers. Supplying a large city with milk means that the old matrons must have their places taken by younger stock from time to time. When an old cow breaks down a young one must be had immediately to keep up the contract milk supply. Where will she come from if all the heifers are sold?



Milking in the Show-ring.

The first-prize dairy cow at an English Show. A milking Shorthorn.

cents; with the second group, 15 cents; and with the third group, 19.9 cents. These figures certainly show that at the prices prevailing for foodstuffs when this test was made that cotton seed meal clearly outclassed wheat bran as a source of protein for dairy cows. In this test the cotton seed meal was charged at \$23.50 per ton.

In this connection the high fertilizing value of cotton seed meal as compared with the other concentrate should not be overlooked. In feeding dairy cows 75 per cent. of the fertilizing constituents should be returned to the soil in the form of yard manure where proper care is taken to preserve the excrements. It has been shown that cotton seed meal is frequently worth as much per ton for fertilizing purposes alone as it actually costs at prevailing market prices. Its ability, therefore, to enrich the manure and thus increase crop yields on soils to which it is applied is an important matter to bear in mind.

Last winter another interesting test was conducted at the College. In this instance four cows were used in each group, and the following rations were fed. The first group received beet pulp five lbs., cotton seed meal five lbs., and silage ad libitum. The second group received wheat bran and cotton seed meal at the rate of eight lbs. per day mixed in the proportion of wheat bran 66 lbs., and cotton seed meal 110 lbs., with silage ad libitum. The third group received cotton seed meal six lbs., and silage ad libitum. The average cost per gallon of milk with the first group was 8.86 cents; with the second group, 7.28 cents; and with the third group 6.25 cents. In this instance the cotton seed meal again clearly demonstrated its efficiency as a producer of milk.

Having fed cotton seed meal as the principal

HORTICULTURE.

Plant Proven Varieties.

Every Province in the Dominion now has an experimental station where varieties of fruit may be tried out and their adaptability to that particular district proven, or their use condemned. There are, however, a number of varieties of apples that have stood the test and are becoming more popular as seasons go by. When one understands his location and the markets to which he will eventually cater, he can then decide on the percentages of each kind it would be wise to plant. At the outset bear in mind there are two classes of apples—cooking and dessert. Such varieties as Spies, Snows, Kings, etc., are dessert apples, used on the table in the raw state. They bring the top or fancy prices and should be packed with considerable care. Baldwins, Greenings, Stark and many others are cookers and sell for a smaller figure. While the practice of packing in barrels continues, they will be the varieties barreled when the dessert varieties are being boxed. The red apple sells best on any market, but there are large centres which are almost exclusively red-apple markets. Such are Liverpool, Eng., and Hamburg, Germany. All buyers are not experts on quality and a large Wolfe River will sometimes attract the eye of the purchaser and leave a smaller apple of much superior quality behind in the salesman's ware room. The Old Country market will probably be asking for barrels when the Western Canadian market will be demanding boxes exclusively.

Too large a percentage of green apples will depreciate the value of the entire orchard, but there is always a demand for the Rhode Island Greening in almost every market. Of the green varieties the Greening is king and percentages of that color should be limited to that old reliable. In the case of any ordinary plantation, ten per cent. Greenings is a fair proportion to plant. They can be harvested before the late winter varieties and assist to economize the time. One may work up a trade in some special variety, but to sell an orchard "tree run" good varieties must predominate. Here is where the Spy repays the planter for the long years he must wait, and oftentimes an orchard sells on the strength of the Spies. Remove the Spies from an orchard of Baldwin, Greening, Ben Davis and Stark and you will not find those varieties as profitable as you thought they were. Buyers ask for about 33 per cent. Spies in association packs or large deals and that is a fair percentage to plant in a young orchard. McIntosh Red and Snow are fancy dessert apples, difficult to keep clean from scab, but good box apples and choice enough to go onto any table. They also are good sellers. Fifteen per cent. McIntosh and ten per cent. Snow will make a quarter of your orchard choice, marketable fruit. The old Baldwin cannot be overlooked; it is widely known and on the whole a good money-maker when along with other good varieties. Twenty per cent. Baldwin would not be a mistake in a commercial orchard of this kind. We now have twelve per cent. of the plantation to fill in. What will it be? The King is a good seller, but a shy bearer and the tree often cripples at about twenty-five years of age. Collar rot has worked

havoc with many King trees, but it could be overcome by grafting Kings on Tallman Sweet stocks as Spies are grafted in order to hasten them into bearing. Kings have been selling this year in Nova Scotia for \$3.50 per barrel. The fewer apples handled for the same amount of money the greater will be the net proceeds. Ten per cent. Kings would not be an unwise choice, and only two per cent. is now left for the agent and customer of the nursery stock to decide upon.

These are all standard varieties and should be planted forty feet apart. Where fillers are required, early-bearing, smaller-growing trees are preferable. We wish only at this time to name a few of the varieties which are unquestionably most profitable, for it will be these which in future years of heavy offerings on the market will yield the best returns. To the grower of these kinds "over production" will never be a reality, for they are always in demand. There are other good and well-tried varieties and there are some which have established for themselves a bad reputation yet have made money for the grower. Such is the Ben Davis, and if it could be re-named every two years, it might still be a profitable apple on account of its heavy yielding and attractive appearance in the package. It is a good shipper and in spite of its lack of quality commands a place in some remote markets.

Get in touch with your Provincial College or Department of Agriculture and ascertain through them the wisdom of planting varieties you have in mind. Planting is not done for one year or for five years but for a lifetime, and the demands of the market make a good criterion upon which to base the choice of varieties.

The Prevalence of Apple Scab in Ontario.

Editor "The Farmer's Advocate":

Before discussing the reason for apple scab, or as many growers call it, "black spot" or "fungus," being so abundant this year and for the failure of careful spraying in a number of cases to control it, many persons would probably like to hear whether this state of affairs prevailed all over the Province of Ontario, or whether it was only certain sections that suffered severely. The data I shall give on this point is largely the result of my own observations when visiting different parts of the Province in connection with the inspection of nurseries for San Jose scale.

Starting at the east of the Province, Morrisburg district, I found that in the really well-sprayed orchards, where the spray was applied at the times indicated in the spray calendar, the apples, even Snow and McIntosh, were clean, apparently 90 per cent. free from scab. Unsprayed orchards had no fruit because of the ravages of Tent caterpillars.

In Leeds county, and in Hastings, the assistant district representatives told me last week that the really well-sprayed orchards were clean. At Port Hope and Newcastle I visited four or five well-sprayed orchards, some of them were large, and over 90 per cent. of the fruit was free from scab. Unsprayed check trees showed from 20 to 50 per cent. infested.

At Whitby I visited the orchard sprayed by W. F. Kydd, of the Department of Agriculture, and an unsprayed orchard alongside of it. The latter had, in my opinion, fully 90 per cent. of the fruit scabby and much of it had fallen off because of the disease; the leaves were also badly attacked, while in Mr. Kydd's orchard, there were not one scabby apple out of two hundred; in fact, I doubt if there would be half a bushel of scabby fruit in the whole four acres or so of orchard. The crop was a medium one.

In Peel county sprayed orchards are almost totally free of scab, while unsprayed have not more than from 10 to 40 per cent. of the fruit attacked by the disease.

In Wellington, around Guelph, so far as one could judge from the unsprayed fruit brought in to the market, scab was not very abundant, even Snow apples ranging from not more than 10 to 50 per cent. scabby.

In the Niagara district a few orchards were quite scabby, but as a rule the disease was not very virulent. Three small orchards sprayed by myself and assistant, Mr. Spencer, at St. Catharines, were easily 99 per cent. scab free.

As we go further west, however, we get more scab. At Woodstock, a demonstration orchard, sprayed by Mr. Kydd's assistants, was, when visited by me a short time ago, about 95 per cent. clean. The neighboring orchard, unsprayed, but situated more favorably for clean fruit, had from 50 per cent. to 90 per cent. of scabby fruit. In Brantford reports indicate that scab is very prevalent, even well-sprayed orchards having as high in some cases as 40 or 50 per cent. of affected fruit. In Middlesex county, the orchard sprayed by I. B. Whale and his assistant, J. W. Stark, had scarcely any scabby fruit, whereas some check trees nearby had almost every apple affected. In

other sections of this county well-sprayed orchards were reported to be quite scabby.

In Norfolk county, around Simcoe, many of the best sprayers have been greatly discouraged to find about 50 per cent. of their fruit attacked. The same condition prevails in Lambton with a few exceptions. In Kent, Mr. McLostie, the district representative, states that the well-sprayed orchards have clean fruit. I have no definite information from Georgian Bay district, but I am told that travellers report good, clean fruit there.

From this survey of the Province it is clear that it is chiefly in the southwestern counties, such as Brant, Oxford, Norfolk, Middlesex and Lambton that the really discouraging state of affairs exists.

THE WEATHER RESPONSIBLE.

One naturally asks why it is that Peel county, for instance, is almost free from scab and Norfolk so severely infested. The answer to this can be given in two words—the weather. In Peel there were not sufficiently long periods of continuous rainy or dark, foggy weather at any time in May or early June to give the scab spores a chance to germinate in large numbers and so infest the fruit. It was only in a few sheltered orchards where the breeze did not freely penetrate or in a few specially sheltered trees in other orchards where the moisture evaporated very slowly that the scab disease made any headway. In Norfolk, however, and also in the other severely infested areas there were two periods in May where favorable weather for scab occurred. These two periods were, first, from May 15th to 17th, inclusive, and second, from May 21st to 23rd, inclusive; in fact, in some localities favorable conditions for the development of the disease continued up to May 27th. After this, so far as I can discover, there was no more weather that would satisfy the conditions necessary for the germination of spores of the scab. So that, in my opinion, all or almost all the scab injury was done during the period from May 15th to May 28th, and not as most growers believe during June. From a study of the weather reports, there does not seem to have been any wet periods in June sufficiently long and continuous to start fresh germination of spores. But I shall be told that there was no sign of scab on the fruit until some time in June, when the apples were half an inch or more in diameter. I believe that very few thought of examining the fruit so early as this, but those who did saw little dark spots, the result of the scab, showing injury was explanation of this is simple: It takes several days from the time the spores germinate on the fruit or leaves before the spots are visible. If we suppose the most of the infection on the fruit took place from May 21st to 23rd, or even to 27th, as was likely the case on most varieties, then the area where the germinating spore tubes entered the fruit would be showing as a tiny spot about the first week in June, and in another week or two these spots would be black and much enlarged, so that it would look as if there had been a great deal of fresh infection in the meantime.

SPRAYING DELAYED.

Now let us think over the two periods of infection mentioned above, May 15th to 17th, inclusive, and May 21st to 23rd, or even to the 27th, and ask ourselves where these dates come in comparison with the date of spraying just before the blossoms burst and again right after they fall. In parts of these southwestern counties I believe the blossoms began to burst about May 1st; late varieties, like Spy, were a little later, but as the weather was quite warm up to May 7th, the bloom came out very quickly. Consequently many growers who had just finished the first application—the one before or as the leaf buds were bursting—would be taken by surprise and be unable to get the second one all on or to do it thoroughly. Moreover, if this spray were finished by May 1st or 2nd there would be five days of warm weather left before the cold period came on, after which the bloom stood still up to about May 20th. In these five days there would be an opportunity for much development of leaves and blossoms, and consequently even where the spray was applied by May 2nd these parts would be left unprotected and thus give a good chance for the spores from the old dead leaves on the ground—the place where the disease winters—to shoot up and get a chance to germinate during the first favorable period, May 15th to 17th. As the blossoms did not fall early enough, or the wet weather did not permit its being done, the spray that should be put on just after the blossoms fall was not put on until about May 25th and in many cases not finished till June 1st, so that in the meantime the second period of wet weather, from May 21st to 23rd, or in some cases to 27th, intervened before this spraying could be done to safeguard the young forming fruits. The spores that germinated during the first wet spell would have produced a new crop of spores by May 21st, or the beginning of the second wet spell; in fact, I saw the spores at this time on some apple leaves in Niagara. These new spores being carried everywhere by the wind would get on the young fruits, which were clearly visible by May 21st, and many would germinate by May 23rd or 24th and more by May 27th. It would then be too late to save the fruit, because once the germ tube from the spore had passed through the skin no spray could prevent its growing there and in a week or two beginning to form a black spot on the surface. Here then, in my opinion, lies the explanation of the failure of the spray to control the scab. (My tests with spores show they germinate in from 18 to 40 hours. They probably have worked through the skin inside of 48 hours as a rule.)

I may be asked to explain how I. B. Whale, at London, was able to keep his orchard clean if the above be so. I think the explanation is this: First, he sprayed very carefully three-times. The first application was April 24th and 25th. This would perhaps help some by falling on the dead leaves and tending to prevent the development of the disease there. The second application was May 5th and 6th, just before the cold weather, so that the leaves and blossoms stood almost still; after this up to and through the first wet

period, or the early period of infection of May 15th to 17th, and were covered with the spray. Thus the new crop of spores that in earlier sprayed or in unsprayed orchards developed on the unprotected leaves and bloom was here prevented and when the next period of wet weather came, May 21st to 23rd, there was not the same abundance of spores to inoculate the fruit and leaves. His third spraying was put on the early apples, May 23rd, I think, and on the other May 28th. This may not seem very convincing, but the fact that the fruit on his check trees were almost totally scabby shows that he got the spray on at the right time to prevent the scab.

No blame, in my opinion, should be attached to the majority of those who failed to control scab in these districts. The peculiarity of the season caused a long period of fully three weeks, twice the ordinary period, to elapse in most districts between the opening and falling of the bloom and in this period the scab got a start. I have no record in my own experience of a season of this nature, one where thorough spraying at the recommended times failed to control scab. Jas. E. Johnson, of Simcoe, told me that in all his previous experience he had never seen a similar case, or a failure to control the scab. It is not likely we shall have another spring like this for many years.

THE SPRAY USED NOT TO BLAME.

So far as I can see, there is no reason to blame lime-sulphur for the scab. I doubt very much whether the same careful spraying with Bordeaux would have given better results on the whole. That lime-sulphur can and does control scab when put on before the spores get a chance to germinate has been proven this year by the fact that it was this mixture that was used in all the really clean orchards I saw. I have tested this mixture on all sorts of trees and in various districts of the Province for four or five consecutive years, including the present and have never got less than 95 per cent. of scab-free apples, even on Snow trees. Bordeaux has not done any better than this. I have no brief for lime-sulphur. Let the man who prefers Bordeaux mixture, use it if he wishes.

Many think that a fourth spray, about two weeks after the blossoms fell, would have helped greatly to control the scab this year. I do not think so, except in the districts where the weather during the first half of June was wet. By that we should never give a fourth application in June 13th the days were quite hot and in hot weather, unless exceptionally wet, we get no development of scab. I do not mean by this that we should never give a fourth application in June. It all depends on the weather. If the prospects about eight or ten days after the Codling moth spray is done point towards cool, wet weather, it will be very advisable to spray at once. Do not, however, spray apples when they are in about this stage of development with lime-sulphur on a hot, calm day, as many of those exposed to the sun's rays will be badly scalded by the spray. This forms a large, hard, brown area on the side exposed to the sun.

In late August and September we occasionally have another outbreak of scab, but only if the weather is wet and cold as it was last year. In such seasons a spray applied as soon as such weather begins in August and, if necessary, repeated in September, will save great loss, especially to varieties very subject to scab.

As I intend to discuss apple scab more fully at the fruit growers' meeting in Toronto during the Horticultural Exhibition, I shall be very pleased to get any data readers of this article can give me in the meantime and to receive their criticisms and questions. L. CAESAR.

O. A. C., Guelph, Ont.

Fortify Trees Against Vermin.

It is not uncommon to have the most healthy trees in the young orchard completely ruined by mice or rabbits during the winter months. The bark of the young peach or apple tree is very appetizing to this kind of vermin in cold weather, and damage from them is sometimes quite appreciable. In certain instances cover crops have been impossible on account of the harbor they furnish for the mice.

The rabbit does not do all his damage with his teeth. Oftentimes it reaches for the small under branches, and, in so doing, steadies himself against the trunk with his paws. His slipping down and climbing up often injures the tree more than his chewing amounts to. Some growers have found it useful to cut off some of the tender twigs that would naturally come off with next spring's pruning and throw them on the ground or snow. This serves to attract their attention from the tree, as they get their requirements from the slender shoots upon the ground. A small piece of closely woven wire bent around the tree will last for several years and costs about seven cents per tree. This does not cost so much when one considers it extended over a number of years. Perhaps the most generally advised protective agency is veneer, similar

to that used in baskets. This is studded around the tree and made fast with a string. A little dirt banked around the bottom will help to make it firm and less likely to collapse. The wire would not score as much protection against the peach tree borer. The veneer is sometimes used, but ordinary papers are more in vogue. Banked at the bottom with soil and tied at the top, newspapers will prevent the insect laying its eggs on the tree. That is an operation to be put into execution in the spring, but it would be a good idea to save up a quantity of daily newspapers for that purpose. The prevention of girdling by mice or rabbits is timely at this season, and if any damage exists it should not be disregarded.

POULTRY.

Sprouted Oats for Winter Green Feed.

The feeding of green food to poultry in winter has been much practiced by experienced poultrymen. The chief function of such food is probably largely in the nature of a digestive stimulant rather than as an addition to the actual food constituents of the ration. In recent years sprouted oats have been very widely used as a green food for poultry. Experience at the Maine Experiment Station indicates that in order to make a satisfactory product the oats must be grown very quickly and this requires plenty of warmth, moisture and sunlight. Where the right combination of these factors can be gotten, oats may be satisfactorily sprouted for poultry-feeding purposes.

At the Maine station use was made of a small room in connection with the station poultry plant. This room is provided with a three-inch pipe connected with the water-heating system.

To provide a place in which to sprout oats, the back part of this room was partitioned off as



Quack! Quack! Quack!

Ducks delight in such pools.

a closet, inclosing the three-inch hot-water pipe. The partition wall which forms the front of this closet consists of glass doors, made from regular storm-window sash, hinged so as to swing open as an ordinary door does. These glass doors face toward the south side of the building, which has a window directly in front of the doors. Throughout the day the closet gets plenty of light. The dimensions of the sprouting closet are as follows: Length, nine feet three inches; depth, two feet six inches; height, six feet.

The place of shelves in this closet is taken by large, square greenhouse flats, made of seven-eighth-inch stuff. These flats have the following dimensions: Length, two feet five inches (inside); breadth, two feet five inches (inside); depth, two inches (inside).

The length of the closet is such as just to accommodate three tiers of these flats, which slide on supports so they can be moved in or out or turned around to suit the convenience of the operator and the needs of the sprouting grain. These flats sit 15 inches apart (that is, vertically). There can be accommodated four rows of flats, three in a row, in the closet at one time. A number of holes are bored in the bottom of each one of the flats in order to drain off the surface moisture which comes with the wetting of the oats.

The advantage of the closet arrangement described is that it enables one to control the three necessary factors of heat, moisture and light quite completely. In this closet it is easily possible to maintain a temperature which does not run at any time below 70 degrees. The closet being perfectly tight, it is possible to saturate the air with moisture quite easily and virtually convert the whole space into a great moist chamber. With this arrangement one is able to grow oats from four to six inches high in one week's time. The only difficulty with which one has to

contend is the matter of mold. There is always a tendency for the oats to mold in the sprouting process. The only way in which it has been found possible to control this mold is by thoroughly cleaning the flats after each time when they are used. After a flat has been emptied it is thoroughly scrubbed with a 50 per cent. solution of formalin (that is, equal parts of commercial formalin and water). This scrubbing is very thoroughly done and sufficient formalin is used to soak the flat thoroughly. With this precaution, and if the oats are further made to grow rapidly, the mold does not give any trouble whatever.

The actual method of sprouting the oats is as follows: Clean and sound oats are soaked in water overnight in a pail. The next morning flats are filled to the depth of about two inches and put into the sprouting closet. At the beginning freshly-filled flats are placed near the top of the closet so as to get the maximum amount of heat, and in that way get the sprouts started at once. During the first few days, until the sprouts have become from a half to three-quarters of an inch long, the oats are thoroughly stirred and raked over at least two or three times during the day. This stirring insures an even distribution of moisture throughout the mass of oats in the flat. After the sprouts become sufficiently long so that the oats form a matted mass it is not desirable to stir them, or to disturb them in any way. Stirring at that time will break off and injure the sprouts and the green portion above the mass will not grow so well. The matter of prime importance in growing the oats successfully has been found to be sufficient moisture. The tendency at first is to use too little moisture. The oats should be kept quite wet. The aim here is to keep condensed moisture standing on the glass doors which form the front of the closet at all times. In order to do this it is found necessary to wet the oats three times a day. This is done with an ordinary greenhouse sprinkling can, with very little expenditure of time or labor. As the oats grow the flats are moved to different positions in the closet. The taller the green material gets the nearer the flats are moved toward the floor, because the growing grain then needs less heat. This procedure leaves the desirable places in the closet for the grain just beginning to sprout, where high temperature is needed.

The oats are fed when they are from four to six inches in height. They are fed at the rate of a piece of the matted oats and attached green stalks about six or eight inches square for each 100 birds per day. In feeding, this six to eight inch square piece is broken into smaller pieces and scattered over the pen, so as to insure that all the birds will have an opportunity to get some. Fed at the rate indicated, this material has never caused any bowel trouble among the birds.

It should be clearly understood that the purpose for which green sprouted oats are fed is their tonic and stimulative influence on the digestive organs. They are not fed for the food value of the oats themselves. If one wishes merely to feed oats they can be most economically not sprouted. The point of sprouting is to furnish fresh, succulent, green food during the winter months.

FARM BULLETIN.

Market Timothy Seed Early.

Large shipments of American timothy seed of the 1912 and 1913 crops are being handled by the Toronto market. It is probable that the Canadian supply for the ensuing season will be approximately 50% of the 1912 and 50% of the 1913 crops. In an average year nearly three-quarters of the timothy seed used in Canada is obtained from Chicago, and is American grown. Because of the unfavorable weather in Western Quebec and Eastern Ontario last spring, little timothy seed was saved this year. Considerable has been held over and is still in the farmers' hands; their knowledge of local conditions induce them to hold out for higher prices.

The farmers of Eastern Canada do not, as a rule, market their timothy at the most opportune time. During the last few years retail dealers in the Ottawa and St. Lawrence Valleys have purchased their supplies from agents of American firms before any considerable quantity of local seed had been threshed. Seven years ago farmers could thresh their seed in April and

make it available in the local retail stores in plenty of time for seeding. Now the Seed Control Act requires this seed to be cleaned and graded. This can be done by the farmer himself if he has a good fanning mill, equipped with a full set of timothy seed screens, and takes the precaution of sending accurate samples to the Ottawa seed laboratory for test and grading. The great bulk of commercial grass and clover

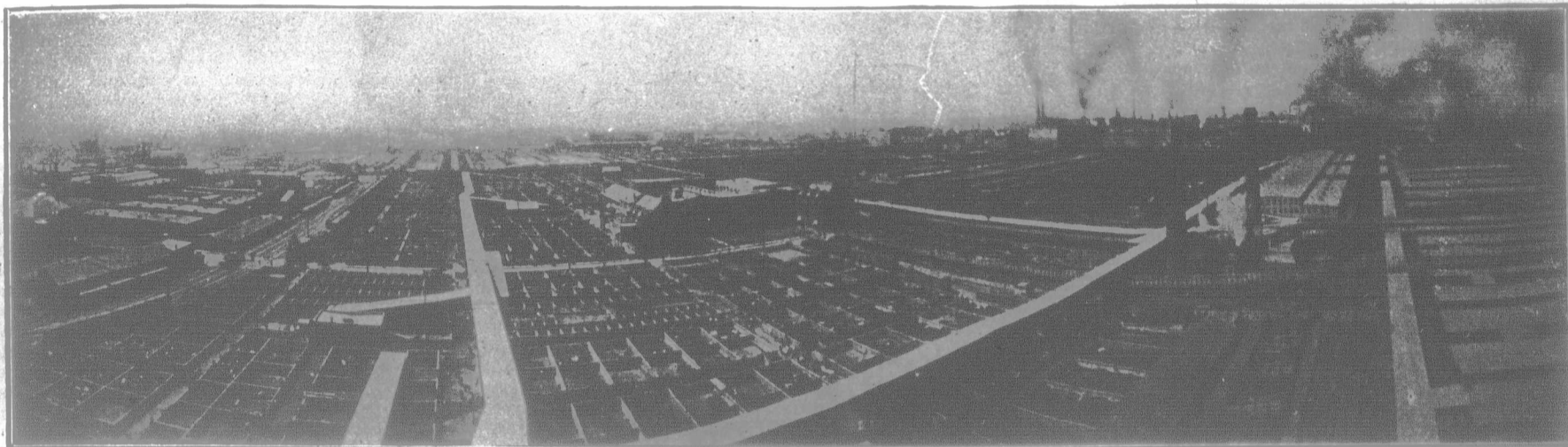
seed, however, is cleaned by power mills operated by seed houses. When local vendors obtain their supplies direct from cleaning plants, they escape much of the responsibility entailed by the Seed Control Act. In effect, therefore, the Canadian farmer who holds tight to his timothy seed until late in the season finds little demand for it, the main channels of commerce having been supplied from other districts.

The Toronto market is now purchasing its cleaned timothy seed at from \$5.00 to \$6.00 per hundred pounds. It is anticipated that the old as well as the new crop now in the farmers' hands in Eastern Canada will again find a dull market at the time of year they have been accustomed to sell, which is at least six weeks too late under present conditions.

GEO. H. CLARK, Seed Commissioner.

The Union Stock Yards, Chicago, Illinois.

THE WORLD'S GREAT LIVE STOCK MARKET.



Five Hundred Acres of Stock Pens.
Showing the Chicago Union Stock Yards, and some of the Packing Plants.

Imagine a one-hundred-acre farm with two farms of corresponding size on both sides given over as yards and paddocks. Think of this 500 acres being all paved but fifty acres. Consider 13,000 pens with 25,000 gates through which the stock is directed to different yards and retained therein; then picture for one moment over 500,000 head of horses, cattle, sheep and swine corralled into that enormous live-stock center and with this vision in mind one might form some little idea of the extent and capacity of the Union Stock Yards at Chicago.

Bounded on the west and south by Packing Town, with its enormous capacity for stock; intersected with railroads and traversed by viaducts, it presents the appearance of a humming, busy live-stock city. Like the great city by which it is surrounded, it has its main thoroughfares and side streets, and again the elevated viaducts resemble the elevated railroad of Chicago. Through these viaducts the stock is transferred from and to various different points without interfering in the least with operations on the grounds and in the pens.

The Union Stock Yard and Transit Co. of Chicago are the proprietors of this great live-stock mart. This company neither buy nor sell, but furnish accommodation for live stock and a suitable place for buyer and seller to meet and transact business. All business is done by word of mouth and both parties to the transaction trust their memories till the close of the business day yet disputes are so few that one is forgotten before another occurs.

On the north side is the hog department. A two-storey building it might be called, which, together with the sheep barracks, lying just south, comprises over 8,000 covered pens. South of the sheep and hogs come the finished cattle and then on the south and east appear the stockers and feeders, while the corresponding western corner is the quarantine section and stock is only received there when intended for immediate slaughter. The cattle are not so fortunate as the horses, sheep and swine in the protection given them. They must enjoy as best they can the sometimes inclement weather in the open pens, but they are well fed and watered and the big, fat steers do not mind a severe cold spell if it is not wet.

The railway branches around the yards and Packing Town, which is the area contiguous to the yards and occupied by some of the largest packing plants, connect with thirty-two complete railroad systems, having, in all, 100,000 miles of track, with terminals in Chicago. These systems serve fifty million people in the various States and give access to the city for stock or means of procuring the canned or manufactured product in return. The yards draw from twenty-two different States in the Union, and on one record day 188,164 animals came pouring into the city yards. It required 3,720 cars to convey them there, which is equal to a solid train over twenty-eight miles long, or if arranged in single file it would make a solid procession of animals over 200 miles long and require ten days to pass a

given point marching constantly at the rate of twenty miles per day. The outlet for this stock is so great and the capacity of the Chicago plants so unlimited that the major part of this immense shipment was all disposed of in one day.

ECONOMIC IMPORTANCE.

Packing Town and the yards together employ about 40,000 people. This represents families to the extent of a population of 200,000, but they must be fed and clothed, transported hither and thither, educated, amused and protected, so an additional number of individuals depend indirectly upon the live-stock interest in Chicago for their livelihood. Thus nearly 400,000 people, directly or indirectly, are dependent upon this enormous trade for a living in Chicago. It is a market with no equals. In one year the receipts and values amounted to over \$375,000,000, which means business transactions to the extent of one and a quarter million dollars for every working day in the year. This was the turnover in the yards alone and does not include any transactions after the animal once leaves the pen.

The Union Stock Yards at Chicago figure appreciably in international affairs. No polar expedition is equipped without supplies from Chicago or other plants that have gotten their live stock from the yards, no navy would commence an extended bombardment or conflict, no war would be declared nor army advanced without first getting supplies directly or indirectly from this great center. Chicago Stock Yards is the greatest live-stock market of the world.

CAPACITY OF YARDS.

Seven hundred and twenty-five chutes permit unloading from the cars to the yards to proceed with utmost expedition. If filled to their greatest capacity the yards would accommodate 75,000 cattle, 125,000 sheep, 300,000 hogs and 6,000 horses. During the year 1912 16,487,233 head of stock were sold, realizing \$375,694,939. There is no other market of any kind in the world that equals it as a trading place. It appears like a ranch congested with fences, gates and stock. Buyer and seller no longer walk amongst the offerings, but go hither and thither through gates and viaducts on their yard-trained horses.

THE STOCK.

All parts of Western United States deliver up their quota of live stock to the Chicago yards, but the choice finished cattle come from the corn fields of Illinois, Iowa, Indiana, North Missouri, parts of Kansas and Nebraska, and portions of Minnesota and Dakota. The first three States lead, perhaps, in the quality of their offerings. About ten per cent. of the cattle received are stockers and feeders which come from the Western States or Texas and go back into the States of maize and alfalfa to be finished.

Yearlings, weighing 900 to 1,000 pounds, known as "babies" or "baby beef," top the market along with the heavy, deep-fleshed steer, and, at time of writing, are selling at \$9.00 to \$9.75 per cwt. Stockers and feeders are picked up either for short-keep or long-keep steers and the

prices vary with the requirements, but the steer weighing from 600 to 900 pounds is greatest in demand and at present is changing hands at prices ranging from \$6.00 to \$7.15 per cwt. More depends upon quality and type than upon weight, however, and there is no better object lesson for a breeder of live stock than a visit to a live-stock market to see what a premium is placed on quality.

Sheep journey from as far south as Mexico and bring with them the resemblance to the old Spanish Merino type, with which the Spanish first stocked that country. They have been topped with Shropshire and other breeds, but they still carry the close, fine wool and folds of flesh about the neck if they have gained in size and proportions. Other types of sheep come from Wyoming, Idaho, Iowa and Montana in great numbers and many lambs from Colorado. Numerous indeed are the carloads of feeding lambs that go back to Colorado to be finished on peas and alfalfa in the fertile country near Denver. Feeders vary from .45 to 65 pounds apiece, while the average butcher lamb ranges in the vicinity of 80 to 95 pounds.

Most striking of all is the difference in Canadian and United States markets in the character of the swine. Instead of the straight-sided, bacon type of hog seen in Canada, the low, fat, thick, lard hog predominates in these pens. Poland-Chinas, fat and short of leg; Duroc-Jerseys, red and thick, and others, showing splatters of Berkshire, Chester-White, Hampshire and many other fat-hog breeds in their parentage, fill up the pens. Individuals varying in weight from 50 to 1,100 pounds are seen, but the popular weight, if such there be, is 200 to 225 pounds. So varied are the wants of the markets taking the swine that every class has a patron. New York takes the thinner kinds; Philadelphia asks for fat and lard, while Boston desires most the medium carcass, smooth and round.

Chicago is essentially a market for finished stock, and in this respect differs from Buffalo and Toronto. The finished steer is superior to that animal on either of these markets. Not only is he deeper in flesh and more evenly covered, but on account of longer and more liberal feeding is better filled on the inside and dresses out a higher percentage of carcass.

WHERE THE STOCK GOES.

There are, in Chicago, eighty-two different slaughtering plants, and together they consume sixty per cent. of the stock offered at the yards. One cannot conceive of the stupendous character of their operations. To those not acquainted with the industry a sausage is a sausage, but in one plant alone sixty different kinds of sausages are manufactured. They are made to please the taste of the most fastidious, or the most indifferent. Some with one seasoning, some with another; one make in a particular kind of container, one in another. And so it goes up and down the whole gamut of sausage choices. This, of course, is only one department in the preparation of human food, but there is a corresponding variation in all the endless number of products

of these plants and when together they make up the enormous industry beyond the conception of the untrained mind.

Ten per cent. of the incoming stock goes again to be fitted on the farm and ranges, and the remainder is utilized by abattoirs, both east and West.

The outlet is practically the whole civilized world, and this condition, combined with the fact that stock comes from both north and south, makes every season a busy season and every day a busy day.

DAYS OF HEAVIEST RUNS.

The daily capacity, as stated previously, is about 500,000 head, but this is never attained. Monday, Oct. 27th, saw 34,000 head of cattle, 32,000 hogs and 68,000 sheep and lambs. With this great deluge of meat, choice baby beefs sold for \$9.75 per cwt. Monday and Wednesday are the busiest days, but the fourth of July and Christmas Day are the only times between sunrise and sunset that bear the least resemblance to a cessation in the operations. This great influx and outpouring of stock is maintained throughout the year and entails almost eternal vigilance on the part of those interested.

CHIEF OPERATORS.

Amongst the Chicago packers Swift & Co., Armour & Co., Norris & Co., and the constituent members of the now dissolved National Packing Co. are the heaviest buyers. There are over four hundred commission offices transacting business for non-resident buyers and sellers. One could not enumerate them in a limited space, neither could we cite a few without giving them unwarranted prominence and with disparagement to the other reliable firms. The buyers and sellers represent business over the whole continent and transactions are conducted according to fixed charges: Cattle, per carload, minimum \$10.00, maximum \$13.00; hogs, \$3.00 single deck, \$12.00 double deck; sheep, minimum \$8.00, maximum \$10.00. The charges per head are: Cattle, 50 cents; calves, 25 cents; hogs, 20 cents; sheep, 10 cents per head; calves, simply an entrance fee which amounts to:

When the live stock enters the yards an entrance fee is exacted Cattle and horses, 25 cents per head; hogs, 8 cents per head, and sheep, 5 cents. This is and they remain indefinitely on that charge. Corn is dispensed at \$1.00 per bushel; oats, 75 cents per bushel; timothy hay, \$1.25 per cwt., and alfalfa, \$1.50 per one hundred pounds.

CANADIAN OFFERINGS LIGHT.

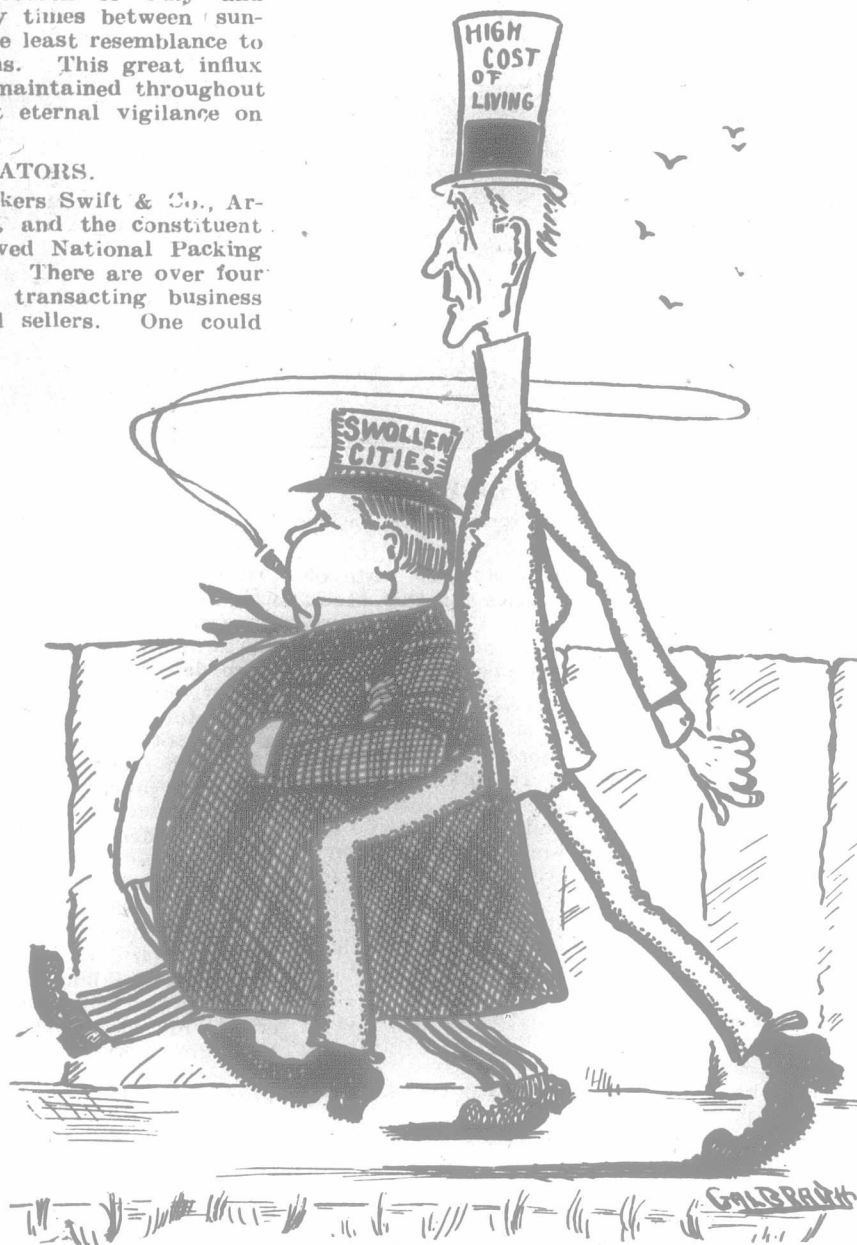
Although a great number of cattle have left Canadian farms for United States markets, they have not appeared in Chicago in any great numbers. The finished stock has probably been sold in the East, while the younger animals have gone directly to feeding States and will appear later as finished cattle.

THE OUTLOOK.

M. F. Horine, statistician for the Stock Yards Co., predicts that the fall of 1919 is the nearest possible date that markets may expect anything like an adequate supply of beef. Mr. Horine has been connected with the live-stock industry for nearly fifty years and over forty years in the employ of the Union Stock Yards Company. After thorough investigation he is satisfied that Australia and Brazil will not figure in American markets for a number of years. Argentina has suffered from three successive years of drouth and the foot-and-mouth disease. She has been struggling to supply England's demand for beef, and now Portugal, Spain, Italy and Switzerland are drawing on her stock. She has sacrificed many of her cows and heifers, and not for seven or ten years, at least, will she recover from the shock. United States and Canadian breeders have nothing to fear from the Argentine. Canada and the United States are both short of cows and heifers and before an appreciable increase in the females will materialize and they may be bred and mature steers for the market several years will have elapsed. The year 1919 or 1920 at least will

come before the world's markets will receive a supply approaching the adequate mark, and in the meantime Canadian farmers cannot be admonished too earnestly to retain their young stock and finish it on the farm. More particularly should the breeding stock be retained, for the shortage of stock and abundance of feed in some sections is a regrettable condition already existing. This unwise action on the part of many will, in a few years, make itself evident through depleted fields and worn-out farms.

The Milk Producers Association, composed of a number of producers around Toronto, met in that city again recently and decided to stand by the original price of \$1.70 per can for seven months from October first. Dealers offer \$1.40 per can.



Arm in Arm.

The trek from rural districts swells city population, lessens production, and sends the cost of living up.

The Fall Harvest.

By Peter McArthur.

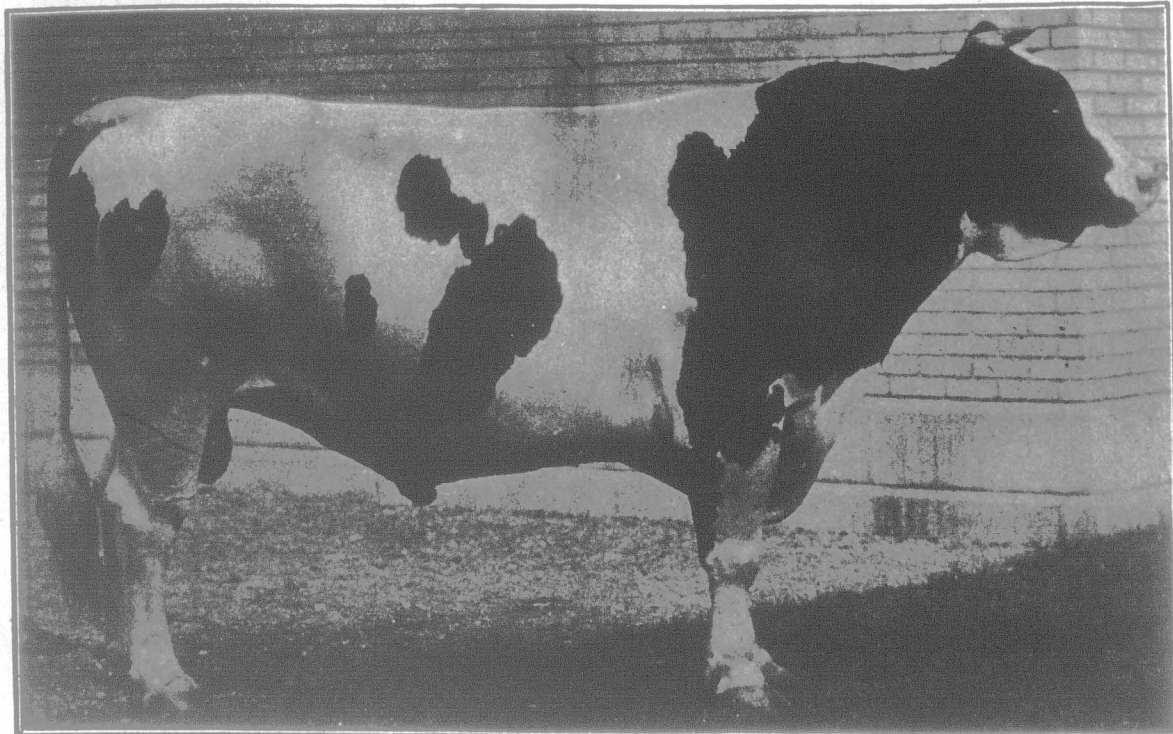
This week I have been convinced that we celebrate harvest home and Thanksgiving Day altogether too early in the year. The harvest home festival was held before I had commenced my harvest, and we had Thanksgiving Day before my troubles had really begun. Harvesting the corn has been the real work of the season, not only with us but with many other farmers in the country. A good crop of corn causes a great deal of work at a time when the weather is catchy and uncertain, and though we have the back of the job broken it may be a month before it is finished. Everything depends on the weather. The cutting and husking was done while the days were still fine, and when we got ready to haul in the change came. On the morning when we were ready to begin it started to rain just as we were hitching up the team. As the ears got a thorough soaking we had to wait a couple of days for them to dry, and then, when we got in a few loads, it started to rain again. Since then I have heard all kinds of sad stories about years when the snow came early and it was impossible to get the corn in for months. It seems that there have been years when it had to be left in the field until spring. These depressing stories make me feel that we were in altogether too great a hurry with our harvest home. There is no knowing when the harvest will be home. Still, we are trying to be cheerful. The

sun is trying to shine again and if the corn gets a chance to dry, a steady day's work will get it all under cover.

What I have lacked in thankfulness has been more than made up by the ducks. They had their thanksgiving day when we were hauling in corn. When the loads were being shovelled off, ears fell overboard and grains were shelled, and the ducks were right there working overtime. Whenever a load was brought in they were under the wheels and the horses' feet ready to salvage every grain that fell. By evening they were so full that they had to lie down to eat. If they had tried to swim we might have got into trouble with The Marine Department for having them filled beyond the Plimsoll mark. One lame drake made a horrible example of himself. As a rule his slight limp, due to having been stepped on by a cow earlier in the season, did not interfere materially with his movements. He could jump for a grasshopper as suddenly and unerringly as any of the flock, but when he got filled with corn from his waistline to his beak his cargo shifted to starboard, and every time he stepped it would overbalance him on the lame side, and over he would go. When I came across him in the yard I thought a wheel had gone over him, but on examination I found that nothing ailed him except that he had on too big a load and had it on lopsided. He was so full that he could hardly quack when I picked him up, but, judging from the look in his eye, he was entirely happy. It was his thanksgiving day and he was making the most of it, without any thought of the Christmas that is looming in the near future. I thought of taking the children out to look at him to teach them lessons about the evils of gluttony, but they were so busy eating apples that I was afraid that they would probably sympathize with the duck instead of being shocked.

The apple harvest is now over and that is a satisfaction, though it is about the only satisfaction concerned with the apple business this season. When the apples were placed on the packing table I was really ashamed of them. A scabbier and worse-shaped lot I have seldom seen. The same men packed our apples this year as packed them last year, so that I have every reason to believe that the grading was done in the same way both years. Last year they put up something over 130 barrels of No. 1 apples, and this year from the same trees they put up exactly one barrel of No. 1's. The rest were all No. 2's and 3's. I, at least, am thankful that in making our sale this year we managed to sell our No. 3's. Before another year comes around I hope the scientists will be able to tell definitely how to control the scab. This year it certainly got beyond us. I am by no means the only sufferer in this district. Even the most experienced orchardists have the same complaint to make, and the amount of No. 1 apples packed in the best orchards this season has been pitifully small. During the winter meetings of our association we shall have to get the ripest thought of the country on this question, so that next spring we can do our spraying effectively. Between the frost and the scab our apples had a hard time of it this season, but the good prices we got softened the blow. And that reminds me that I have received two more requests for apples this week. I am sorry to have to disappoint people, but they really should make up their minds about buying earlier in the season.

Mr. Carey, the Peripatetic Philosopher of Pomology, otherwise known as the Inspector and Demonstrator for the Fruit Branch at Ottawa, paid a visit to our association while the packing was in progress. He demonstrated on box packing, and gave us a lot of instruction and amiable counsel. He impressed the necessity of careful grading, and the use of box packages if we are to hold our place in the market. It seems that boxes are steadily increasing in favor in the West, and the Western demand is one to which we must cater. When asked about the wild stories regarding Ontario apples that have come from the West, he ventured the opinion that there has been a great deal of loose talk on that subject. Of course there has been some careless and even dishonest grading and packing, but his experience has been that the various associations and shippers have been doing their best to conform with the requirements of the Fruit Marks Act. It is hardly fair for the papers to be giving the whole province a bad name because a few mistakes and sharp deals have been made. No mention is made of the many shipments of first-class Ontario apples that reach the West every year. In commenting on the subject Mr. Carey advanced a theory that is worthy of investigation. Although theologians and professors of ethics have found it difficult to properly define a conscience and explain its workings, Mr. Carey has some definite convictions on the subject. He holds that the conscience is a kind of elastic check rein on our conduct. It is capable



Paul Calamo Korndyke.
Grand champion Holstein bull at Chicago.

of being stretched a little by temptation, and the difficulty is that, like a rubber band that has been stretched too often, it loses its return pull. Some men when packing apples may be entirely honest in their motives and may have every intention of giving a proper pack, but by constantly giving a little stretch to their elastic consciences in order to pass slightly defective apples, this intuitive check gradually loses its restraining power. Then an inspector appears on the scene and an otherwise honorable man is fined and disgraced. The trouble seems to be that some packers do not recognize this elastic quality of their consciences, and so get into trouble. It is a very pretty theory and does much credit to Mr. Carey's heart, even though he may have difficulty in getting the college professors to grant the soundness of his views.

Chicago's National Dairy Show.

All great national events are conceived only in the minds of a few, and not until they mature and acquire their grown-up proportions do we have the slightest conception of the vision that came to the minds that gave them birth. The National Dairy Show, held at Chicago from Oct. 23rd to Nov. 1st, 1913, is a feature in America's agriculture that is destined to be one of the most influential factors of an educational nature that has been inaugurated, and too much honor cannot be bestowed upon the promoters of this show, who had such broad-minded foresight and the energy and continuity of purpose to put it into execution.

This exhibition of everything pertaining to dairying or dairy farming, was held in the great amphitheatre at the Stock Yards, which is also the home of the International Fat Stock Show. All products into which the cows' milk may be converted were on exhibition, and many were manufactured each day before the observation of the guests. Then came the dairy utensils and equipments. Pasteurizers, bottlers, separators, milking machines and everything necessary to equip a farm with five cows or one hundred and five. Refrigerator plants, creamery outfits and everything large and small were there, and so were attendants to explain their use. These departments in themselves were worth many miles of travel to see, for they acquaint the dairyman with all that is new and up-to-date in sanitary and labor-saving devices. Most unique of all exhibits was that of the Fox River Butter Company, which had constructed from their brand of butter a plowman, plow and team. It did not depict the modern riding plow, but probably represented the outfit of twenty years ago. To see this farmer turning the stubble with his eye along the beam attracted considerable attention, and drew forth respect and admiration for the man upon the soil.

The Department of Household Science of the University of Illinois had one large room devoted to lectures and demonstration cooking. The comparative values of all foodstuffs were explained, and many interesting features connected with the mothers' department of the home were made clear to the feminine audiences.

VARIOUS COMPETITIONS.

The stock-judging competition, made up of teams from different colleges, is always an interesting feature from an intercollegiate point of view. Canadians have won worthy honors at the International, but as yet have not gone into

competitions with their neighbors at the National Dairy Show. In the final reckoning this year, the University of Missouri stood first with a score of 3,766 points out of a possible 4,000. Kentucky State University followed with 3,672 points, then came Iowa, Nebraska, Maryland and Pennsylvania.

The executive got down to brass tacks in their trials of proficiency in the milking contests. Boys and girls, men and women, farm press editors and millionaires all sat down in the arena in their various classes, and with their hands manipulated the teats and udders of some of America's most productive cows in order to prove their superiority on the stool as well as in other lines of honorable toil. They were indeed interesting, and hard it was to keep the excited crowd from bearing down upon them.

Good as were the exhibit booths, the intense interest centered round the arena where over 700 head of America's aristocracy of dairy blood strove for premier place. Visitors watched intently while the various classes in each breed were being judged, but when the banner went to the grand champion sire or dam in their particular breeds, the growing and pent up enthusiasm burst forth into cheering and applause.

For the first time since 1907 Canada was represented at the National Dairy Show by an exhibit of dairy stock.

That veteran Ayrshire breeder, R. R. Ness, of Howick, Que., has been making the dairy show circuit this year in the United States, and ended up in Chicago with a herd of 24 Ayrshires in charge of herdsman W. Gibson, that are a credit to any country.

THE AYRSHIRES.

Three exhibitors, R. R. Ness, Howick, Que., W. P. Schanck, Avon, N. Y., and Adam Seitz, of Waukesha, Wis., led out 65 head of good Ayrshires. Seitz carried off the honors which reversed conditions existing at Waterloo, Iowa, where Ness was champion of the breed and premier exhibitor. In many classes where Ness won at the Waterloo Dairy Show, Seitz was allowed, by the Judge, H. G. Van Pelt, to take first at Chicago. It appears that Van Pelt and W. W. Ballantyne, of Stratford, Ont., who judged at Waterloo have different Ayrshire ideals, or else the competition was so keen that the placings might easily be reversed. What makes the former supposition appear nearer to the truth is that Ness's herd was on the road constantly for six days before unloading at Waterloo, and even there conveniences were lacking to get them into shape. At Chicago the Canadian herd were in good condition, having recovered from their strenuous tour, and it was somewhat surprising to followers of the showing to see them defeated by competitors whom they had outclassed under less favorable circumstances. At this age of liberal-minded, showing executives and judges we would not stoop to accuse any judge, especially one possessed of the calibre and reputation of H. G. Van Pelt, of wavering to the influence of national sentiment or petty prejudices. Quite likely it is that ideals of type varied to the extent of reversing these decisions, and it means no dishonor to either to take second place in such keen competition.

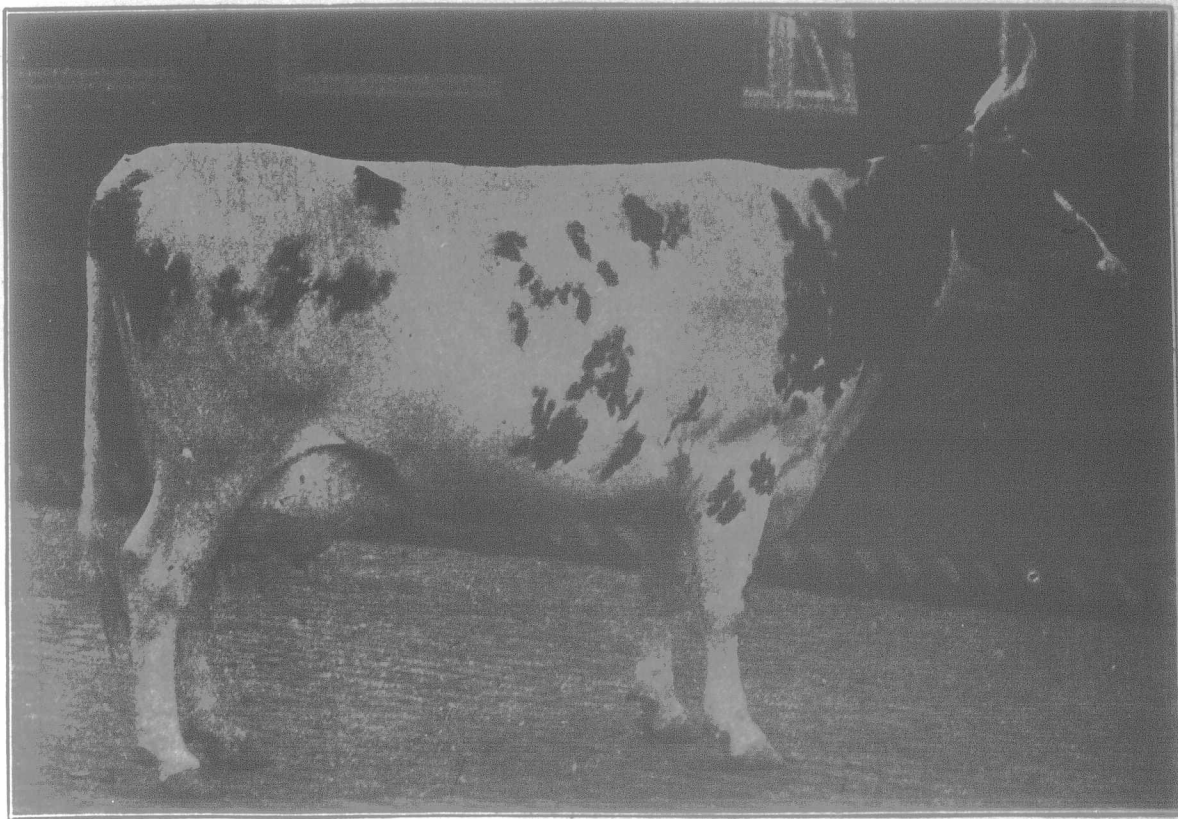
Imp. Bargenoch Gay Cavalier, took senior and grand championship in bulls for Seitz, outclassing Ness's Hobsland Masterpiece, who, for the first time, has known defeat. They are both princes in Ayrshire blood, and the decision might easily be reversed as it was at Waterloo. Seitz's Kilnford Bell was senior and grand champion cow. Ness had the junior champion bull in Holehouse Wanderer, and junior champion cow in Holehouse Randy, who was grand champion at Waterloo. Auchinbrain Fanny, Finlayson Maggie, Broomhill Flora, Benchan Spottie and Hobsland Pansy won for Ness first honors as a dairy herd. Schanck won the banner for most stock exhibited, bred by the exhibitor, and Seitz won the banner as winner of most money.

GUERNSEYS.

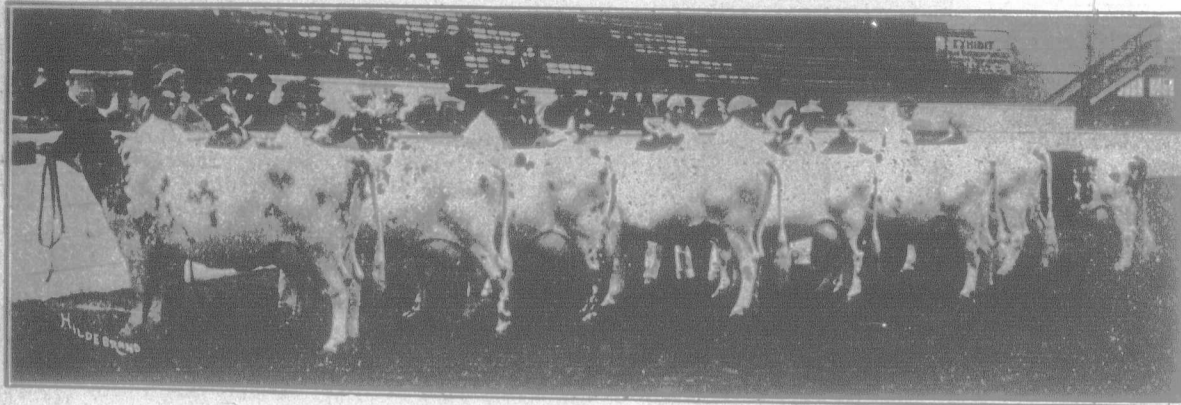
Guernseys are ten times outnumbered in the United States by the Holstein breed, but when they come to the National Dairy Show they surpass all other kinds numerically. Eighteen breeders entered and were represented by 183 animals. It held Prof. Geo. C. Humphrey, of Madison, Wis., from Wednesday morning till Thursday night busy in the ring placing the awards.

There were thirteen entries in the aged-bull class, but Imp. Hayes Cherub stood first and afterwards captured the grand championship in all male classes.

In the aged-cow class eighteen Queens of Guernseys breeding filed into the arena and many a good cow there was which stood outside the money when the ribbons were dispensed. Essie Jeweller, owned by A. W. & F. E. Fox, Waukesha, Wis., was first. Not so large as Jedetta of Pinehurst, who took second, but she had excellent constitution, quality and a Guernsey's countenance that challenged the judge to place her



Kilnford Bell 3rd.
Grand champion Ayrshire cow at Chicago.



Aged Ayrshire Cows at Chicago.

Ness's Auchenbrain Fanny standing at extreme right.

anywhere-but first. Later she stood beside Imp. Jessie Rose, brought there by W. W. Marsh, Waterloo, Iowa, for senior championship. Jessie Rose was just a little better and won the laurels as grand champion cow over Glenwood Sundari, the junior champion. This victory of Imp. Jessie Rose secured for Marsh the permanent possession of the Langwater trophy, which he has won on two previous occasions.

Another interesting class was the heifers, six months old and under twelve. Here 29 faced Prof. Humphrey, and easy it was to choose the good, but hard to discard any bad. Lilly Lapine was first and Glencoe's Bopeep second. Both animals belong to Marsh, and in his care will probably be heard from at a future dairy show.

Dr. T. W. Brophy, Edison Park, Ill., had the junior champion bull in Lady Chesterbrooke's May King. W. W. Marsh had the best exhibiter's herd and best dairy herd.

Guernsey quality and production have been brought to a high stage of development in the United States and Canadians would be surprised at their ringside to see the perfection of the stuff shown and the interest displayed.

JERSEYS.

The Jerseys were third in numbers at the show, but for quality they were unsurpassed. One hundred and thirty-five animals with blue blood in their veins came into the arena, and gave G. W. Sisson, of Potsdam, N. Y., considerable labor and field for thought. Nine breeders were represented, but first honors were presented to the Elmendorf Stock Farms, of Lexington, Ky., Lasatar secured the senior and grand championship on Noble's Eminent Lad and had the senior champion cow in Lady Jolly, but John B Stump had brought from Monmouth, Oregon, a yearling heifer which was junior champion cow, and when it came to a choice between the best of all the junior and senior females the little heifer, Ma of Fair Cows, won the laurels. She was sired by Noble Peer and was one of the sweetest females in the showing. She did not win by a very wide margin, for Lady Jolly, a nine-year-old cow, sired by Golden Jolly, possessed many points which Ma of Fair cows only promised, but the placing was a popular one despite their difference in age.

HOLSTEIN-FRIESIANS.

Large crowds, good interest and the colors of black and white seem inseparable at the dairy show. Thursday and Friday were Holstein days, and the big attendance bespoke plainer than

words the popularity of the breed. The large-barred cows with capacious udders looked, in truth, to be the great producers they are, when material and the proper care are furnished them. Over 175, old and young, walked into and out of the ring. Many a herdsman came, confident of his chosen animal, only to find it excelled by one a little better. W. W. Stevens, of Liverpool, N. Y., had no easy task to decide upon the relative merits of these great milk-producing animals.

In the aged class R. E. Haeger's great show bull, Paul Calamo Korndyke, was first, and Ollie Johanna Sir Fayne second. Because this bull took second place is no indication that he is not a good one. He is a big, strong bull and in the pink of showing condition, but Calamo Korndyke is almost unbeatable, for he has been up against America's best Holstein blood this year and is king of them all. Sired by Korndyke Abberkerk, and out of Waneta Calamo Pietertje, he has the blue blood in his veins and the conformation besides.

In the aged-cow class a bevy of high producers faced the judge, but Haeger's Aconeth Lady stood at the top of the line. She was afterwards senior and grand champion cow, as was Paul Calamo Korndyke senior, and grand champion bull.

Haeger was first with the good stuff, but Frank White & Son, Geo. M. Carpenter, Iowana Farms, Traverse City State Hospital, and J. C. Copstake were all in the money with good stock.

BROWN SWISS.

J. P. Allyn, Delavan, Wis.; H. W. Ayres, Honey Creek, Wis., and E. M. Bartin, of Hinsdale, Ill., were the three exhibitors in Brown Swiss blood. Collectively, they put on exhibition sixty-seven head which to patrons of the breed would be considered good. Myone Boy, a four-year-old bull, owned by J. P. Allyn, was senior and grand champion. As a type of bovine strength and character he was outstanding in his class and a credit to the breed. Allyn also had the grand champion cow in Belle of Grattan and won the banner as winner of most money.

DUTCH BELTED.

Twenty-five head of these black, white-banded cattle were shown by E. J. Kirby, Covert, Mich., and Maplebrook Farm, of Mason, Mich. Kirby won all the championships and banner as premier exhibitor.

The Brown Swiss and Dutch Belted cattle are little known in Canada, and with the excellence

we have already established in the four leading dairy breeds, there appears little place for them except in showing circles.

It was, to speak conservatively, a very good show. Unique in that dairying was the only and outstanding feature. High development of type, quality and productive ability were shown in the stock. Up-to-date fixtures for the barn, house or dairy were shown exhaustively, and no man or woman could visit this fair without carrying away ideas of no little value. Regrettable it is, however, that more Canadian stock does not occupy the stalls at this show. Canadian breeders have nothing to fear from their neighbors across the line, and it would be very gratifying to Canadian visitors and profitable to the exhibitors to see more of our good dairy stock in friendly competition with neighboring bovine blood.

Regulations re Canadian Stock Going to the International

From Dr. F. Torrance, Veterinary Director General, "The Farmer's Advocate" gets the following item taken from United States Regulations, governing stock going from this country to the Chicago International Exposition:

"Cattle must be accompanied by a satisfactory certificate of tuberculin test by a veterinarian in the employ of and receiving a salary from the Canadian Government made not more than six months previously, and an affidavit by the owner or importer stating that the said tuberculin test refers to the cattle in question."

Sheep shall "pass a satisfactory inspection at the port of entry," and be accompanied by an affidavit of the owner or importer, and a certificate issued by a Canadian official veterinarian stating that he has inspected the sheep and found them free from disease, and that no contagious disease affecting sheep has existed in the district in which the animals have been kept for six months preceding the date of importation," and "have been twice carefully dipped in one of the approved dips."

Swine must be accompanied by a certificate signed by a Canadian official veterinarian stating "that no swine plague or hog cholera has existed within a radius of five miles of the premises in which they have been kept, for a period of six months immediately preceding the date of shipment." Also the usual affidavit of the owner.

Horses are subject to inspection at the port of entry.

Canadian official veterinarians are provided with the necessary forms for these certificates, and will be glad to furnish any further information required by Canadian exhibitors.

Want Increased Subsidies.

The Conference of Provincial Premiers, which was held at Ottawa last week, agreed on a unanimous demand for additional Federal subsidies to the provinces. If these subsidies were granted to meet the demands of the Premiers, it would mean that the provinces would get more than double what they do now. They also passed a resolution asking that the Federal Government increase the salaries of the Lieutenant-Governors in each province, and that henceforth they be known as "Governors." Several other resolutions were brought forward, but on most of them the Premiers did not agree. Those mentioned, however, met with their individual support.

Markets.

Toronto.

Receipts at the Union Stock-yards, West Toronto, on Monday, Nov. 3, numbered 295 cars, comprising 6,375 cattle, 1,105 hogs, 3,937 sheep and lambs, and 198 calves. Quality of cattle fair to good. Trade slow. Good to choice, fat cattle, steady, other grades 15c. to 25c. lower. Choice butchers', \$7.25 to \$7.50; good, \$7 to \$7.25; medium, \$6 to \$6.75; common, \$5 to \$6; cows, \$3.50 to \$6.50; bulls, \$4.25 to \$6.50; milkers and springers, \$60 to \$100; calves, \$4.50 to \$10.50. Sheep, \$3.50 to \$5.40; lambs, \$7.25 to \$7.50. Hogs, \$9 fed and watered, and \$8.70 f. o. b. 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	65	866	931
Cattle	1,488	16,742	18,230
Hogs	125	5,989	6,114
Sheep	947	7,950	8,897
Calves	94	1,505	1,599
Horses	21	41	65

The total receipts of live stock at the two markets for the corresponding week of 1912 were:

	City.	Union.	Total.
Cars	69	413	482
Cattle	667	6,251	6,918
Hogs	1,899	6,738	8,637
Sheep	1,989	6,128	8,117
Calves	107	682	789
Horses	3	21	24

The combined receipts of live stock at the two yards for the past week, show an increase of 449 cars, 11,312 cattle, 780 sheep and lambs, 810 calves, and 41 horses; but a decrease of 2,523 hogs, compared with the same week of 1912.

Receipts of live stock have again been large, but not greater than the demand, as there were many American as well as Canadian buyers. Nearly all of the Chicago packing-houses had buyers on the market, as well as, some from New York, Buffalo, Indiana, and Ohio; also many American farmers from various States in the Union. Toronto has suddenly become a great live-stock center, where prices are as high, if not higher, than any market on the Continent, quality considered. The quality of the cattle was not all that could be desired, as

there were too few good to choice, well-finished steers and heifers, not enough to supply the demand. Trade in all classes of live stock was exceedingly brisk, notwithstanding the heavy receipts, and prices very, very firm, in all classes, although the quotations were not much different, in many classes, from those quoted the previous week. During the seventeen years we have been on the Toronto live-stock markets, we never saw a better or more active trade throughout the week.

Exporters.—No cattle were bought for export, but steers of export quality and weights sold at \$7.50 to \$7.75. Export bulls, \$6.50 to \$6.75.

Butchers.—Choice butchers' steers sold at \$7.25 to \$7.50; choice butchers' heifers, \$7 to \$7.35; good steers, \$6.75 to \$7.25; medium, \$6.25 to \$6.75; common, \$5.50 to \$6; choice cows, \$5.75 to \$6.50; good cows, \$5.25 to \$5.50; medium cows, \$4.50 to \$5; common canners and cutters, \$3 to \$4.50; good butcher bulls, \$5 to \$6; bologna bulls, \$4 to \$4.75.

Stockers and Feeders.—Never in the history of the Toronto live-stock trade have there been as many stockers and feeders bought and sold at such high prices. Steers, 1,000 to 1,100 lbs., sold at \$6.30 to \$6.65; steers, 900 to 1,000

lbs., at \$6 to \$6.25; stockers, 500 to 800 lbs., at \$5.25 to \$6; rough, Eastern stockers, \$4.50 to \$5.50; stock heifers, \$4 to \$4.75. Distillery bulls sold at \$5 to \$5.25.

Milkers and Springers.—The outlet for good to choice milkers and forward springers, continued broad all week, values being firm throughout. A few prime cows sold from \$90 to \$100, and two or three reached \$110, \$120, and one choice Holstein \$130; medium cows sold from \$50 to \$65, while light cows brought \$40 to \$50.

Veal Calves.—The calf market was never better in Toronto. Choice veal calves sold at \$9 to \$10.50; good, \$8 to \$9, medium, \$7 to \$8; common, \$5.50 to \$6.50, and rough, Eastern calves, \$4.50 to \$5.25.

Sheep and Lambs.—The sheep and lamb trade remained steady to strong all week. Sheep—Ewes, light, \$4.50 to \$5.25; heavy ewes, \$4 to \$4.25; rams, \$3.50 to \$4; culls, \$2 to \$3. Lambs sold at \$7.25 to \$7.50; bucks, culled out, at 75c. per head less.

Hogs.—On account of the light receipts, hog values have been growing stronger all week. Selects, fed and watered, sold at \$9.25 to \$9.35; and \$8.90 to \$9 f. o.

b. cars, and \$9.40 to \$9.50 weighed off cars.

Horses.—At the various sale stables there were few horses offered and sold. The few that were sold went to the local trade, and at unchanged quotations. We did not hear of any shipments to outside points.

BREADSTUFFS.

Wheat.—Ontario, No. 2 red, white or mixed, 80c. to 82c., outside; 85c., track, Toronto; Manitoba, new, for October shipments, from Fort William, No. 1 northern, 87½c.; No. 2 northern, 86c.

Oats.—Ontario, new, white, 33c. to 34c., outside; 35c. to 36c., track, Toronto; Manitoba oats, No. 2, 39¼c.; No. 3, 38¼c., lake ports.

Rye.—No. 2, 61c. to 62c., outside.

Peas.—No. 2, 83c. to 85c., outside.

Buckwheat.—No. 2, 52c. to 53c., outside.

Barley.—For malting, 56c. to 58c.; for feed, 33c. to 46c., outside.

Corn.—American, No. 3 yellow, 73¼c., Midland; 78¼c., track, Toronto.

Flour.—Ontario, ninety-per-cent, winter-wheat patents, new, \$3.60 to \$3.70, bulk, seaboard. Manitoba flour—Prices at Toronto are: First patents, \$5.50; second patents, \$5; in cotton, 10c. more; strong bakers', \$4.80, in jute.

HAY AND MILLFEED.

Hay.—Baled, car lots, track, Toronto, \$14 to \$14.50 for No. 1; No. 2, \$13 to \$13.50.

Straw.—Baled, car lots, track, Toronto, \$8 to \$8.50.

Bran.—Manitoba, \$22 to \$23, in bags; track, Toronto. Shorts, \$24 to \$25; Ontario bran, \$22 in bags; shorts, \$24; middlings, \$24.

HIDES AND SKINS.

No. 1 inspected steers and cows, 13c.; No. 2 inspected steers and cows, 12c.; city hides, 14½c.; country hides, cured, 13¼c.; calf skins, per lb., 16c.; lamb skins and pelts, 50c. to 80c.; horse hair, 85c. to 88c.; horse hides, No. 1, \$3.50 to \$4; tallow, No. 1, per lb., 5½c. to 7c.

COUNTRY PRODUCE.

Butter.—Market firmer. Creamery pound rolls, 28c. to 31c.; creamery solids, 27c. to 29c.; separator dairy, 26c. to 27c.; store lots, 20c. to 25c.

Eggs.—New-laid, 40c.; cold-storage selects, 32c. to 33c.; cold storage, 29c.

Cheese.—Old, large, 15c.; twins, 15¼c.; new, large, 14c.; twins, 14¼c.

Honey.—Extracted, 10c. to 11c.; combs, per dozen sections, \$2.50 to \$3.

Beans.—Imported, hand-picked, \$2.25 per bushel. Canadians, hand-picked, \$2.10 to \$2.25; primes, \$1.65.

Potatoes.—Ontario, car lots, track, Toronto, 65c. to 75c.

Poultry.—Receipts liberal; quality poor; prices about steady. Chickens, alive, 13c. to 14c.; ducks, 12c. to 13c.; hens, 10c. to 11c. per lb.; geese, 12c.; turkeys, 18c. to 20c.

TORONTO SEED MARKET.

Alsike, No. 1, per bushel, \$7.75 to \$8.00; alsike, No. 2, per bushel, \$6.50 to \$7.50; alsike, No. 3, per bushel, \$5.00 to \$5.50; timothy, No. 1, per bushel, \$2.50; timothy, No. 2, per bushel, \$2.00; red clover, per bushel, \$6 to \$7.

FRUITS AND VEGETABLES.

Apples, baskets, 30c. to 50c.; apples, barrels, \$2.50 to \$4; Canadian grapes, small baskets, 25c. to 30c.; cabbages, per dozen, 60c. to 65c.; Canadian onions, 75-lb. bags, \$1.85; turnips, per bag, 50c.; beets, per bag, 85c.; carrots, 85c. per bag; Canadian celery, 40c. per dozen; Spanish onions, per case, \$3; half cases, \$1.60.

Chicago.

Cattle.—Beeves, \$6.60 to \$9.70; Texas steers, \$6.70 to \$7.80; stockers and feeders, \$5 to \$7.50; cows and heifers, \$3.35 to \$8.20; calves, \$6.50 to \$10.75.

Hogs.—Light, \$7.55 to \$8.10; mixed, \$7.60 to \$8.25; heavy, \$7.50 to \$8.25; rough, \$7.50 to \$7.70; pigs, \$5.50 to \$7.60.

Sheep and Lambs.—Sheep, native, \$4.10 to \$5.05; yearlings, \$5.10 to \$6; lambs, native, \$6 to \$7.50.

British Cattle Market.

Quotations are 13¼c. to 14c. per lb. for Irish steers and heifers.

Montreal.

Live Stock.—The local cattle markets were very strong again last week, and there was every indication that prices will go higher rather than lower. Best butchers' cattle were up about ¼c. The common stock seems to have struck its level. There was a good demand from American buyers for the latter quality, and an active demand was going at 5½c. to 5¾c. for stockers, and 4c. to 4¼c. for bulls, while canning cows were 3¼c. to 3½c. per lb. Butchers were paying as high as 7¼c. to 7½c. for picked lots of steers, and car lots of good sold around 6¾c., with picked lots of these at 7c. to 7¼c. There was a very good demand for lambs, and Western stock sold at 6½c. per lb. Ewe sheep were 4½c. to 4¾c. per lb. Grass-fed calves were taken for shipment to the United States at 3½c. to 4½c. per lb., while local butchers paid from 6¼c. to 7¼c. for milk-fed calves. Receipts of select hogs have been very light of late, and as a result prices have advanced ¼c. per lb. Selected hogs sold at 9¼c. to 10c. per lb.

Horses.—The market held about steady, and quite a trade was transacted. Heavy draft horses, weighing from 1,500 to 1,700 lbs., sold at \$300 to \$350 each; light draft, 1,400 to 1,500 lbs., \$225 to \$300 each; light horses, 1,000 to 1,100 lbs., \$125 to \$200 each; broken-down, old animals, \$75 to \$125, and choicest saddle and carriage animals, \$350 to \$500 each.

Dressed Hogs.—Prices of dressed hogs were higher, being 14¼c. to 14½c. per lb. for fresh-killed, abattoir-dressed stock. Potatoes.—Potatoes scarcer, with gradual rise. Demand was good, and Green Mountains were 75c. to 80c. per bag, ex track, jobbing prices being about 20c. higher, ex store. Bags weigh 90 lbs.

Honey and Syrup.—The market for honey and syrup was steady. White-clover comb was 15c. to 16c. per lb.; extracted, 10½c. to 11½c. per lb.; dark comb, 13c. to 14c., and strained, 7½c. to 8½c. Tins of maple syrup sold at 9c. to 10c. per lb., while syrup in wood was 7c. to 8c., and maple sugar was 9c. to 10c. per lb.

Eggs.—The market for eggs was firm, and advancing. Strictly fresh eggs were quoted at 41c. per dozen. Selected eggs were 33c. per dozen, and No. 1 candled 29c., while No. 2 were 33c. per dozen.

Butter.—Last week, choice creamery was quoted about the same as the previous week, being 27½c. to 27¾c. per lb., in a wholesale way, and fine at 26½c. to 27c., while second grades were 26c. to 26½c. Dairy butter was steady, at 22c. to 23c. per lb.

Cheese.—Exports to date are 1,364,928 boxes, as against 1,507,000 a year ago. Prices show little change, Western, white or colored, being 13c. to 13¼c. per lb. Finest Eastern, colored, was 12½c. to 12¾c., and white about ¼c. below these prices.

Grain.—Oats were firmer in price. No. 2 Western Canada was quoted at 40½c. per bushel, ex store; No. 1 extra feed at 40c., and No. 1 feed at 39c. to 39¼c.

Flour.—The market for flour was unchanged. Manitoba first-patent flour was quoted at \$5.40 per barrel, in bags; second being \$4.90, and strong bakers', \$4.70. Ontario winter-wheat flour was unchanged, at \$4.60 to \$4.75 per barrel, in wood, for straight rollers.

Millfeed.—The market for millfeed was steady. Bran was \$22 per ton, and shorts \$24 in bags, while middlings were \$27, including bags. Mouille was \$30 to \$32 per ton for pure, and \$28 to \$29 for mixed.

Hay.—Prices of hay continued to advance. No. 1 pressed hay, car lots, Montreal, on track, was \$15.50 to \$16 per ton, while No. 2 extra was \$14.50 to \$15, and No. 2 was \$13.50 to \$14 per ton, ex track.

Hides.—Hides were unchanged, but lamb skins were up 5c. Beef hides were 12c., 13c. and 14c. for Nos. 3, 2 and 1, respectively. Calf skins were 15c. and 17c. per lb. for Nos. 2 and 1, and lamb skins 65c. each, with horse hides ranging from \$1.75 for No. 2, and \$2.50 each for No. 1. Tallow sold at 1½c. to 3c. per lb. for rough, and 5c. to 6¼c. for rendered.

Buffalo.

Cattle.—Canada was a liberal support to the Buffalo cattle market for the past week, sending to this market something over 500 cars, distributed as follows: Saturday, 108 cars; Monday, 150; Tuesday, 15; Wednesday, 60; Thursday, 30, and Friday, 140. Total supply for the week figured, approximately, 16,325 head. Market weaker throughout the week ending last Friday, values showing a general decline, figuring all the way from 25 to 40 cents lower than the previous week, on grass cattle, which have been plentiful, with choice, dry-fed kinds, ruling about steady. The general stocker and feeder market was about 15 to 25 cents under the previous week's level, bulls showing about a steady market, with a good, strong market prevailing on milkers and springers. Best weight Canadian steers last week ranged from \$7.75 to \$8.25, some very coarse, commonish kinds of strictly grass, shipping steers, \$7.25 to \$7.35; best natives, \$8.25. In the dry-fed line, best handy-weight steers sold at \$8.25 to \$8.75, with a bunch of fancy yearlings (baby beef) bringing the extreme top of \$9 per cwt. Quite a few handy steers ranged from \$7.50 to \$7.75. Few fat heifers were good enough to go above \$6.25, all grades of fat females showing weakness, medium, killing cow stuff showing as much of a takeoff as any kind. Best feeding steers have been good sellers, steers of good quality—reds and roans, dehorned—which have been bringing \$7 to \$7.25, but fairish kinds, and the little, cheap grades, have been rather slow. Bulls were steady all week, one fancy 2,300-lb. Canadian bringing \$7.50, the highest price for some weeks past. Fresh cows and springers generally, \$60 to \$110. Shippers out of Canada are advised that the present request in the butchering line is for nice, tidy, fat steers and heifers, and in the feeder line the demand has been strong for best quality, reds and roans, dehorned. Good, thick, shipping steers, are being bought readily, going for Eastern kill.

Hogs.—Total hog receipts at Buffalo for the week ending last Friday, 44,000. Market for week rather uniform, prices since the opening day of the week being held within a ten-cent range, running from \$8.40 to \$8.50 for packers' grades. Pigs showed a 75-cent range for the entire week, selling from \$7.50 to \$8.25; roughs, \$7.60 to \$7.75; something fancy as high as \$8, and stags from \$6.50 to \$7.50.

Sheep and Lambs.—Week's supply, 37,400 head. First part of the week was low time on lambs, tops selling Monday and Tuesday at \$7.35, values latter part of the week showing a higher range, winding up for the week with best lambs at \$7.50 to \$7.65. Culls were about steady all week, ranging from \$5.50 to \$6.50. Handy sheep, active; heavy sheep, slow. Best yearlings sold at \$5.75 to \$6; wethers, \$5 to \$5.25; mixed sheep, \$4.75 to \$5, the top price for handy ewes being \$4.75; heavy ones selling at \$4.25 to \$4.50, and cull sheep from \$3.75 down.

Calves.—Week's supply, 2,125 head. Trade was active all week, tops ranging from \$11.50 to \$12, and culls mostly \$9.50 down, some selling up to \$10 to \$10.25. The supply of Canadian grass calves was not as large last week as for two or three past, and trade on these has been good, the general range being from \$4.50 to \$5.50, something real common quotable down to \$3.75 to \$4. One deck of very good Canada grass calves went to feed at \$5.60, and a bunch of heavy, fat ones, sold at \$6.75.

Cheese Markets.

Utica, N. Y., 14¼c.; butter, 32c.; Stirling, Ont., 12½c. to 12 11-16c.; Campbellford, Ont., 12¼c.; Woodstock, Ont., 13c., 13 3-16c., 13¼c.; Madoc, Ont., 12 11-16c. to 12¼c.; Brockville, Ont., 12¼c.; Kingston, Ont., 12 13-16c. to 12¼c.; Vankeek Hill, Ont., 12¼c. to 12½c.; Belleville, Ont., 12 11-16c. to 12¼c.; Ottawa, Ont., 12¼c.; Cornwall, Ont., 13c.; Perth, Ont., 12¼c.; London, Ont., bidding 13c., no sales; Watertown, N. Y., 14¼c.

Gossip.

Attention is directed to the advertisement in this issue of Aberdeen-Angus cattle, owned by Savage Bros., Oakville, Ont. These cattle are to be sold Nov. 25, by auction. See the advertisement.

Attention is called to the advertisement in this issue of Shropshire sheep, to be sold at Toronto, Friday, Nov. 21st, the second-last day of the National Live Stock, Horticultural and Dairy Show. These sheep are contributed by J. G. Hanmer and J. Lloyd-Jones, Burford, Ont., and comprise a fine offering of young ewes, ewe lambs, and rams. See the advertisement, and attend the sale.

At an auction sale of young Shorthorn bulls and heifers, from the famous Edgescote herd, held at Edgescote, Banbury, England, October 17th, the top price realized was 890 guineas, about \$2,095, for the white yearling Missie bull, Edgescote White Eagle, purchased by Sir E. Leon. Boxer, a red roan, born in April, 1913, sold for 850 guineas, to H. M. the King, and Edgescote Masterpiece, white, born February, 1912, brought the same price. Forty-nine head averaged £131 18s. At the annual auction sale of Shorthorns at Darlington, the same week, the top price secured was 250 guineas, given by Senor Unzie, Buenos Aires, for Gainford King, a red, consigned by George Harrison. The average realized for 110 head sold was £41.

HEREFORDS SELL WELL.

At the third annual sale of Herefords, from the herd of Cyrus A. Tow, at Norway, Iowa, Oct. 21st, thirty-five females sold for an average of \$402, the highest price reached being \$780, for the three-year-old cow, Harris Princess 198rd. Three others brought \$700, \$750 and \$775. The highest price reached for a bull was \$1,225, for the yearling, Fairview Prince, three others selling for \$700, \$775 and \$355.

On October 22nd, at Harris, Mo., 88 head, the property of O. Harris & Sons, sold for an average of \$378, the top price being \$2,700, for the yearling bull, Gay Lad 12th, the two-year-old bull, Gay Lad 9th, selling for \$1,500, and the yearling, Repeater 18th, for \$2,100. The highest price paid for a female was \$550, for the three-year-old, Princess Repeater 3rd.

JUDGES FOR THE NATIONAL.

In the list of judges for the National Live Stock, Horticultural and Dairy Show, which opens at Toronto on November 17th, will be found the names of men whose presence will be a guarantee of the high standard which this new institution hopes to attain. With the exception of a few classes, the list of judges is almost complete. The ready compliance of these gentlemen with the invitation to act as judges, along with the large number of advance entries received, is an ample indication of the important place which the National Live Stock, Horticultural and Dairy Show will occupy in this great Canadian industry. Following is a complete list of the judges to date:

Horses.—Shires and Heavy Draft, T. J. Berry, Hensall; Percherons, R. Burgess; Standard-bred, Dr. Rutledge; Ponies, Robt. Miller.

Breeding Cattle.—Shorthorns, Peter White, K. C., Pembroke.

Fat Cattle.—Shorthorns, Peter White. Grades, Crosses, and Export Steers.—Peter White, K. C., and a dealer.

Butcher's Cattle.—A dealer.

Swine.—All divisions, D. C. Flatt, Hamilton.

Sheep.—Southdowns, Geo. McKerrow.

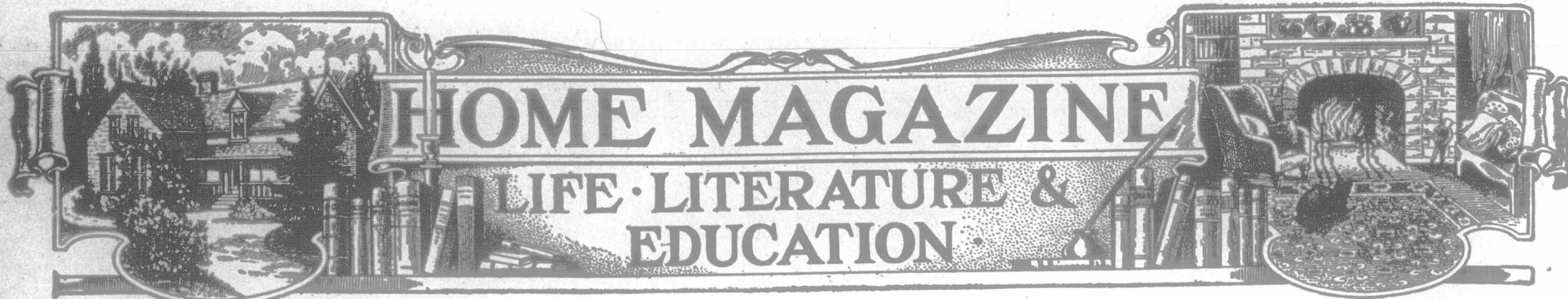
Oxfords, Hampshires and Suffolks.—W. A. Dryden.

Cotswolds, Lincolns and Leicesters.—Jas. Douglas.

Grades and Crosses.—W. A. Dryden and Jas. Douglas.

Champion Winners.—W. A. Dryden and Jas. Douglas. If they disagree, a third is to be appointed.

Dairy Cattle.—Ayrshires and Jerseys, Wm. Hunter, Grimsby; Holsteins, Geo. Rice, Tillsonburg.



Isabella Valancy Crawford.

The Master Builder.

By Isabella Valancy Crawford.

O Love builds on the azure sea,
And Love builds on the golden sand;
And Love builds on the rose-winged
cloud,
And sometimes Love builds on the
land.

O, if Love build on sparkling sea,
And if Love build on golden strand,
And if Love build on rosy cloud,
To Love these are solid land.

O, Love will build his lily walls,
And Love his pearly roof will rear,
On cloud, or land, or mist, or sea,—
Love's solid land is everywhere!

Little Trips Among the Eminent.

Canadian Poets.

By Clayton Duff.

"Think not, O master, of the well-tilled
field,
The earth is only thine; for after thee,
When all is sown and gathered and put
by,
Comes the grave poet, with creative
eye,
And from these silent acres and clean
fields
Bids with his wand the fancied after
yield
A second tilth and second harvest be,
The crop of images and curious
thoughts."

There have been so-called Canadian
poets that remind us of the coachman
Mr. Weller told about who "wrote an
affectin' copy o' worses the night afore
he was hung;" but gradually there has
arisen a body of real poetry that may
be called Canadian, not merely from the
fact that its authors happened to be of
Canadian birth or residence, but because
it provides an interpretation of Cana-
dian life both in its outward aspects and
its inward spirit.

From the earliest days of our history
there have been isolated instances of
poetic talent. Sometimes it was an
"unlettered muse" and sometimes a ped-
antic one, and occasionally some one ap-
peared of sufficient power to impress his
name if not his works upon the popular
memory. Such was Charles Heavysege,
a journalist and a carpenter of Mont-
real, who looms, a half-mythical figure,
in the background of our literary his-
tory. Another was Alexander M'Lach-
lan, a less-cultured writer, whose some-

what crude but vigorous verses had a
vogue not many years ago. But it
may be said that practically all our
best poetry has been written by men and
women still living, or by those who,
while they have passed away, laid down
their work at such an early age that in
reality they belong to the present gen-
eration.

Among the latter was one of the most
eminent poets Canada can claim,
Isabella Valancy Crawford. Our regret
at the loss our literature sustained by
her early death, is deepened by the fact
that it was in part caused by lack of
public appreciation. Her fame has been
growing ever since she died, but her
life might have been prolonged if she
had received a little of this belated
recognition in those struggling years
when she lived with her mother in
rooms over a grocery store on King
Street, Toronto, and tried to keep the
wolf from the door by her pen. Many
of her loveliest poems were contributed
at that time to the Toronto Telegram,
and were found in old files of that
paper years afterward by Mr. J. W.
Garvin when he, with some other ad-
mirers of the poet, was collecting ma-
terial to publish an adequate edition of
her work. A small volume containing
a number of her longer poems, "Old
Spookses' Pass," "Malcolm's Katy,"
etc., had been issued before her death,
and while it was warmly praised by
British critics and brought her a kind
letter from Lord Dufferin, the book was
practically unnoticed in Canada, and its
failure was a fatal disappointment to
its author.

Isabella was the daughter of a Dublin
physician, who brought his family to
Canada in the fifties while the future
poetess was still a child. They resided
successively at Paisley, Lakefield, and
Peterboro, in Ontario. The parents
were cultured people who were able to
educate their children at home, but
poverty, sickness and death pursued the
transplanted household, and, at the time
of the poet's own early death, only her
mother and one brother remained of the
large family circle. The story of her
life reads like a tragedy, but the family
misfortunes were proudly concealed from
those who would have been willing to
help, and, in her poetry, the reader is
surprised to find that no note of per-
sonal repining is intruded. She is the
least egotistical of poets, but trying to
read between the lines, one would pic-
ture a rich, ardent nature, glowing with
the zest of existence, wildly alive in
body and spirit. The most striking
characteristic of her poetry is its ex-
uberance. It glows with color and im-
agination, and is intense with feeling.
She has such a wealth of ideas that
they seem at times to clog the flow of
her verse, and this is especially true of
some of her longer poems, where the
mind is fatigued by the mere exertion
of trying to visualize her thronging
poetic images. Her shorter lyrics are
more limpid, and it is in these, I think,
that she reveals her greatest charm,
striking though "The Helot" may be
in its burning vindication of human
freedom, "Malcolm's Katie" in its epic
portrayal of pioneer life, or "Old
Spookses' Pass" in its humor and open-
air philosophy. The lyrics have an
originality, vivacity, and beauty of dic-
tion, a nobility of thought and warmth
of feeling that are thrilling to the lover
of poetry. Among these poems, "The
Ghosts of the Trees" is glorious in the
sense it conveys of the freedom and
majesty of nature; "The Inspiration of
Song" is marked by splendid imagina-
tion; "The Dark Stay" by wonderful
sustained imagery; "The City Tree" by
tender charm, and it would be necessary
to go back to Keats or Shelley for a

passage that would surpass the descrip-
tion of the nightingale's song from,
"Said The Daisy":

"No morn so sweet as this, so pure, so
fair—
God's bud time, so the oldest white
thorn said.
And she has lived so long; yet here and
there,
Such fresh white buds began her
ancient head.

"And from her thorny bosom all last
night
Deep in my dew-sealed sleep, I heard
a note—
So sweet a voice of anguish and delight
I dreamed a red star had a bird-like
throat
And that its rays were music which had
crept
Mid the white-scented blossoms of the
thorn,
And that to hear her sing the still night
wept
With mists and dew until the yellow
morn."

• • • • •

"So sweet a voice of anguish and de-
light" was stilled when Phillips Stewart
passed away in early manhood, that
though his work was largely promise, he
has been awarded a place with the most
honored poets of Canada. There was a
resemblance to Keats in the work of
this young poet as well as in the
brevity of his life and the affection he
inspired in all who knew him. Sensi-
tiveness to beauty and a melancholy
cast of thought were the attributes of
Phillips Stewart. After reading the
tender anguish of "The Last Sleep" or
the sombre loveliness of "Hope," mere
gaiety is apt to seem commonplace.
What an effect of beauty he conveys by
his magical way of using simple, sweet
words:

"In shadowy calm the boat
Sleeps by the dreaming oar,
The green hills are afloat
Beside the silver shore.

"Youth hoists the white-winged sail,
Love takes the longing oar—
The soft-told fairy tale
Beside the silver shore.

"Soft lip to lip, and heart
To heart, and hand to hand,
And wistful eyes depart
Unto another strand.

"And lovely as a star
They tremble o'er the wave,
With eager wings afar
Unto the joys they crave.

"In a sweet trance they fare
Unto the wind and rain,
With wind-tossed waves of hair,
And ne'er return again.

"And at the drifting side,
Changed faces in the deep
They see, a changing tide,
Like phantoms in a sleep.

"Slow hands furl the torn sail
Without one silver-gleam,
And, sad and wan and pale,
They gaze into a dream."

Phillips Stewart was the son of a
physician who resided in Peel County.
In the middle of a course at Toronto
University he left on an extended Euro-
pean tour, and while abroad issued with
a London publisher the volume of
"Poems" that contain the slender body
of his work. On his return he took up
the study of law, graduating with the
degree of L.L.D., but only it is said,
at the cost of his life. At Osgoode
Hall his memory is perpetuated by a
library for poor students.

Men Notable in Canadian History Champlain—Continued.

Since we left Champlain momentous
things have happened. De Monts, after
abandoning his enterprise in Acadia to
Poutrincourt, had obtained a monopoly
of the fur trade along the St. Lawrence
for one year, and daring spirits ready
to forge into any wilderness he might
name were not wanting. Champlain
was still in Paris, with his fervor for
exploration unabated, and there were
other men in plenty who were willing to
face the dangers of the new world for
the sake of the emoluments of the fur-
trade.

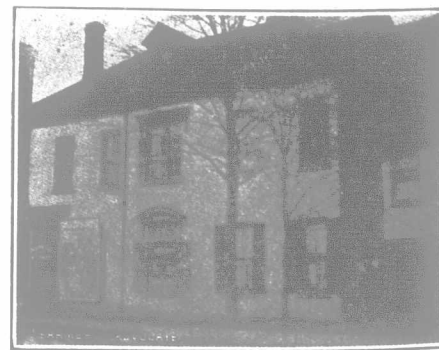
De Monts, therefore, had little diffi-
culty in fitting out two ships. The
command of one was given to the elder
Pontgrave, that of the other to Cham-
plain whose duties were to be to ex-
plore and to found settlements.

On the 5th of April, 1608, Pont-
grave set sail from Honfleur, and eight
days later he was followed by Cham-
plain, who, on the 3rd of June, sailed
into Tadoussac only to find that Pont-
grave had met with a mishap. His
ship, it is true, was there, but so also
was a Basque vessel which had come to
trade with the Indians from up the
Saguenay. There had been a fight and
the Basques had come off victors, and
had taken possession of all the cannon,
arms, etc., on board the ship. On the
arrival of Champlain, however, they
deemed discretion the better part of
valor, hastily signed a peace, and made
off as quickly as their sails could carry
them.

TADOUSSAC AND QUEBEC.

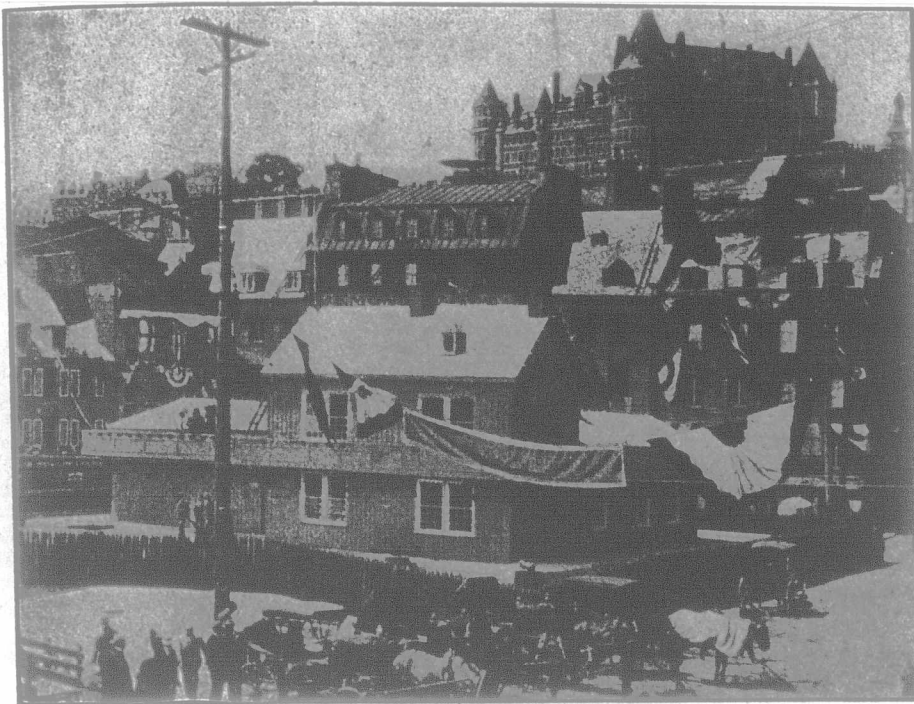
The Tadoussac of to-day is visited by
thousands of tourists annually. Those
who go there find a straggling village
nestling among the hills of one of the
most picturesque spots on the lower St.
Lawrence. Following the long winding
street they pass the Government fish-
hatcheries, a fine summer hotel shining
in holiday dress, a number of habitant
homes, and finally arrive at a little
church with a crack-voiced old bell,
which is pointed out as the "oldest
church in Canada." Yes to-day the
finger of antiquity is even upon Tadoussac,
but so long ago was the time of which
we write, that no building was in sight
save the ruins of Chauvin's barrack
built four years before, nor was there
sign of human being save the camp of a
band of roving Montagnais.

Having routed the Basques Champlain
spread his sails and again the Don de
Dieu sped over the water bearing to-
wards the setting sun. Soon the beet-
ling cliffs at Quebec were reached, and,
with the eye of a soldier, Champlain
recognized the strategic value of the
spot. "On the strand between the
water and the cliffs, his axemen fell to
their work. They were pioneers of an
advancing host."



Where Miss Crawford Lived.

In a room over a store, corner of John
and King streets, Toronto.



The Replica of Champlain's "Habitation," as built in 1908, for the Tercentenary celebration of the Founding of Quebec in 1608. The "Habitation" is the building in the foreground, and was built on the site of the original, erected by Champlain.

The pencil of Champlain has preserved the feature of the wooden buildings that soon were erected on the flat by the lapping water, and, following that rude sketch, a perfect facsimile, no doubt seen by many who read this, was erected three hundred years later—the buildings, the walls, the loop-holed galleries, even at one corner the "tall dove-cot like a belfry." The occasion was the "Tercentenary Celebration of the Founding of Quebec," and surely the spirit of good old Champlain, were it privileged to be present at that anniversary, might have looked with wonder and pleasure at the varied scene,—the fair city, blest in its site as but few cities in the world; the frowning citadel above; the wall-crowned glacis; the warships in the harbor grim in war-dress, to be sure, but flying the flags and pennons of a fete; the thousands of happy and gaily-dressed visitors flocking everywhere, mingling with the kindly folk of Quebec who everywhere strove to make them welcome.

But let us return.

A BITTER WINTER.

In September Pontgrave left for France with a ship-load of furs, and Champlain was left with but 28 men to face the rigors of the Northern winter.—Alone in the wilderness, truly, for although there was a camp of Montagnais near, but little comfort could be reaped from their vicinity. They were a superstitious people, and more likely to come to the French for assistance than to be of use in case of emergency. A bad dream, we are told, was sufficient to send them flying to the fort for admittance; when in need of food they came also, as upon one occasion when a band of them, in starving condition, reached the Lewis shore. The river was full of floating ice, but, desperately, the Indians set out in their canoes, most of which were ground to pieces before the eyes of the helpless Frenchmen. Those who escaped came leaping from floe to floe, and, needless to say, were received with kindness which their pitiable state demanded.

All this, however, told on the resources of the French. To make matters worse scurvy broke out, and by the middle of May only eight men out of the twenty-eight were left alive.

On the fifth of June, however, Pontgrave arrived from France, and once more a grave crisis was passed.

A MISTAKE.

But a problem that proved in the end as difficult as starvation, and scurvy had in the meantime presented itself. Indian warfare was obtruding itself upon the French. The fierce and warlike Iroquois were pressing closely upon the Algonquins and Hurons. It seemed to Champlain necessary to take side in this issue, and so he made the only blunder in his long years of administration of the affairs of his little empire; he joined

with the Algonquins against the Iroquois, with the weaker, as it proved, against the stronger. Henceforth the French in Canada had to face not only the natural dangers of flood and forests, but also the hatred of an implacable enemy.

By the middle of June, 1609, Champlain was ready to help his allies in their first skirmish with the Iroquois, but was detained for a time by the arrival, near Quebec, of some hundreds of Algonquins and Hurons, bent on seeing, before setting out on their warlike journey the wonders of Quebec of which they had heard. "On their arrival," we are told, "they feasted their eyes and glutted their appetites, yelped consternation at the sharp explosions of the arquebuse and the roar of the cannon, pitched their camps, and bedecked themselves for their war-dance. In the still night their fire glared against the black and jagged cliff, and the fierce red light fell on tawny limbs convulsed with frenzied gestures and ferocious stampings; on contorted visages, hideous with paint; on brandished weapons, stone war-clubs, stone hatchets, and stone-pointed lances; while the drum kept up its hollow boom and the air was split with mingled yells."

On the 28th of June all embarked together, Champlain in a small open boat with eleven Frenchmen swinging out over the blue water in the van of a flotilla of canoes filled with the copper-skinned warriors.

Reaching the mouth of the Richelieu River, the whole party encamped for two days, probably on the spot where now stands the town of Sorel, but leisure bred dissension; there was a quarrel and three parts of the number of Indians went off in high dudgeon. The rest followed Champlain up the river until impassable rapids were encountered. It was impossible to take the boat up them, hence it was sent back to Quebec with the greater number of its men, only three of the Frenchmen pushing on with Champlain towards the country of the Iroquois.

Paddling, portaging, encamping by night in camps hastily barricaded, the little army moved slowly on, retarded at every camp, by the necessity the Indians felt for consulting the medicine man. He, as Parkman tells us, "pitched his magic lodge in the woods, formed of a small stack of poles planted in a circle and brought together at the tops like stacked muskets. Over these he placed the deer skins which served him for a robe, and, creeping in at a narrow opening, hid himself from view. Crouched in a ball upon the earth, he invoked the spirits in mumbling, inarticulate tones, while his naked auditory, squatted on the ground like apes, listened in wonder and awe."

DISCOVERY OF LAKE CHAMPLAIN.

Finally the party passed into the beautiful lake which has ever since that

day borne the name of the great explorer—"Lake Champlain." Continuously they paddled along its western shore, by night, for this was dangerous country, and on the 29th day of July came first upon a band of Iroquois near the spot now known as Ticonderoga.

Next day a battle took place, the Iroquois advancing through the forest under three chiefs marked by the tall plumes which they wore.

Presently Champlain advanced to the front, dressed in full armor, and the Iroquois stared in wonder. "When I saw them getting ready to shoot at us," he says in his journal, "I levelled my arquebuse, which I had loaded with four balls, and aimed straight at one of the three chiefs. The shot brought down two and wounded another. On this our Indians set up such a yelling that one could not have heard a thunderclap, and all the while the arrows flew thick on both sides. The Iroquois were greatly astonished and frightened to see two of their men killed so quickly in spite of their arrow-proof armor. As I was reloading one of my companions fired a shot from the woods, which so increased their astonishment that, seeing their chiefs dead, they abandoned the field and fled into the depths of the forest."

The allies pursued the fleeing Indians and secured several prisoners. That night they began to torture one, and were about to burn him when Champlain, sickened by the sight, interposed. The best the warriors would do was to permit him to put the poor wretch out of misery by shooting.

Returning to the mouth of the Richelieu, separation came; the Hurons and Algonquins made off up the Ottawas, while Champlain with the Montagnais from Quebec returned to the fort, and thence repaired to Tadoussac. "Here the squaws, stark naked, swam out to the canoes to receive the heads of the dead Iroquois, and, hanging them from their necks, danced in triumph along the shore."

In the first encounter the allies had been victorious, but reverses were to follow.

(To be continued.)

Travel Notes.

(From Helen's Diary.)
Munich, Oct. 5, 1913.

"There are the Munich Beer Mugs," said Uncle Ned, as he glanced out of the car window. "We'll be at the station in five minutes."

"Beer Mugs?" said I interrogatively, looking out of the window and seeing nothing but level fields, clumps of trees and a line of roofs in the distance, "What on earth do you mean?"

"See those twin towers with the round tops?"

"Yes. Looks like a church."

"It is. It's the Frauenkirche (church of Our Lady)—the biggest church in Munich."

"But why—why Beer Mugs?"

"Oh, that's just a local joke. The towers look like gigantic beer mugs, and so some humorist nicknamed them and the name stuck. When you have been in Munich a few days you'll be more familiar with the outward appearance of a beer mug than you seem to be at present."

And after I had been at the Festweise I certainly was.

The Festweise is the October Fair, though why should it be labelled the October Fair any more than the September Fair I don't know, as the first week of it is the last week of September, and the last week of it is the first week of October. But then they have a queer way of juggling dates over here. For instance, some of the evening papers are dated a day ahead. This confused me terribly at first, and made me feel as if I had lost a day, or my memory, or something, but after awhile I got quite accustomed to having the morning editions come out the evening before.

The Festweise is held on an immense tract of meadow land just outside the city. This land is bounded on the north, south, east and west by breweries. Inside the enclosure every brewery in Munich is represented. The entire area is blocked out into large squares and wide streets, and these streets are lined with beer halls, sausage factories, refreshment booths and sideshows. There is no entrance fee to the grounds, but there is nothing free inside. You may be deluded into thinking some things are, but if you linger long enough there will be a hat collection.

I stopped a minute before a large cage in which a queer-looking family consisting of a cat, a canary and a squirrel were living amicably together. The exhibitor bared his bald head every five minutes to pass-around a tattered hat for contributions.

The Festweise has existed for over two hundred years. It is the annual gathering place of the Bavarian peasantry and the country people. They come in thousands from every direction, and spend their days at the Festweise eating and drinking and going to sideshows. It is their grand yearly dissipation.

The first day I went out there I was seized with an ambition to make a list of all the beer halls I passed, but after I had written down fifteen or twenty names I realized that I had hardly made a beginning, so I promptly gave up the job. If by any chance the Atlantic Ocean should dry up I think the gap could quite easily be filled with Munich beer. The supply seems inexhaustible. Although these beer halls are only temporary structures, they are architecturally attractive, and some of them quite magnificent. Each one has a garden and a fine band. Here and there all over the grounds are open-air kitchens where meat is being cooked for the visitors. I saw huge pits where hundreds of chickens at a time were being baked. As soon as they were done they were sold over the counter, and carried



Old Church, Tadoussac.
The oldest in America, save one, at St. Augustine, Fla.

off on paper plates to the beer gardens. We passed many fish kitchens. The fish was cooked over trenches made in the ground and filled with live coals. All along the sides of the trench long sticks were stuck upright in the earth, the tops arching over the hot coals. On the end of each stick a fish was impaled.

But the sausage factories were the places that hypnotized us. We couldn't get away from them. It was positively enthralling to see the rapidity with which cold hash assumed form and solidity, and was whipped off the grill in the shape of little brown rolls sizzling hot.

"Let's buy some," said Olivia, "I'm starving, and they do smell so good." So we got into the hunger line, and in about five minutes were handed out a paper plate loaded with "red-hots," sauerkraut and bread.

Then we adjourned to the nearest beer garden to enjoy our Bavarian feast. The place was so packed with people we could hardly find a seat, but managed to squeeze in at a table with a family stolid-looking peasants. They were just finishing off a chicken, and, as they had no plates but bits of wrapping paper, and no knives or forks but their own fingers, the place looked pretty messy.

Of course, if you sit at a table you must buy something in order to keep your seat, so, when the waitress came along we ordered "zwei kleines," which, being interpreted, meaneth two small beers.

This is where we showed our ignorance, for at the Festweise small beers are unknown. It is a case of buy a quart or go without. So we bought a quart, and it was brought to us in a large stone stein. (These steins hold one litre). Olivia had never tasted beer before, and her initiation was a source of great amusement to the people sitting near us. Every time she lifted the heavy stone mug to her lips, her face became a mass of puckers, and she looked as if her mouth was full of liquid alum.

"Isn't it awful?" she would say. "How can they ever like the vile stuff?" According to our western ideas, sausages and sauerkraut and beer is not a very aesthetic combination, but it seems to be the nectar and ambrosia of the Bavarian peasantry. I wonder what their opinion would be of mince pie. They would probably think it was a terrible mixture.

By far the most impressive sight at the Festweise was the procession of beer wagons coming with more beer. These enormous wagons loaded with kegs were drawn by huge horses fairly glittering with gold and silver ornamentation, and driven by pompous Bavarians arrayed in gorgeous velvets in the fantastic fashion of the middle ages. Royalty paled before such grandeur as this.

Munich has been called the City of Beer and Art. I don't know why they put the beer before the art, but perhaps there are historic reasons. Can it be that the beer is the cause of the art? Whatever the reason, it is certainly true that Munich is a great center for music and art.

I like Munich. I like it for a great many reasons. It is a most attractive

and beautiful city; the streets are as clean as a newly swept room; there are so many lovely fountains splashing in the sunshine; there are so many places to go, and so much to see, and do, and hear; there are such splendid art galleries, and so much fine music; and then the soldiers! Those lovely Bavarian-blue soldiers with their glittering helmets and shining buttons and clanking swords. Every day at noon they march to one of the public squares and give an open-air band concert, and every day there is a big crowd there listening to the music.

Munich is as flat as a pancake. The streets are all asphalt and kept in perfect condition. After a rainfall they are so shiney you feel as if you were walking on gigantic mirrors. Sometimes at night after a very heavy rain the streets appear like rivers, the roadway is so full of reflections and light and color. Motor cars coming along with their glaring headlights look like launches ploughing through the water. At such times Munich seems transformed into a Bavarian Venice.

The architecture of Munich is very varied and interesting. So many buildings are imitations of celebrated buildings in other lands, especially in Italy and Greece, that the streets of Munich are said to be the note-books of travel of the Bavarian kings.

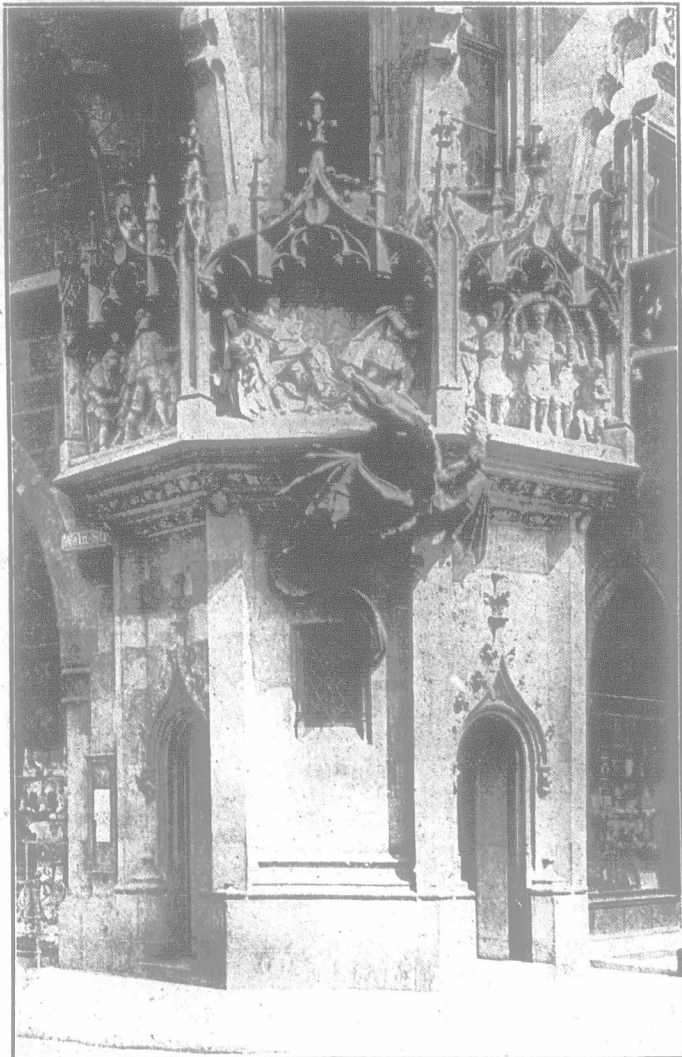
Some of the buildings are very curious, the new City Hall, for instance, is considered a sort of architectural joke. It is a most flamboyant structure, and covered from its base to its highest pinnacle with all sorts of odd sculptural things in stone, including a mammoth dragon climbing up one of the corners. I wondered why that dragon had such a conspicuous place, and one day came across the story in a book of old legends.

It seems that long, long ago, in the "once-upon-a-time" period, a monstrous dragon flew into Munich through one of the city gates and brought with it the plague. It went straight to Marien Platz (where the City Hall stands) and there it was slain. But the courageous Munchener who killed it inhaled its deadly breath and died immediately afterwards.

Apropos of the City Hall, there is a story told of a humorous murderer as he was being led to the scaffold: "Take me past the new City Hall that I may have one more good laugh before I die."



The New City Hall and the Twin Towers, Munich.



The Terrible Dragon that is Always Climbing Up the Corner of the City Hall.



A Curious Fountain in Munich.

In Munich women have asserted their divine right to be street-car switch-tenders and street sweepers. I think, judging from their appearance, that the chief qualification for such a position must be lack of beauty, lack of shape, and big feet. Every government official in Germany wears a uniform and glistens with brass buttons—even the street sweepers, but in the case of the women employees the uniform is confined to a distinctive hat. I think it must have been designed by a narrow-minded, malicious man who was opposed to the advancement of women, and took his revenge on the sex in this mean way. It is the kind of a hat that little Willie (aged five) would consider too babyish to wear. The shape is infantile enough, but to add to the absurdity, the powers that rule have decreed that the color must be a bilious yellow-green. But in spite of this ridiculous badge of servitude, the women look strong and healthy. Personally I would rather be a fat, florid switch-tender with a green hat, than an anemic seamstress stitching all day in a dreary back room.

I have asked a number of people about the wages of those women, and was told by a German woman that they earned from two to three marks a day. Through Munich races the river Isar—the "Isar rolling rapidly." I have been kept awake at night trying to track that quotation to its lair. It has such an old familiar sound like "Greenlands Icy Mountains," and "The Assyrian came down like a wolf on the fold," and all those old things we learned in school.

I asked Uncle Ned about it. "Yes," he said, "Yes—it does sound awfully familiar, but where the dickens it comes from I can't remember."

Aunt Julia said she thought it was in some of Byron's poems, but just which one she couldn't remember.

I asked a university man who lives here, and he said he had a vague idea it was in something that began with, "On Hohenlinden when the sun was low," but he couldn't just remember.

Then one day in the library I stumbled on a reference to it in which Campbell was mentioned as the author. I gleefully consulted the card catalogue, and there wasn't any Campbell. So I am still in the dark about it.

The Roundabout Club. Re-opening of the Literary Society.

In re-opening the rather unique Literary Society which has been so happily maintained in connection with our journal by a number of "home" students during the winters of several years, it is only necessary to say that an equal enthusiasm, an equal eagerness for work for work's sake, an equal generosity of feeling among competitors are anticipated for the coming season. Mentally then, may the members to-day shake hands with the cordiality of old, and so all are ready for a new winter's work.

But four subjects will be given during the winter.

1. Write an essay on any poem suggested by the accompanying picture. All essays to be received not later than December 15th.

2. A subject suggested by one of the members: "What I really want most in this world,—not what I may appear to want, but what really in my heart I am trying for." Time limit—January 15th. These essays need not be long.

3. Write an essay on the following quotation:

"Now who shall arbitrate?
Ten men love what I hate."

Time limit—February 15th.

4. Write a short story on any subject you choose. Time limit—March 15th. As heretofore prizes will be given to those taking highest marks.

AN ENDEARING ACT.

Wife (pleadingly)—"I'm afraid, Jack, you do not love me any more—anyway, not as well as you used to."

Husband—"Why?"

Wife—"Because you always let me get up to light the fire now."

Husband—"Nonsense, my love! Your getting up to light the fire makes me love you all the more."

The New Public Health.

"The Farmer's Advocate" Bureau of Public Health Information.

QUESTIONS, ANSWERS, AND COMMENTS.

Conducted by the Institute of Public Health.—(The Public Health Faculty of Western University, London, Ontario.)

[Questions should be addressed: "New Public Health, care of 'The Farmer's Advocate,' London, Ont." Private questions, accompanied by a stamped, self-addressed envelope, will receive private answers. Medical treatment or diagnosis for individual cases not prescribed.]

After a good rest, the New Public Health column is open again for questions, and discussion of subjects in Hygiene and Public Health.

Most people would like to live well and happily. A good deal of happiness depends on being well. This means more than not being sick; not being beaten. Being beaten hardly constitutes happiness, even for a dog! A great deal has been found out in the last few years about these subjects; and especially that a great many of the old ideas on health, as well as on happiness, are wrong. This column aims to give the latest and

spend vast amounts of time, energy, and cash, in fixing the wrong thing or fixing it the wrong way; or we do far more than is really necessary for safety, thus making all reforms burdensome and expensive in the extreme, putting them beyond the reach of most people.

No better illustration of how not to do it has ever been afforded than our current methods and teachings regarding ventilation, especially ventilation in winter, when our efforts are still further complicated by the need to save heat as much as possible.

The errors made so far are so numerous and so mixed up with bits of truth, that it is hard to know where or how to begin unravelling them.

First, what makes air harmful when people breathe it?

Right at the outset we are met by the question, How much can we rely on the foul odor of the air to prove its harmfulness? We all know the smell of a stuffy room full of people. Is that foul odor itself harmful? Or, if the odor is harmless in itself, does it indicate some condition of the air which injures the body? What injuries should we fear from such air, and how shall we best prevent them?

Now, of course, everyone knows that pure air is chiefly four parts of nitrogen mixed with one part of oxygen: also that we take the mixture into our lungs, throw back the nitrogen without using it, and burn up the oxygen, or some of it, changing it into carbonic-acid gas (carbon dioxide), which we also throw out as we breathe. It seems at first sight

exhaust the oxygen of any ordinary room by breathing; or to increase the carbonic-acid gas of any ordinary room to a dangerous point by breathing. Only under the most extreme conditions could harm follow either way. Moreover, the "worst ventilated" rooms, with the people in them suffering extremely from the "poor ventilation," practically never show exhaustion of oxygen anywhere near to the danger point, nor accumulation of carbonic-acid gas anywhere near to the danger point, even though the air smells bad, the lights are dim, people have headaches and are stupid, sleepy, etc.

What, then, is the cause of the headache, drowsiness, etc.? Why are the lamps dim? Why does a terrible stench assail the nostrils, of him who comes into the room from the fresh air outside?

When it was found that the "exhaustion of oxygen" was non-existent, and that the "accumulation of carbonic-acid gas" was far below the point where bad effects could develop, it was supposed that the human body must throw off very poisonous substances in very minute amounts, from the skin or from the lungs, substances never isolated or examined, in fact, not known. This was a very convenient belief, for no one could well dispute it; if an investigator failed to find these substances on close examination, it was easy to say that he failed because he did not know how to look for them. This theory has never had any conclusive proof adduced in its support.

However, all the air of a crowded room becomes unpleasant, disagreeable, even somewhat poisonous, producing often a tired feeling, somewhat like that of the "morning after."

Why? The foul odor is easily accounted for by something literally right under our noses; not some obscure, mysterious "poison," but merely the accumulation of the individual odors of the individuals in the crowd; the smell of bad teeth, catarrhal noses, unwashed armpits, etc., etc., etc. That these odors could generate smallpox, typhoid fever, diphtheria, when accumulated in a crowded room, although the individuals who contributed them breathed individually these very odors, not during the meeting merely, but day and night continuously without harm, is too ridiculous for modern belief; not too ridiculous for our forefathers to believe, however.

True, a very few super-sensitive people might be psychically distressed, even nauseated by such odors, but this is a trick of mentality so closely allied to imagination that the line of demarcation is hard to draw. Leaving aside such effects of odor—which, remember, impress the late comer, not the people who have breathed the air longest, from the beginning of the meeting!—we have left two noticeable but usually unnoticed factors—the original heat of the room, added to by the heat of all the living bodies crowded into it; and the moisture thrown out by those bodies in perspiration and respiration. The adult human generates, even while sitting still, very much heat. At the same time, much water is thrown out from skin and lungs. In brief, the atmosphere becomes hot and humid, even foggy. Hence the dimmed lights; not really dimmed, but shining through a mist. Hence, also, the headaches and dullness, for everyone knows how damp air increases, to our feelings, the effects of either cold or heat.

In brief, a crowded room produces, after a time, an exaggeration of the conditions of an excessively hot, humid, lifeless day in midsummer.

Bringing in fresh air from outside relieves these conditions a good deal, if that outside air be cooler and dryer than the air in the room. Of course, it is usually cooler and dryer; but if not, it relieves matters not a whit. Indeed, a room properly cool and dry already, may be spoiled by "fresh air"; as sometimes in summer a closed house is made very uncomfortable by admitting the hot, damp, outside atmosphere.

One point further; in still air, each person's own heat and humidity surrounds him like a blanket. He warms the air just touching him, more than the air at a distance. Fan yourself and dissipate this blanket; at once you feel better. Stop fanning; the blanket re-forms, and you feel, by contrast, worse than ever.

Modern ventilation consists, then, in three principles, very different indeed



Literary Society Study.

Write an essay or a poem suggested by this picture.

best information all round—not fads or fancies or theory, but up-to-date facts. We have an immense amount to learn yet. Scientific investigation of public-health questions is only about 20 years old. So there are 6,000 (or 60,000) years of misunderstanding and accumulated mistakes to reinvestigate and correct. But we are on our way, and we want your help and co-operation so that we may all have the best there is.

THE NEW VENTILATION.

Ventilation in the last decade or two meant changed air. The word comes from "ventus," Latin for "wind," and was very appropriate for all methods which consisted in pouring a stream of fresh air into a building, while pouring a stream of foul air out to make room for it.

But the question studied in the last four or five years with new energy and insight has been this—What is the "foulness" of foul air due to? Why is foul air bad, or is it bad at all; if so, what are its effects, and what should be done to get rid of them? In fact, the old doctrines of ventilation have gone through the same rigorous re-examination that other public-health doctrines have met of late. No longer do we just assume that things are bad; now we ask are they bad; if so, how do we know they are; and in what specific way are they bad? For, unless we know all about just exactly how and why they act disadvantageously, we cannot prevent their so acting; we

reasonable that if we use the oxygen in a room this way, we will in time exhaust it; and must then die of lack of oxygen: also, if we only partly exhaust it, we will not quite die, but be made sick: also that the carbonic-acid gas we throw out will accumulate and poison us in time, even if the oxygen is not used up.

This is all theoretically true. If we lived in perfectly air-tight glass cases, we would run both of these risks. But we are really living in sieves, not tight boxes, so far as these two gases are concerned; for all our ordinary buildings are pervious to oxygen and carbonic-acid gas; even had we no cracks round windows or doors, no chimneys, etc., our very walls would serve the purpose of letting in oxygen and letting out carbon dioxide.

The fundamental law of diffusion of gases which ventilation writers usually forget, compels oxygen, nitrogen, carbonic-acid gas, etc., to maintain a uniform percentage everywhere. Thus, if there were only 10 per cent. of oxygen in a room, the 20-per-cent. oxygen surrounding that room and stretching round the world and up into the sky, tends to press into that room and make it 20-per-cent., too. If in that room is 1-per-cent. carbonic-acid gas, but only 4-100th of one per cent. outside, that one per cent. tends to rush out of the room and spread all over the universe to equalize the percentage out of doors with that indoors. The result is that it is quite impossible to seriously

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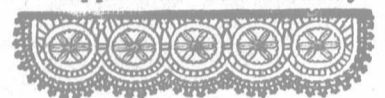
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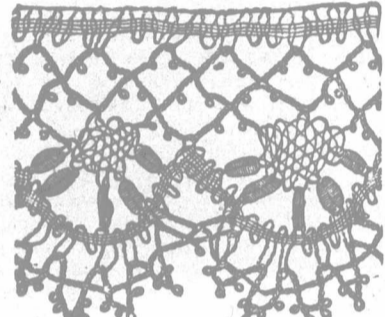
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from the old, make-shift of "fresh air," taken at random from the varying outside. Modern ventilation aims to keep the heat at 60 degrees F., or near it, to keep the humidity at 60 per cent. of saturation, or near it, and to keep the air moving, thus removing the hot-air blanket around the body. Those who know only the method of ventilation by wholesale change of all the air in the room, will probably gasp at the story of recent experiments where people confined in a room with no fresh air in the ordinary sense, but with mechanisms to keep the old air at 60 degrees F., 60 per cent. humidity, and in motion, lived and worked with perfect satisfaction for two weeks!

How shall we achieve good ventilation while waiting for the Sanitary Engineers to catch up to the new discoveries, and give us systems of ventilation that will make us comfortable; which is more, much more, than most existing systems do? Watch the heat and the humidity, and keep the air moving. The problem in winter is very different from that in summer.

In summer, the general humidity tends to be too high, at least in this part of the world, and overcrowding makes it far worse. So, also, the heat is apt to be above 60 degrees F. rather than below it. Fortunately, in summer we do not have to stay in doors so much; but when we do, the heat and the humidity are hard to avoid. The air in motion, we can pretty well secure by fans—and, after all, is not this the sensible thing that we all do, so far as we can?

In winter, the humidity is too low as a rule. To raise it in a room, evaporate water in the room. At once the heat has more effect; or in other words, one feels it more, just as in summer humidity makes the heat worse. In winter, this increase in humidity saves coal, for a temperature of 60 degrees is comfortable with the proper humidity, 60 per cent., although a temperature of 75 degrees F. would be shivery, if the humidity were low (25 per cent.). But in a crowded room, even in winter, the humidity may rise too high, 75 per cent., or 80 per cent., or more. This makes the heat "unbearable," and someone opens the window, "freezing" everyone near it. If while the humidity is high, the air is chilled, the effect of the dampness on the air is seen in the penetrating cold so well known in countries on the sea or great lakes.

Practical ventilation, then, means keeping the temperature up to 60 degrees F. in winter, down to 60 degrees F. in summer; keeping the humidity up to 60 per cent. in winter, down to this point in summer; and both summer and winter, keeping the air in motion, if a blanket of uncomfortable humid air forms round one, whether the humidity be uncomfortable from cold or heat.

H. W. HILL.

Announcements.

1. The Arts Department of Western University has thrown open to the public a course of twenty-five lectures on Public Health, beginning Wednesday, November 5, 1918, at the Western University Buildings, St. George street, 4.30 p. m. Registration fee, \$1. No other charges.

2. The first of the Institute Public Lectures on Health will be held Thursday, November 20th, at 8.15 p. m., in the public lecture-room of the Institute, corner Waterloo street and Ottawa avenue. Admission free. Subject, Food Adulteration; Fancies and Facts.

3. Clubs, Societies, Associations, etc., are invited to form regular classes from their memberships for systematic courses in Public Health, subjects and number of lectures to be arranged. Fees nominal. Such courses will be held in the Institute of Public Health.

4. Free single addresses on Public Health subjects may be arranged for by any club, society, etc., in Ontario, with the Director. Subjects, School Hygiene, Flies, Sewage Disposal, Contagious Diseases, Tuberculosis, Typhoid Fever, Ice, Water Supplies, Ventilation, Overcrowding and Housing, Infant Mortality, Sex Hygiene, Germs and Disease, Vaccination, Food Poisoning, Patent and Other Drugs, Handling of Epidemics, Rural Hygiene, etc., etc.

Hope's Quiet Hour.

Reflect the Sunlight.

Praise ye the LORD from the heavens. . . . Praise ye the LORD from the earth.—Ps. cxlviii: 1, 7.

My soul, bear thou thy part,
Triumph in GOD above,
And with a well-tuned heart,
Sing thou the songs of love!
Let all thy days
Till life shall end,
Whate'er He send,
Be filled with praise!
—Rev. Richard Baxter, 1681.

Those brave words were written a long time ago, but they are as up-to-date as anything written to-day. We find ourselves facing always the problem of living. The hours come to us one by one, and silently they carry into eternity what we have placed in their keeping. We can never call one back and demand again what we have given it. Each one meets us humbly, as a slave bound to submit to our royal will; but each one slips out of our grasp, unheeding our most passionate prayer that it will drop into oblivion that bit of our precious living which it has secured. We are all-powerful over it in the beginning of its short stay with us, we have no power at all over it as it slips away. Our earthly life, this life which we feel to be of infinite importance—to ourselves, at least—is made up of these submissive, yet sternly inexorable hours. Do they mount, like white-winged angels, the stairs which lead up to the Throne of God from our home on earth? Do they joyously lay their shining offerings at His feet, or are they badly and reluctantly forced to carry up to Him their dark and heavy burden? That question is one we can and do answer every day.

We pray, "Thy Will be done, in earth as it is in heaven," but are we trying to answer our own prayer? Are we doing God's Will in earth as the angels do it in heaven? Read over the command in our text. Evidently we, who live in this commonplace, workaday world, have the same high task as the angels who bow before the awful majesty of God. "Praise ye Him, all His angels . . . both young men, and maidens; old men, and children: let them praise the name of the LORD."

The hours are always momentous, even those which seem most uneventful. Maeterlinck says:

"There are as many eternal minutes in the week that goes by in silence, as in the one that comes boldly towards us with mighty shout and clamour. And, indeed, it is we who tell ourselves all that the hour would seem to say; for the hour that abides with us is ever a timid and nervous guest, that will smile if its host be smiling, or weep if his eyes be wet. It has been charged with no mission to bring happiness to us; it is we who should comfort the hour that has sought refuge within our soul. And he is wise who always finds words of peace that he can whisper low to his guest on the threshold. We should let no opportunity for happiness escape us, and the simplest causes of happiness should be ever stored in our soul."

Our business in life—at least one chief business—is reflecting the sunlight of God's Love. His Love lights up our world with never-ceasing radiance. If we fail to see the light it is our own fault, it is because we have allowed earth-born clouds of discontent and faithlessness to come between us and the unclouded heaven above. The sun is always shining—though our days may seem dull and cheerless; and God's Love is always shining, to glorify our most ordinary hours, but we too often turn away and refuse to believe in His Love.

There is a wonderful steam-engine used in Egypt for irrigation purposes. It is worked by steam, and yet no fuel but the sun's rays produces the needful heat. Five immense radiators, 204 feet long, concentrate the sunlight on the water. These radiators move automatically, as the sun's position changes. Always they gaze into his face and reflect his radiance. As a consequence, the life-giving water is pumped by the steam-engine, and

goes out to refresh the parched land. This also—like everything we see—is a parable revealing spiritual things.

Those who look constantly into the Face of God, reflecting His Love joyously in their daily living, are doing far more than they know to cheer and encourage discouraged and sorrowful souls. We may be happy, if we will; not so much by reaching out after happiness for ourselves as by accepting trustfully everything God sends. Sure of His Love, whatever may come, we need not wait for outward sunshine before we praise and thank Him. David had many terrible troubles, and yet he said: "Every day will I bless Thee." If our eyes are lifted up to God continually our hearts will praise Him every hour, and we shall obey the command—which seems sometimes almost impossible—"Rejoice in the Lord alway." St. Paul urges the duty of rejoicing on his loved converts in Philippi. Over and over again he tells them to rejoice in the Lord, bidding them "shine as lights" in the midst of a crooked and perverse nation. They had plenty of troubles, and their faith in God was one great cause of earthly danger, exposing them to insult, torture, or a violent death. They might, at any moment, be forced to give up all their earthly possessions or renounce Christ; and yet the friend who loved them was not troubled about their condition. He knew that the sunshine of God's love was about them, and told them to rejoice, as he rejoiced, in the knowledge that God—their rich Father—would supply all their need.

Most of our troubles are troubles of thought. We are unhappy because we love cares little for us, or because we ourselves are quarreling with other people. We fret because some cherished ambition does not succeed, because we are poor or afraid we may be poor, because we have no chance to do great things. We even permit our priceless peace of mind to be scattered to the winds by very trifling disturbances. Some little thing goes wrong in the household arrangements, or someone else is out of sorts and speaks unjustly, and we forget that a God-sent hour is waiting to carry up to Him a treasure of love and goodwill, of peace and joy. Think of the hour wearily climbing the stairs, weighed down by our impatience, our cross looks or complaining words, our gloomy want of faith in our Father's carefully-planned providence. We might have been radiating gladness yesterday. Were we? We may be reflecting God's Joy to-day. Are we? The next hour is humbly waiting our pleasure. Let us not waste it, at least, in complaint and gloom. But one hour of seeking and finding the joy, which is always to be found if we will, is not going to make us shine as lights in the world. The great sun-mirrors in Egypt keep their faces always turned to the sun while daylight lasts. We can never rest on our oars, can never shine in the sunlight which we saw and reflected yesterday. Each ray must be newly accepted and radiated to-day. It is not enough to have loved and trusted God in His past dealings with us—we must look for the love in His gifts to-day. The hours do not come empty-handed to us, they always bring a gift of love. "Good habits are not made on birthdays, nor Christian character on New Year. The workshop of character is everyday life. The uneventful and commonplace hour is where the battle is lost and won."—M. B. Babcock.

We are too much in the thick of the battle to be able to judge rightly the meaning and results of everyday actions. St. John was, in his old age, a lonely exile, shut off from the opportunity of service or missionary speech. Perhaps it seemed hard and meaningless, when he was ready and able to bear faithful witness for his Lord. Yet, think what the world would have missed if those wonderful chapters at the end of our Bible had never been written. Think of the messages sent through the seven churches in Asia to the Church in all the ages. Think of the vision of the white-robed conquerors who wrung sweetness and joy from tribulation. Think of the glorious vision of the golden City of God, "coming down from God out of heaven, prepared as a bride adorned for her husband."

St. John did not know how his trying months of exile would be a blessing to

the world for thousands of years; but—like the reflectors in Egypt—he fixed his eyes and heart on the Sun. He only did the reflecting, it was Christ—the Sun of Righteousness—Who did the great work. But He did it through the words of St. John. He is just as able to make use of us, if we accept in joyous trustfulness everything He sends, and thank Him every hour, saying:

"I thank Thee, uncreated Sun, That Thy bright beams on me have shined."

DORA FARNCOMB.

Books for Christmas.

By Dora Farncomb.

"The Vision of His Face"—50c., 75c., and \$1.
"Star-Led to the Heights"—25c. and 35c.

THE WILLIAM WELD CO., London, Canada.

SOME BRITISH PRESS NOTICES.

"Let us recommend 'The Vision of His Face,' a book under whose shadow we have sat down with great delight. It catches the attention first by the exceeding appropriateness of its quotations. It holds it by its own exceeding spirituality."—Expository Times.

"One of the most spiritually beautiful and edifying books we have read for a long time. Miss Farncomb writes with an intimacy of knowledge, a purity and fervor of feeling, a passionate Christian idealism which simply captivates the thoughtful and devout reader. Many a sermon and many a life will be enriched by these choice meditations."—Baptist Times.

"The purpose of the authoress is expressed in the preface; it is that she 'may help some who are weary and heart-sick to see more clearly the Face of the King.' Many will be grateful to Miss Farncomb for a most helpful book; a great deal of it, indeed we do not hesitate to describe as beautiful."—Publisher's Circular.

"IN THE GARDEN WITH HIM," a new book by the author of "Hope's Quiet Hour," is now ready. Published by The William Weld Co., London, Ont.

A New Book by Dora Farncomb.

The many readers who have been helped and inspired by the writings of Miss Dora Farncomb in the weekly Quiet Hour of "The Farmer's Advocate," and the book entitled "The Vision of His Face," which first appeared a year ago, will be glad to hear that another book by her, "In the Garden With Him," is now ready for circulation. Bound in green cloth and lettered with gold, the little volume is very attractive. Its contents need no recommendation to readers of "Hope's Quiet Hour." The price is seventy-five cents. Published by "The William Weld Co., London, Ont."

Women's Institute Convention.

The annual convention of the Women's Institute for Ontario will be held in the Canadian Foresters' Hall, Toronto, on Thursday and Friday, Nov. 20th and 21st. An interesting programme has been prepared, and it is hoped that as many as possible will avail themselves of the privilege of attending.

BABY'S OWN SOAP



Baby's soft skin is the test of BABY'S OWN SOAP—

and its constant use in thousands of nurseries is satisfactory proof that its fragrant lather helps and whitens the most delicate skin. No imitation has all the merit of BABY'S OWN SOAP.

ALBERT SOAPS Limited, Manufacturers, MONTREAL.

\$12.50 at CATESBYS IN LONDON BUYS A \$25.00 Canadian Suit



You've heard that clothes are cheaper in England, and you know that you can't beat English fabrics.

But do you know that about two thousand Canadians buy their clothes every year direct from us, and save about one-half what they would have to pay for them if they bought them in Canada?

This is the reason why: We not only sell them a suit of fine English wool, beautifully tailored in the latest Canadian, New York or London style—as they prefer—but we sell them at manufacturer's cost.

Canadian tailors buy goods only in small suit lengths. Four profits come out of the cloth before it reaches them. Whereas we—buying all suitings direct from the mills—save these four profits and give you the benefit of the saving, and still make a fair profit ourselves.

We will prove it to you without a cent of obligation on your part. Just sign and return our coupon, and we'll send you our Style Book, 72 pattern pieces of cloth, a letter explaining our system of doing business, self-measurement chart, tape measure, and some 100 testimonials from satisfied customers—just to prove to you that every statement we make is correct.

All you need to do is sign and mail the coupon, and the patterns will be sent by return mail.

If you don't want to cut the paper, write a postcard or letter, and we'll send the patterns just the same, but to get them you must mention London Farmer's Advocate

CATESBYS LIMITED (Of Tottenham Court Road, London, England) 119 West Wellington St., Toronto.

The "BURLINGTON"—This shows the most popular style of suit worn by well-dressed men in Canada. The materials used are specially selected for this shape of suit. \$12.50. Duty Free and Carriage Paid.

Mail this coupon now and be convinced. MESSRS. CATESBYS LIMITED (of London), Dept. "A," 119 West Wellington St., Toronto, Ont.: Please send me your new season's Style Book and 72 pattern pieces of cloth. I am thinking of buying a suit—overcoat*. Full Name..... Full Address..... *If you only want overcoat patterns, cross out the word "suit." If you only want suitings, cross out "overcoat." London Farmer's Advocate. Coupon No. 3.

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.]

CANNING PUMPKIN.

Dear Ingle Nook,—Will you kindly tell me how to can pumpkin so that I can keep it for winter use, and oblige a subscriber to your valuable paper, "The Farmer's Advocate"? I. M. S.

See Recipe Department below for a method for canning pumpkin. Some people, after packing the cooked pumpkin in the jars, give it three separate boilings at intervals of a day, loosening the tops each time and screwing down as soon as boiling is finished. This is a very sure way of killing all spores or bacteria which, if not killed, would spoil the "fruit."

RANCID FAT AND BUTTER.

Dear Junia,—Please advise as to what to do with rancid bacon or pork; also butter that has got rather unpleasant taste. I should be most grateful for some hints, so I can use same for cooking, if not for table. M. C.

If pork has become very rancid, it is best to use it for soap-grease, as it is not fit for food. If but a little off flavor, however, it may be tried out, if fat, clarified as follows, and so made fit for shortening or frying. This is the method: Pare a large, white potato, and cut it in three or four pieces. Put the fat in a pot with the potato and let come to boiling point. Continue cooking until the potato is brown, then remove it and let the fat cool. If there is a large quantity of fat, use about a pint of potatoes to each gallon of fat.

To sweeten the butter, use a pint of new milk for each pound of butter. Cut the butter into small pieces and put into the milk. Heat gently until the butter is melted, then set away to cool in a place free from odors. When the butter is firm, pour off the milk and work the butter as though it were a fresh churning, using plenty of cold water for washing.

COOKING SCHOOL.

Dear Junia,—I, like a great many others, have been a silent reader of the Ingle Nook for some time, but I now come for help. Could you tell me where there is a cooking school? And could you give me any information on it? A SUBSCRIBER'S DAUGHTER.

Durham Co., Ont.

There are Schools of Domestic Science in Toronto and Hamilton; also, there is the Macdonald Institute at Guelph. Write to these institutions for all further information.

We regret to say that the pattern manufacturing company has informed us that No. 6151, for bed-slippers and hot-water bottle cover, is out of stock, and will not be replaced.

The Scrap Bag.

SERVICEABLE RUCHING.

Cut a piece of white tape the size of your collar-band and crochet to it a narrow lace edge of some pretty pattern, using fine crochet cotton. You will find that your frill will outlast many bought ruches.

CLEANING WHITE BEAVER HATS.

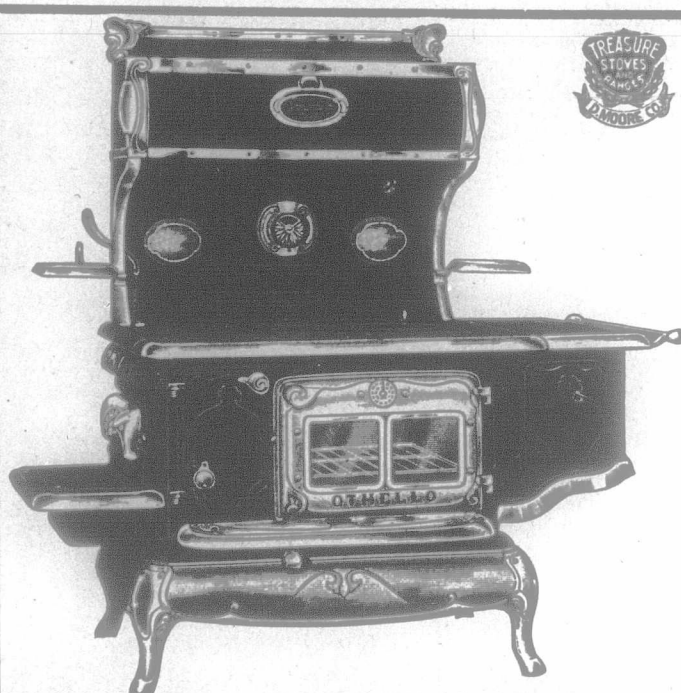
Rub the hat well with French chalk and powdered magnesia. Put away for several days in tissue-paper, then brush and shake out. If necessary repeat the treatment.

HOT MILK STIMULANT.

One of the very best stimulants which we have is hot milk. Try sipping a glassful when you are chilled or tired.

USE FOR OLD PIE PANS.

If an old pie pan is inverted on the stove under any kettle in which fruits or other things, that scorch easily are cooking, the danger of "burning" will be practically removed.



For the Attention of the Particular Housekeeper:

The "Othello Treasure" Range

is built to give the most efficient service for the amount of fuel consumed.

It is handsome in appearance, has large fire-box for coal or wood. Large copper reservoir, and large oven, so you can put four 10-inch pie plates on bottom. With plain or glass oven door.

Ask your nearest dealer to show you this

Wonderful Baking Range

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Western Agents:
MERRICK ANDERSON CO., Winnipeg
JOHN BURNS, Vancouver

Prove the "BISSELL" by Its Work

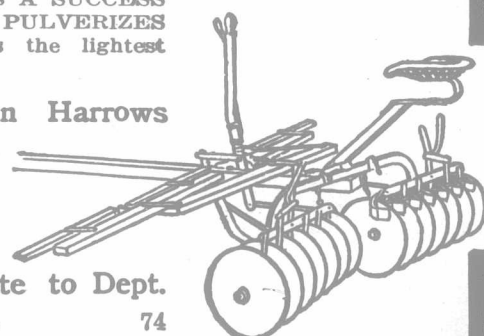
Do the gangs on your Harrow crowd together and raise out of the ground if it is hard? They won't do this on the "Bissell." The "Bissell" is so designed that THE GANGS CAN'T CROWD OR BUMP together no matter how hard the ground may be.

Tough soil won't stick the "Bissell." It stays right down to its work and pulverizes the ground thoroughly.

We ask you to take a "Bissell" out into the field and test it beside other Harrows. Then you

will HAVE PROOF that it is A SUCCESS ON HARD LAND—THAT IT PULVERIZES THE BEST—and that it is the lightest draught.

Post yourself fully on Harrows before buying. We put our name on every Harrow so that you will know it is genuine. Ask your local dealer, or write to Dept. W for free Catalogue. 74



T. E. Bissell Company, Limited, Elora, Ont.

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Ready Roofing

Armed with "Nature's everlasting waterproofer" Genasco is ready to combat rain, snow, hail, wind, sun, heat, cold, and fire and to defend your roof with its resisting, lasting life, and keep it weather-tight. Genasco smooth-surface roofing is supplied with patented **Kant-leak** Kleets, which make seams waterproof without cement, and prevent nail leaks.

Ask your dealer for Genasco. Guaranteed. Smooth or mineral surface. Write us for samples and the Good Roof Guide Book.

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RAW FUR

Price Lists and information. Free to trappers and collectors. We want to show you why your RAW FUR shipments should come to

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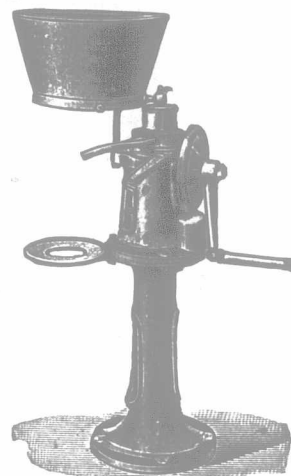
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The statements of thousands of users prove that the Premier is all that we claim it to be.

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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.

FOR SALE—S. C. Black Minorca cockerels. Cheap for quick sale. W. F. Carpenter, Horning's Mills, Ont.



Peep again in your oven.
 See those loaves, those pleasing;
 loaves you've made.
 How fat—rounded—substantial.
 No, they won't fall when colder.
 Because the Manitoba strength that
 is in FIVE ROSES will hold them up
 till eaten.
 This sturdy elastic gluten has kept them
 from dropping flat in the oven.
 No unsightly holes 'twixt crust and crumb
 —never.
 All risen evenly—to stay risen.
 Never heavy—sodden—soggy—indigestible.
 Yours are the FIVE ROSES loaves—
 Crinkly and appetising of crust.
 Golden brown and tender.
 Snowy of crumb—light as thistledown.
 FIVE ROSES helps a lot.
 Try it soon.

Five Roses Flour

Not Bleached



Not Blended

LAKE OF THE WOODS MILLING COMPANY, LIMITED, MONTREAL

TO REMOVE SOOT.

If soot should be accidentally spilled on carpet, cover with a thick layer of salt and sweep vigorously, repeating as long as a mark remains. If you have a vacuum-cleaner, use it first.

Seasonable Recipes.

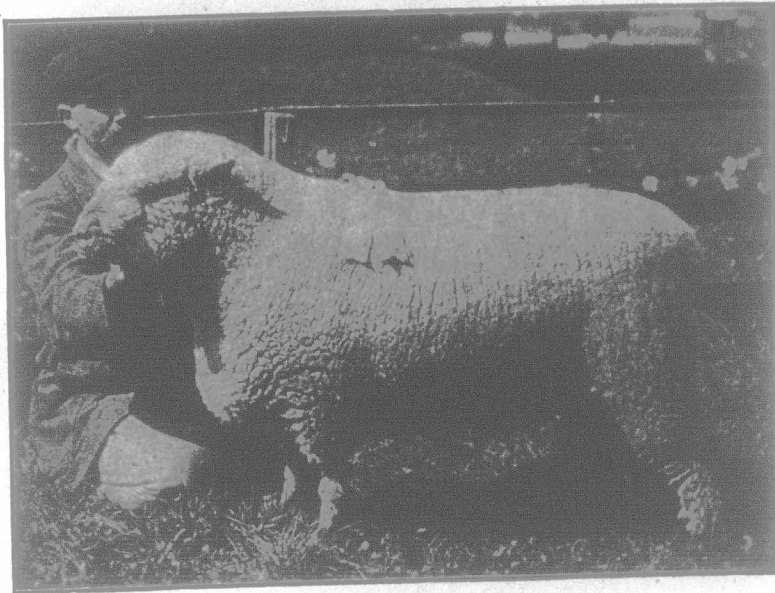
Pumpkin Pie.—A good method of preparing pumpkin for pies is to put a whole small pumpkin in the oven with the stem left on. When it is done the stem will fall in, the steam will escape, and the pumpkin will retain all its flavor. When cool, scrape out the pulp and treat as usual.

Pumpkin Conserve.—Eight lbs. sliced pumpkin, 6 oranges, 6 lemons, 9 lbs. sugar. Put the pumpkin in a kettle with the sugar over it and let stand over night. Next morning, add juice of oranges and lemons. Boil the rinds of the oranges and lemons in a little slightly-salted water until tender, then chop, and add. Boil all slowly for about two hours, and when stirring be careful not to mush the conserve.

Canned Pumpkin.—Cut the pumpkin in halves and remove the seeds, then cut the halves in narrow strips, pare them, and cut in pieces. Put the pieces in a granite kettle, add a cup of boiling water, cover very closely and cook very slowly on the back of the range, stirring occasionally. Let cook for five hours, then press through a scalded sieve, and pack into sterilized jars. Fill to overflowing, then set the jars on a rack in a boiler and put the covers beside the jars. Pour warm water into the boiler, cover, and let cook an hour longer. Add boiling water to the jars if needed to make them overflow, adjust the covers and let cook fifteen minutes longer, then screw down and store in a cool place.

Jambolaya.—Place one fat chicken cut into pieces in a saucepan. Pour over it 1 quart boiling water, and cook slowly for 40 minutes. Next add 1 cup rice well-washed, ½ lb. ham chopped fine, and

First Public Auction Sale of High-class Shropshire Sheep



Will be held at the National Live Stock Exhibition, Agricultural Park, Toronto, Ont., on **FRIDAY, NOVEMBER 21st, AT 2 O'CLOCK P.M.**

immediately after the sheep judging is concluded. Consisting of 50 yearling and 2-year-old ewes, bred to the best rams that could be selected from the T. A. Butler flock in Scotland. Ten very choice ewe lambs and ten ram lambs. Also a few choice yearling and two shear rams, some of which are imported, and will be in the show ring for inspection. The above is contributed by J. G. Hanmer and J. Lloyd-Jones, of Burford, Ont. Terms: Eight months' credit will be given on approved security.

WELBY ALMAS, Auctioneer, Brantford. C. F. SAUNDERS, Secretary, Burford, Ont.
BREEDING & QUALITY CLYDESDALES STALLIONS & FILLIES
 My fall importation of Clydesdale Stallions and Fillies are now in my stables; there never was a better bred lot imported, and their standard of character and quality is the highest and my prices the lowest.
G. A. BRODIE, NEWMARKET, ONT. L.D. Bell Phone

YOU NEED A FEED COOKER!
 Strong, galvanized Steel tank, sits right over fire. Cooks quickly. Easy on fuel. Three sizes. Write for catalog. Steel Trough & Machine Co., Ltd., Tweed, Ont.

salt and pepper to season. Cover, and cook slowly until the rice is thoroughly cooked. Place on a platter and serve at once.

An Apple Dish.—Wash and core 6 red apples. The skin may be removed if desired. Cook together 1 cup sugar and 1 cup water until they form a syrup, then put in the apples, cover closely, and

cook until tender. If the juice is still thin, remove the apples, boil the juice down well, then pour it over and around the apples. Cool, and serve.

Creamed Onions.—Boil onions in slightly-salted water; drain well, then cover with a cream sauce, dot with butter, sprinkle with salt or paprika, and serve very hot.

Apple Bird's Nest.—Fill a baking-dish three-quarters full of pared, cored and quartered apples; season with nutmeg and sugar, cover with a rich pie-crust, and bake. If the apples are very dry, a very little water may be added. This dish may be steamed instead of baked if preferred. Serve with sugar and cream.

The Government of New Zealand has decided to build a navy on the lines adopted by Australia.

A new aerial postal service from Paris to Nice has been established. The flight is made in a biplane capable of a speed of 70 miles an hour.

Premier Asquith and his daughter were attacked near Stirling, Scotland, Nov. 1st, by a number of militant suffragettes armed with dog-whips. Four of the women have been arrested.

Paderewski has entered an action against a London concert agent, who advertised the pianist, Egon Petrias, as the equal of the great artist in piano-playing.

The White Star liner Teutonic very nearly collided with an iceberg during a fog, October 27th. Since the burning of the Volturno, inventors are turning their attention to devices for making vessels fireproof.

The London Institute has bought nearly one-third of the world's supply of radium, paying for it £6,000. Practically the entire output of two Paris factories, which turn out radium under the direct supervision of Madame Curie, was required to fill the order, which is the largest ever given in England.

The People of the Whirlpool.

[Serial rights secured from The Mac-Millan Publishing Co., Toronto and New York.]

Chapter IV.

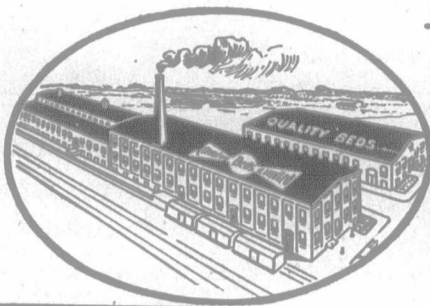
WHEN BARBARA GOES TO TOWN.

March 4. I like to go to a plain people's play, where the spectators groan and hiss the villain. It is a wholesome sort of clearing-house where one may be freed from pent-up emotion under cover of other people's tears and smiles; the smiles triumphing at the end, which always winds up with a sudden recoil, leaving the nerves in a healthy thrill. I believe that I can only comprehend the primal emotions and what is called in intellectual jargon mental dissipation, and the problem play, in its many phases, appeals to me even less than crude physical dissipation.

We have seen a drama of the people played quite recently, having been to New York to spend part of a "mid-winter" week's vacation, which father insisted that Evan should take between two rather complex and eye-straining pieces of work. Speaking by the almanac, it wasn't midwinter at all, but pre-spring, which, in spite of lengthening days, is the only uncompromisingly disagreeable season in the country—the time when measles usually invades the village school, the dogs come slinking in guiltily to the fire, pasted with frozen mud, the boys have snuffle colds, in spite of father's precautions, and I grow desperate and flout the jonquils in my window garden, it seems so very long since summer, and longer yet to real budding spring. We arrived at home last night in the wildest snowstorm, of the season, and this morning Evan having smoothed out his mental wrinkles by means of our mild city diversions, is now filling his lungs and straightening his shoulders by building a wonderful snow fort for the boys. Presently I shall go down to help them bombard him in it, and try to persuade them that it will last longer if they do not squeeze the snowballs too hard, for Evan has prohibited "baking" altogether.

The "baking" of snowballs consists of making up quite a batch at once, then dipping them in water and leaving them out until they are hard as rocks, and really wicked missiles.

The process, unknown in polite circles here, was taught my babies by the Vanderveer boy during the Christmas holidays, which, being snowy and bright, drew the colony to the Bluffs for coasting, skating, etc., giving father such a river of senseless accidents to wade through that he threatens to absent himself and take refuge with Martin Cortright in his Irving Place den for holiday week next year. Father has ridden many a night when the roads would not admit of wheeling, without thought of complaint, to the charcoal camp to tend a new mother, a baby, or a woodchopper suddenly stricken with pneumonia, that is so common a disease among men living as these do on poor food, in tiny close cabins, and continually getting checks of perspiration in the variable climate. During the holidays he was called to the bluffs in the middle of two consecutive nights, first to the Vanderveers, and requested to "drug" the second assistant butler, who was wildly drunk, and being a recent acquisition had been brought to officiate at the house party without due trial, "so that he wouldn't be used up the next day," and then to the Ponsonby's where the family had evidently not yet gone to bed. Here he found that the patient, a visiting school friend of one of the daughters, from up the state, and evidently not used to the whirl of the pool, had skated all day, and, kept going by unaccustomed stimulants, taken half from ignorance, half from bravado, and danced the evening through at the club house, and then collapsed. Her hostess, careless through familiarity with it, had given her a dose of one of the chloral mixtures "to let her have a good night's sleep"; but instead it had sent her into hysterics, and she was calling wildly for her mother to come and take her home. Father returned from



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on any bed you buy

Buying at our factory you cut prices away down, because we save you the profits of wholesaler, jobber and retailer, and sell you at factory figures.

Our system practically brings the factory to your door and gives you a choice of our whole output, at lower prices than if you were buying elsewhere in carload lots.

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We give thirty days' trial of any article you buy. If you are not thoroughly satisfied, return the goods at our expense and we return your money.

Here is our plan: You write for our free illustrated catalogue and look over its handsome showing of brass and enameled steel beds, cribs, springs, mattresses, couches, divans and costumers. Pick out the article you need, in the style you prefer, pay us only bare factory price, and we deliver the goods (FREIGHT PREPAID) to your station, bright, new and carefully packed. That's not all—

**360 Days for
Your Final
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We go still further. Every purchaser gets 360 days in which to try out our goods on all points. If you find any defect in material or workmanship, we guarantee to make it right or refund the money.

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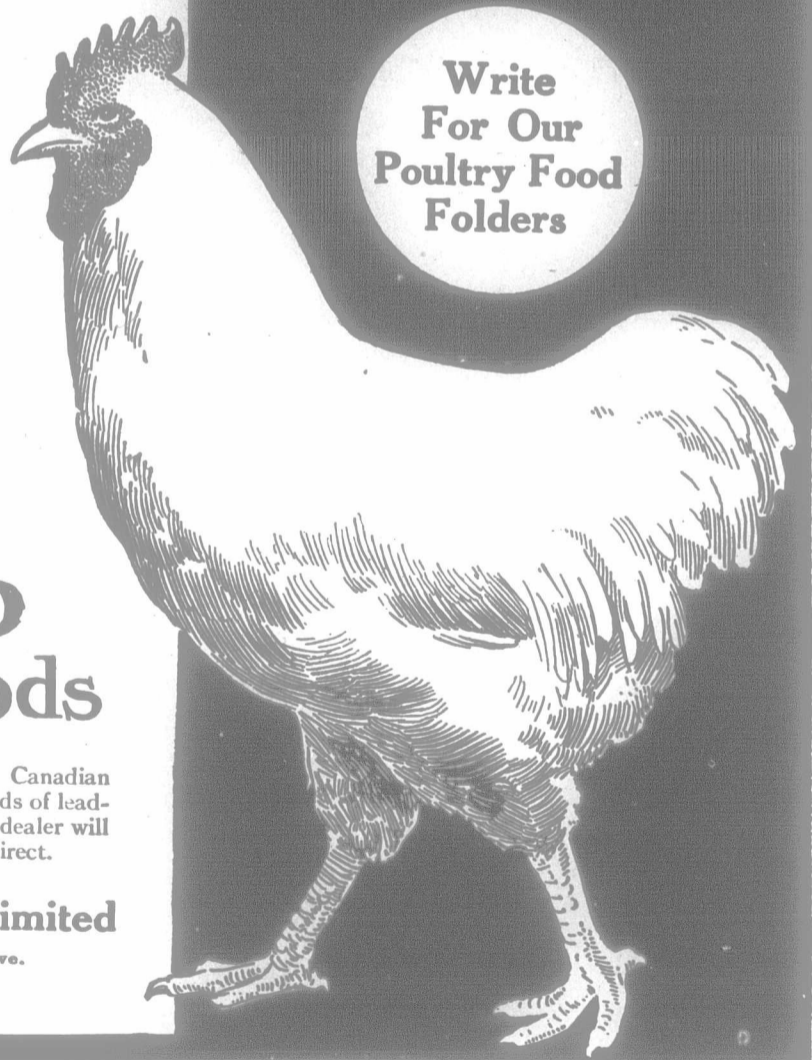
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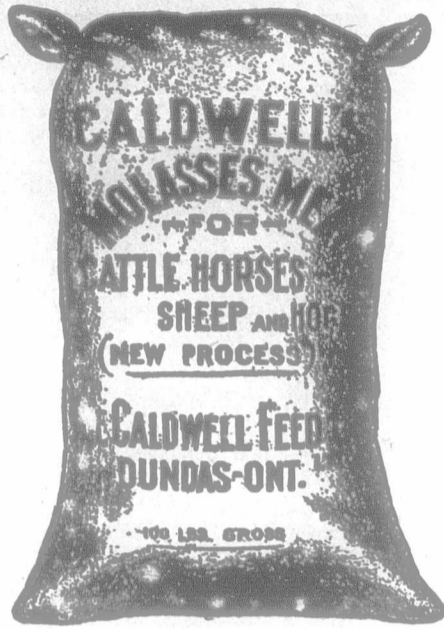
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both visits fairly white with rage. Not at the unfortunates themselves, be it said, but at the cool nonchalance of those who summoned him.

The butler's was a common enough case. That of the young girl moved him to pity, and then indignation, as he sifted out the cause of the attack, in order to treat her intelligently. This questioning Mrs. Ponsonby resented most emphatically, telling him "to attend to his business and not treat ladies as if they were criminals." This to a man of father's professional ability, and one of over sixty years of age in the bargain.

"Madam," said he, "you are a criminal; for to my thinking all preventable



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Caldwell's Molasses Meal

—print them in plain English, because we have nothing to conceal from our customers.

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Including the noted stallion, Manaton [9986] (13619), winner of many prizes in both Scotland and America, and weighing 2,150 lbs., will be held at the farm on **Wednesday, Nov. 19, 1913.** For particulars, write:
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illness, such as this, is a crime. Leave the room, and when I have soothed this poor child I will go home; and remember, do not send for me again; it will be useless." Never a word did he say of the matter at home, though I read part in his face; but the Ponsonby's housekeeper, a countrywoman of Martha Corkle's, took the news to her, adding, "and the missus stepped lively too, she did; only, law's sakes, by next mornin' she'd forgot all about it, and, we being short-handed, wanted me to go down with James and get the Doctor up to spray her throat for a hoarseness, and I remindin' her what he'd said, she laughed and answered, 'He had a bear's manners,' but to go tell him she'd pay him city prices, and she bet that would mend him and them!"

I took good care not to repeat this to father, for he would be wounded. He is beginning to see that they use him as a sort of ambulance surgeon, but he does not yet understand the absolute money insolence of these people to those not of their "set," whom they consider socially or financially beneath them, and I hope he never may. He is so full of good will to all men, so pitiful toward weakness and sin, and has kept his faith in human nature through thirty-five years' practice in a factory town, hospital wards, charcoal camp, and among the odd characters of the scattering hillside, that it would be an undying shame to have it shattered by the very people that the others regard with hopeless envy.

Shame on you, Barbara, but you are growing bitter. Yes, I know you do not yourself mind left-handed snubs and remarks, about your being "comfortably poor," but you won't have that splendid old father of yours put upon and sneezed at, with cigarette sneezes, too. You should realize that they don't know any better, also that presently they may become dreadfully bored after the manner of degenerates and move away from the Bluffs, and then companionable, commuting, or summer resident people will have a chance to buy their houses.

Shrewd Martha Corkle foresaw the probable outcome the day that the foundation-stone for the first cottage was laid, even before our prettiest flower-

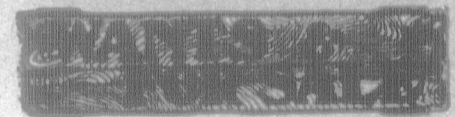
hedged lane was shorn and torn up to make it into a macadam road, in order to shorten the time for motor vehicles, between the Bluffs and the station by possibly three minutes. Not that the people were obliged to be on time for early trains, for they are mostly the reapers of other people's sowing; but to men of a certain calibre, born for activity, the feeling that, simply for the pleasure of it, they can wait until the very latest moment and still get there, is an amusement savoring of both chance and power.

"Yes, Mrs. Evan," said Martha, with as much of a sniff as she felt compatible with her dignity. "I know colonies of folks not born to or loving the soil, but just trying to get something temporary out o' it in the way o' pleasure, as rabbits, or mayhap bad smelling water for the rheumatics. (It was the waters Lunnun swells came for down on the old estate.) To my thinkin' these pleasure colonies is bad things; they settles as senseless as a swarm of bees, just because their leader's lit there first; and when they've buzzed themselves out and moved on, like as not some sillies as has come gapin' too close is bit fatal or poisoned for life."

Well-a-day! Evan says that I take things to heart that belong to the head alone, while father says that, to his mind, feeling is much more of a need to-day than logic; so what can I do but still stumble along according to feeling.

A shout from beneath the window, then a soft snowball on it, the signal that the fort is finished,—yes, and the old Christmas tree stuck up top as a standard. Richard has built a queer-looking snow man with red knobs all over his chest and stomach, while Ian has achieved several most curious looking things—with carrot horns,—whatever are they? Father has just driven in, and is laughing heartily, and Evan is waving to me.

Calm reigns again. The fort has surrendered, the final charge having been led by "Corney" Delaney. We've had hot milk all around, father has retired to the study to decipher a complicated let-



A BEAUTIFUL Country Home—This is a one hundred acre farm, the soil is of a mixed variety, some clay loam, some gravelly loam, and some a deep black loam, such as is considered excellent celery land. The buildings are a handsome frame house, steam heated, fitted with bath, etc., there is a pretty conservatory attached, and in the sitting room is a nice fire place. The house is surrounded by a tidy lawn, hedges and trees. There is a large bank barn, also drive shed, silo, henney, pigery, and a couple of open sheds. There is twenty-four acres of orchard, one acre has been out a number of years, eleven acres out from fifteen to seventeen years, four acres five years old, eight acres set out a year ago last spring, watered by spring and wells. The location is good, on a main road about a mile from village, three and one-half acres from station, five miles from town and about forty miles from Toronto. Send for views of this property which will give you a better idea of its value. Price \$12000; \$4000 cash, balance arranged. Philip & Beaton, Whitevale, Ontario.

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ter from Aunt Lot. Evan has taken the boys into the den for a drawing lesson, and the mystery of the snow man is solved.

We do not intend to have the boys learn any regular lessons before another fall, but for the last two years I have managed that they should sit still and be occupied with something every morning, so that they may learn how to keep quiet without its being a strain,—shelling peas, cutting papers for jelly pots, stringing popcorn for the hospital Christmas tree, seeding raisins with a dozen for pay at the end—this latter is an heroic feat when it is accomplished without drawing the pay on the installment plan—and many other little tasks, varied according to season.

Ian has a quick eye and comprehension, and he is extremely color sensitive, but healthily ignorant of book learning, while Richard, how we do not know, has learned to read in a fashion of his own, not seeming yet to separate letters or words, but "swallowing the sense in lumps," as Martin puts it.

Yesterday, before our return, the weather being threatening, and the boys, keyed for mischief, clamoring and uneasy, very much as birds and animals are before a storm, father invited them to spend the afternoon with him in the study, and Martha Corkle, who mounts guard during my brief holidays, saw that their paws were scrubbed, and then relaxed her vigilance, joining Effie in the sewing-room.

After many three-cornered discussions as to what liberty was to be allowed the boys in study and den, we decided that when they learned to respect books in the handling they should be free to browse as they pleased; the curiosities, rarities, and special professional literature, being behind glass doors, could easily be protected by lock and key. Father's theory is that if you want children to love books, no barriers must be interposed from the beginning, and that being so much with us the boys will only understand what is suited to their age, and therefore the harmful will pass them by. I was never shut from the library shelves, or mysteries made about the plain-spoken literature of other days, in spite of Aunt Lot's fuming. I did not understand it, so it did not tempt, and as I look back, I realize that the book of life was spread before me wisely and gradually, father turning page after page, then passing the task to Evan, so that I never had a shock or disillusionment.

I wonder if mother had lived if I should think differently, and be more apprehensive about the boys, womanwise? I think not; for I am a sun-loving Pagan all through, really born far back in an overlooked corner of Eden, and I prefer the forceful father influence that teaches one to overcome rather than the mother cult which is to bear, for so much is cumbrously borne in self-glorified martyrdom by women of their own volition.

I know that I am very primitive in my instincts and emotions; so are the boys, and that keeps us close, or so close, together.

Of course illustrated books are now the chief attraction to them in the library, and yesterday, when father went there with the boys, he supplied Ian, as usual, with "The Uncivilized Races of Man," which always opens of itself at the Mumbo Jumbo picture, and as a great treat for Richard, took down the three quarto volumes of Audubon's "Quadrupeds," and ranged them on a low stand with a stool in front of it. Then, being tired after a hard morning's work, he drew his big leather chair near the fire, put on an extra log, and proceeded to—meditate. You will doubtless notice that when father or husband close their eyes, sitting in comfortable chairs by the fire, they are always meditating, and never sleeping, little nosey protestations to the contrary.

Father's meditations must have been long and deep, for when he was startled from them by the breaking in two of the hickory log, a gory spectacle met his eyes.

Richard was sitting on the hearth rug, which he had carefully covered with newspapers; these, as well as his hands and face, were stained a deep crimson, while with a stout silver fruit-knife he was hacking pieces from a great pulpy red mass before him.

Checking an exclamation of horror father started forward, to meet Richard's cheerful, frank gaze and the request, as he dug away persistently, to "Please wait one minute more, dranna. I've got the heart all done, that big floppy piece is lungs, an' I've most made the liver. Not the good kind that goes wif curly bacon, but a nasty one like what we wear inside."

Then spying a medical chart with colored pictures that was propped up against the wood box, father found the clew, and comprehended that Richard was giving himself a practical lesson in anatomy by trying to carve these organs from a huge mangel wurzel beet that he had rolled in from the root cellar. Did father scold him for mess-making, or laugh at his attempt that had little shape except in his own baby brain?

No, neither; he carefully closed the door against Martha's possible entrance, seriously and respectfully put the precious objects on a plate, to which he gave a place of honor on the mantel shelf, and after removing as far as possible all traces of beet from face and hands in his sacred office lavatory, he took Richard with him into the depths of the great chair and told the happy child his favorite rigmarole, all about the "three gentlemen of high degree," who do our housework for us. How the lungs, who are Siamese twins, called to the heart to pump them up some blood to air, because they were almost out of work, and how the big lazy liver lay on one side and groaned because he had drunk too much coffee for breakfast, and had a headache,—until Richard really felt that he had achieved something. So the first thing this morning he set about making a snow man, that he might put the beet vitals in their proper places, nearly convulsing father with their location. Though, as he told me, they were accurate, compared to the ideas of many trained nurses with whom he had come in contact.

But where was Ian during the beet carving? Father quite forgot him until, Richard falling asleep in his arms, he arose to tuck him up on the sofa. A sound of the slow turning of large pages guided him to the corner by the bay window where some bookcases, standing back to back, made a sort of alcove. There was Ian, flat upon his stomach, while before him the "Wandering Jew" legend, with the Dore pictures, lay open at the final scene—The Last Judgment—where the Jew, his journey over, looks up at the angels coming to greet him, while the little devils pull vainly at his tattered boots. It was not the Jew or the angels, however, that held Ian's attention, and whose outlines he was tracing with his forefinger, but the devils, one big fellow with cows' horns and wings drooping like those of a moulting crow, and a bevy of imps with young horns and curly tails who were pulling a half-buried body toward the fiery pit by its hair.

Father explained the pictures in brief, and closed the book as quickly as possible, thinking the boy might be frightened in his dreams by the demons. But no, Ian was fascinated, not frightened. He would have liked the pygmies to come and play with him, and he turned to father with a sigh, saying, "They're bully pullers, drannop. I guess if they and me pulled against Corney Delaney we could get him over the line all right," one of the boys' favorite past-times being to play tug-of-war with the goat, the rope being fastened to its horns, but Corney was always conqueror.

Neither did Ian forget the imps quickly, as some children do their impressions, but strove to model them this morning, making round snow bodies, carrot horns, corncob legs, and funny celery tails; the result being positively startling and "overmuch like witch brats," as Effie declared, with bulging eyes.

They unfortunately did not perish with the fort, for Richard doesn't like them; but are now huddled in a group under the old Christmas tree, where Lark is barking at them.

I started to record our visit to Lavinia Dorman, but my "human documents," printed on vellum, came between, and I would not miss a word they have to say for the "Mechlinia albertus Magnus," which father says is

the rarest book in the world, though Evan disputes his preference, and Martin Cortright would doubtless prefer the first edition of Denton's "New York."

In past times, when we have visited Miss Lavinia, we have been fairly meek and decorous guests, following the programme that she planned with such infinite attention to detail that free will was impossible, and we often felt like paper dolls.

We had read her lament on the death of sociability and back yards with many a smile, and a sigh also, for to one torn in the pool, every ripple that stirs it must be of importance, and it is impossible for outsiders to urge her to step out of the eddies altogether and begin anew, for New Yorkitis seems to be not only a rarely curable disease to those who have it, but an hereditary one as well.

As usual, Evan came to the rescue, as we sat in the den the night before our departure. "Let us turn tables on Miss Lavinia this time and take her to see our New York," he said, "since we are all quite tired of hers. Do you remember the time when we went to town to buy the trappings for the boys' first tree and were detained until Christmas morning by the delay of a cable I had to wait for? After dinner Christmas Eve we coaxed Miss Lavinia out with us and bought half a bushel of jolly little toys from street fakirs to take home, and then boarded an elevated train and rode about the city until after midnight, in an out the downtown streets and along the outskirts, to see all the poor people's Christmas trees in the second stories of tenements, cheap flats, and over little shops. How she enjoyed it, and said that she never dreamed that tenement people could be so happy; and she finally waxed so enthusiastic that she gave a silver half dollar each to four little newsboys crouching over the steam on a grating in Twenty-third Street, and when they cheered her and a policeman came along, we told the dear old soul that he evidently thought her a suspicious character, a counterfeiter at the very least. And she always spoke afterward with bated breath on the dangers of the streets late at night, and her narrow escape from arrest. We came to New York unseated and without responsibilities to push us, and looked from the outside in.

"No, Barbara, you did better than you knew that day six years ago, when we sat in the Somerset garden, and you persuaded me to become a commuter and let you plant a garden, promising never to talk about servants, and you've kept your word. I was dubious then, but now—if you only knew the tragedies I've seen among men of my means and aims these last few years, the struggle to be in the swim, or rather the backwater of it. The disappointment, the debt and despair, the pink teas and blue dinners given in cramped flats, the good fellows afraid to say no to wives whose hearts are set on being thought 'in it,' and the wives, haggard and hollow-eyed because the husbands wish to keep the pace by joining clubs that are supposedly the hall-marks of the millionaire. New York is the best place for doing everything in but three—to be born in, to live in, and to die in."

"So you wish us to play bachelor girl and man for a few days, and herd Miss Lavinia about, which I suppose is the pith of these heroics of yours," I said, rather astonished, for Evan seldom preaches. "I never knew that you were such an anti-whirlpooler before, and I've at times felt selfish about keeping you at the old home, though not since the boys came, it's so healthy for them, bless them. Now I feel quite relieved," and I arranged a little crisp curl that will break loose in spite of persistent wetting, for men always seem to discourage curly hair, father keeping his shorn like a prizefighter. This curl softens the rigour of Evan's horseshoe scowl, and when I fix it gives him a chance to put his arm around my waist, which is the only satisfactory way of discussing plans for a pleasure trip.

We arrived in town duly a little before dinner time. It is one of Evan's comfortable travelling habits, this always arriving at a new place at the end of day, so as to get the bearings and be adjusted when we awake next morning. To arrive in the morning, when paying a visit especially, is reversing the namiminded until lunch, sleepy, all the after-

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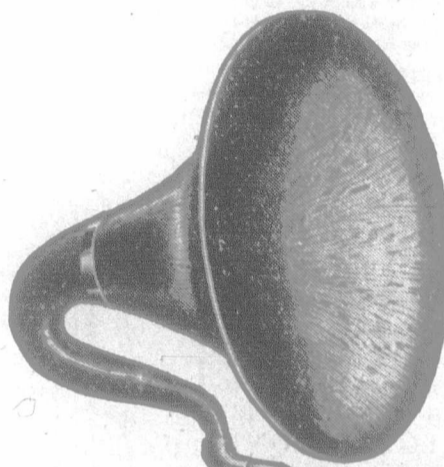
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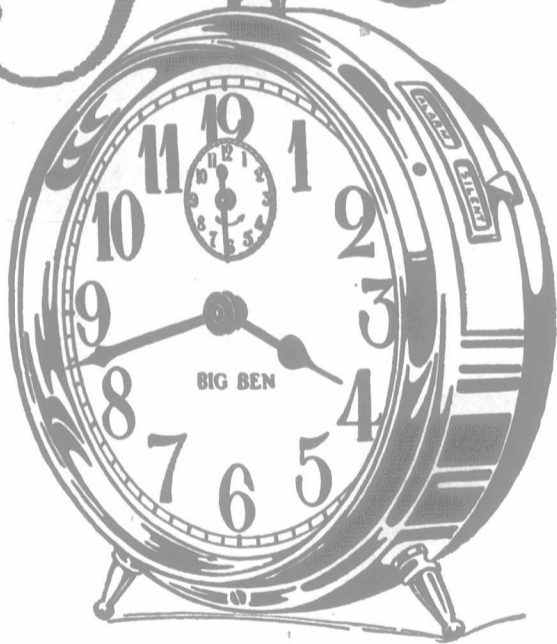
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noon, dyspeptic at dinner, when, like as not, some one you have wholly forgotten or hoped to is asked to meet you. If the theatre follows, you recuperate, but if it is cards (of which I must have a prenatal hatred, it is so intense) with the apology, "I thought you might be tired and prefer a cosey game of whist to going out," you trump your partner's tricks, lead the short suits and mix clubs and spades with equal oblivion, and, finally, going to bed, leave a bad impression behind that causes your hostess to say, strictly to herself, if she is charitable, "How Barbara has deteriorated; she used to be a good talker, but then, poor dear, living in the country is so narrowing."

Of course if you merely go away to spend the day it is different; you generally keep on the move and go home to recover from it. And how men usually hate staying in other people's houses, no matter how wide they keep their doors open or how hospitably inclined they may be themselves. They seem to be self-conscious, and are constrained to alter their ordinary habits, which makes them miserable and feel as if they had given up their free will and identity. There are only two places that I ever dream of taking Evan, and Lavinia Dorman's is one of them.

When we had made ourselves smart for dinner and joined Miss Lavinia by the fire in her tiny library, we read by her hair that she was evidently intending to stay at home that evening, for her head has its nodes like the moon. She has naturally pretty, soft wavy hair, with now and then a sliver streak running through it. I have often seen Lucy when she brushes it out at night. But because there is a dash of white in the front as if a powder puff had rested there a moment by accident, it is screwed into a little knob and covered with skilfully made yet perfectly apparent frontlets to represent the different styles of hairdressing affected by women of abundant locks.

No. 1, worn at breakfast, is the most reasonable. It is quite plain, slightly waved, and has a few stray hairs carelessly curved where it joins the forehead. No. 2, is for rainy weather; the curls are fuzzy and evidently baked in; it requires a durable veil to keep it in countenance. Evan calls it the "rasher of bacon front." No. 3, is for calling and all entertainments where the bonnet stays on; it has a baby bang edge a trifle curled and a substantial cushion atop to hold the hat pins; while No. 4, the one she wore on our arrival, is an elaborate evening toupie with a pompadour rolling over on itself and dropping slightly over one eye while it melts into a butterfly bow and handful of puffs on the crown that in turn end in a single curl behind.

We had a dainty little dinner, grape fruit, clear soup, smelts, wild duck, salad, fruit and coffee, and it was daintily served, for Miss Lavinia always keeps a good cook and remembers our dislike of the various forms of hash known as entrees.

The coffee was placed on a low mahogany stand by the library fire, and Miss Lavinia herself handed Evan a quaint little silver lamp by which to light his cigar, for she has all the cosmopolitan instincts of a woman who not only knows the world but had heard her father discuss tobacco, and really enjoyed the soothing fragrance of a good cigar.

As soon as we were settled and poor sinned Josephus had tiptoed in by the fire, evidently trying to make up for his shabby coat by the profundity of his purr, Evan set forth his scheme to our hostess. We were to lodge and breakfast with her, but after that she was to play our way, and be at our disposal morning, afternoon, and evening, at luncheon, dinner, and supper, and the game was to be the old-fashioned one of "follow the leader!"

At first Miss Lavinia hesitated regretfully, it seemed so inhospitable,—she had thought to take us to several parlor concerts. Mrs. Vanderdonk, she that was a De Leyster, was going to throw open her picture gallery for charity, which would give us an opportunity to see her new house. In fact the undertow of the Whirlpool was still pulling at her ankles, even though she had freed her head, and it seemed impossible to her that there could be any New York other than the one she knew.

Finally her almost girlish vitality asserted itself, and bargaining that we should allow her one evening to have Sylvia Latham to dinner, she surrendered.

"Then we will begin at once by going to the theatre," said Evan, jumping up and looking at the clock, which pointed a few minutes of eight.

"Have you tickets? Isn't this a little sudden?" asked Miss Lavinia with a little gasp, evidently remembering that her hair was arranged for the house only.

"No, I have no tickets, but Barbara and I always go in this way, and if we cannot get in at one place we try another, for usually some good seats are returned from the outside ticket office a few minutes before the play begins. The downtown theatres open the earliest, so we can start near by and work our way upward if necessary."

To my surprise in five minutes Miss Lavinia was ready, and we sallied forth, Evan sandwiched between us. As the old Dorman house is in the northeastern corner of what was far away Greenwich Village,—at the time the Bowerie was a blooming orchard, and is meshed in by a curious jumble of thoroughfares, that must have originally either followed the tracks of wandering cattle or worthy citizens who had lost their bearings, for Waverley Place comes to an untimely end in West Eleventh Street, and Fourth Street collides with Horatio and is headed off by Thirteenth Street before it has a chance even to catch a glimpse of the river,—a few steps brought us into Fourteenth Street, where flaming gas-jets announced that the play of "Jim Bludso" might be seen.

"Dear me!" ejaculated Miss Lavinia, "do people still go to this theatre? The last time I came here it was in the seventies to see Mrs. Rousby as Rosalind."

When we took our seats the play, founded, as the bill informed us, upon one of the Pike County Ballads, had begun, and Miss Lavinia soon became absorbed.

It is a great deal to be surrounded by an audience all thoroughly in the mood to be swayed by the emotion of the piece, plain people, perhaps, but solidly honest. Directly in front sat a young couple; the girl, in a fresh white silk waist, wore so fat and new a wedding ring upon her unglowed hand, which the man held in a tight grip, that I surmised that this trip into stageland was perhaps their humble wedding journey, from which they would return to "rooms" made ready by jubilant relatives, eat a wonderful supper, and begin life.

The next couple were not so entirely en rapport. The girl, who wore a gorgeous garnet engagement ring, also very new, merely rested her hand on her lover's coat sleeve where she could see the light play upon the stones.

When, after the first act, in answer to hearty rounds of applause, varied with whistles and shouts from the gallery, the characters stepped forward, not in the unnatural string usual in more genteel play houses, where victor and vanquished join hands and bow, but one by one, each being greeted by cheers, hisses or groans, according to the part, and when the villain appeared I found myself groaning with the rest, and though Evan laughed, I know he understood.

After it was over, as we went out into the night, Evan headed toward Sixth Avenue instead of homeward.

"May I ask where we are going now?" said Miss Lavinia, meekly. She had really enjoyed the play, and I know I heard her sniff, once or twice at the proper time, though of course I pretended not to.

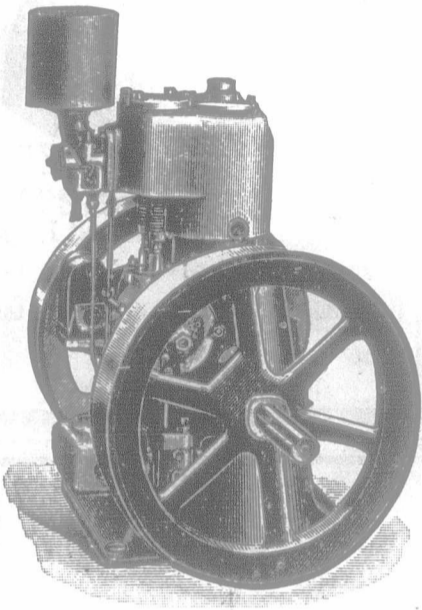
"Going?" echoed Evan. "Only around the corner to get three fries in a box, with the usual pickle and cracker trimmings, there being no restaurant close by that you would care for; then we will carry them home and have a little supper in the pantry, if your Lucy has not locked up the forks and taken the key to bed. If she has, we can use wooden toothpicks."

At first Miss Lavinia seemed to feel guilty at the idea of disturbing Lucy's immaculate pantry at such an hour, but liberty is highly infectious. She had spent the evening out without previous intent; the next step was to feel that her soul was her own on her re-

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turn. She unlocked the forks, Evan unpacked the upstairs ice-chest for the dog's head bass that wise women always have when they expect visit Englishmen, even though they are transplanted and acclimated ones, and she ate the oysters, still steaming from their original package, with great satisfaction. After we had finished Miss Lavinia bravely declared her independence of Lucy. The happy don't-care feeling produced by broiled oysters and bass on a cold night is a perfect revelation to people used to after-theatre suppers composed of complications, sticky sweets, and champagne.

When we had finished I thought for a moment that she showed a desire to conceal the invasion by washing the dishes, but she put it aside, and we all went upstairs together.

A little shopping being in order, Evan took himself off in the morning, leaving Miss Lavinia and me to prowl, after we had promised to meet him at a downtown restaurant at one.

Little boys are delightful things to shop for,—there is no matching this and that, no getting a yard too much or too little, everything is substantial and straight away, and all you have to do when the bundles are sent home by express is to strengthen the sewing on of buttons and reinforce the seats and knees of everyday pantilions from the inside.

We strolled about slowly, and at half past one were quite ready to sit still and not only eat our lunch but watch business mankind eat his. If any one wishes to feel the clutch and motive power of the Whirlpool let him go to the Mazarin any time between twelve-thirty and two o'clock. The streets themselves are surging with men, all hurrying first in one direction, then another, until it seems as if there either must be a fire somewhere, or else a riot afoot. The doors of the restaurant open and shut incessantly, corks pop, knives and forks rattle, everything is being served from a sandwich and a glass of beer to an elaborate repast with a wine to every course, while through and above it all the stress of business is felt. Of course the great financiers usually have luncheon served in their offices, to save them from the crowd; besides, it might give common humanity a chance to scrutinize their countenances, and perchance read what they thought upon some question of moment, for it sometimes seems as if the eye of the New York Journalist has X-ray power. On the other hand, the humbler grade, with less of either time or money to spare, go to the "quick lunch" counters and "dime-in-the-slot" sandwich concerns: yet Evan says that the gathering at the Mazarin is fairly representative.

Miss Lavinia was bewildered. Her downtown visits to her broker's office were always made in a cab, with Lucy to stay in it as a preventative of the driver's taking a sly glass or a thief snatching her lap-robe—she never uses public carriage rugs. She clung to the obsolete idea that Wall Street was no place for women, and saw, as in a dream, the daintily dressed stenographers, bookkeepers, and confidential clerks mingling with the trousered ranks in the street, not to mention the damsels in tidy shirtwaists, with carefully undulated hair and pointed, polished finger nails, who were lunching at near-by tables, sometimes seemingly with their employers as well as with other male or female friends.

"I wonder how much of all this is bad for uptown home life?" Miss Lavinia queried, gazing around the room; but as she did not address either of us in particular, we did not answer, as we did not know—who does?

A spare half-hour before closing time we gave to the Stock Exchange, and it was quite enough, for some one was short on something, and pandemonium reigned. As we stood on the corner of Rector Street and Broadway, hesitating whether to take surface or elevated cars, faint strains of organ music from Trinity attracted us.

"Service or choir practice; let us go in a few moments," said Evan, to whom the organ is a voice that never fails to draw.

We took seats far back, and lost ourselves among the shadows. A special service was in progress, the music half Gregorian, and the congregation was too

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scattered to mar the feeling that we had slipped suddenly out of the material world. The shadows of the sparrows outside flitted upward on the stained glass windows, until it seemed as if the great chords had broken free and taking form were trying to escape.

Now and then the door would open softly and unaccustomed figures slip in and linger in the open space behind the pews. Aliens, newly landed and wandering about in the vicinity of their water-front lodging-houses, music and a church appealed to their loneliness. Some stood, heads bowed, and some knelt in prayer and crossed themselves on leaving; one woman, lugging a great bundle tied in a blue cloth, a baby on her arm and another clinging to her skirts, put down her load, bedded the baby upon it, and began to tell her beads.

The service ended, and the people scattered, but the organist played on, and the boy choir regathered, but less formally.

"What is it?" we asked the verger, who was preparing to close the doors.

"There will be a funeral of one of the oldest members of the congregation tomorrow, and they are about to go through the music of the office."

Suddenly a rich bass voice, strong in conviction, trumpeted forth—"I am the resurrection and the life!" And only a stone's throw away jingled the money market of the western world. The temple and the table of the money changers keep step as of old. Ah, wonderful New York!

The afternoon was clear staccato and mild withal, and the sun, almost at setting, lingered above orange and dim cloud banks at the end of the vista Broadway made.

"Are you tired? Can you walk a half a dozen blocks?" asked Evan of Miss Lavinia, as we came out.

"No, quite the reverse; I think that I am electrified," she replied briskly.

"Then we will go to Battery Park," he said, turning south.

"Battery Park, where all the immigrants and roughs congregate! What an idea! We shall catch smallpox or have our pockets picked!"

"Have you ever been there?" persisted Evan.

"Yes, once, I think, when steamship passengers landed at the barge office, and of course I've seen it often in going to Staten Island to visit Cousin Lucretia."

Evan's only reply was to keep on walking. We did not cross the "bowling green," but swung to the right toward Pier 1, and took the path between old Castle Garden and the sea wall at the point where one of the fire patrol boats was resting, steam up and her nozzles pointed, lance couchant wise.

Ah, what a picture! No wonder Miss Lavinia adjusted her glasses quickly (she is blindly nearsighted), caught her breath, and clung to Evan's arm as the fresh sea breeze coming up from the Narrows wheeled her about. Before us Staten Island divided the water left and right, while between it and the Long Island shore, just leaving quarantine and dwarfing the smaller craft, an ocean liner, glistering with ice, was coming on in majestic haste. All about little tugs puffed and snorted, and freighters passed crosswise, parting the floating ice and churning it with their paddles, scarcely disturbing the gulls, that flew so close above the water that their wings touched, or floated at leisure.

The sun that had been gilding everything from masthead to floating spar gathered in its forces, and for one moment seemed to rest upon Liberty's torch, throwing the statue into clear relief, and then dropped rapidly behind the river's night-cloud bank, and presently lights began to glimmer far and near, the night breath rose from the water, and the wave-cradled gulls slept. "Do you like our New York?" asked Evan, turning to go.

"Don't speak," whispered Miss Lavinia, hanging back.

But we were no sooner on the elevated train than she had found use for her tongue, for whose feet should I stumble over on entering, quite big feet too, or rather shoes, for the size of the man, but Martin Cortright's, and of course he was duly presented to Miss Lavinia.

(To be continued.)

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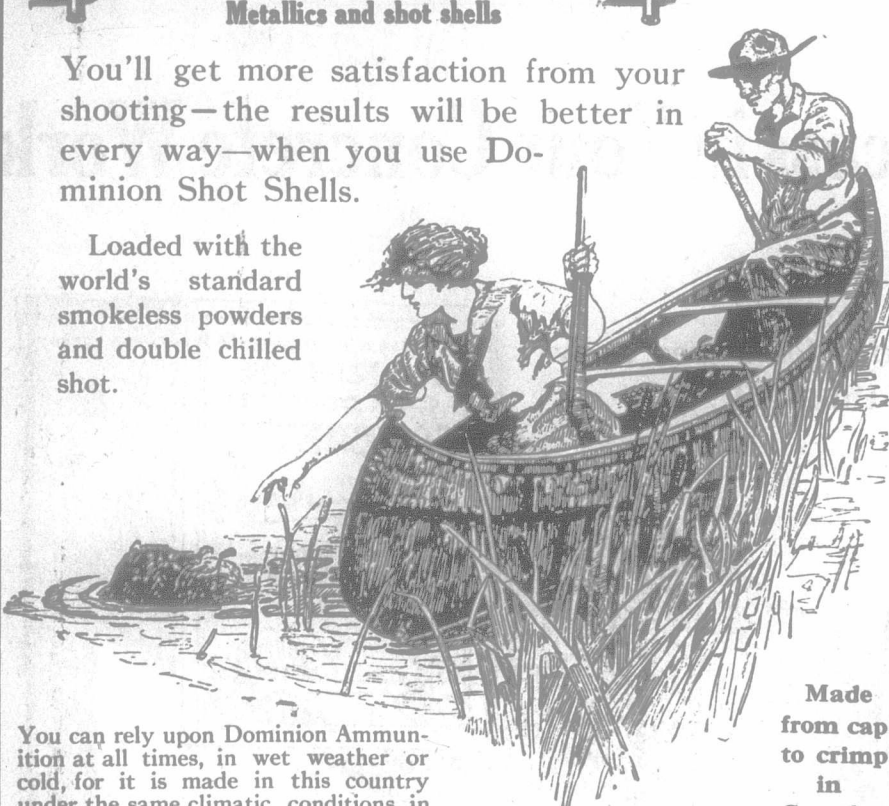
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1st.—Questions asked by bona-fide subscribers to "The Farmer's Advocate" are answered in this department free.

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.

Miscellaneous.

Plant—Lawn Mixture.

1. I am sending a flower and leaf which is in a poor state, but the best I could get. Would be pleased to know the name.

2. What is the best lawn grass? Would white clover be good? C. G.

Ans.—1. The specimen was altogether too small and badly crushed to be certain in identification. It looked like a fall aster.

2 and 3. Try a mixture of Kentucky blue grass, red top and white Dutch clover, equal parts. Sow very thickly.

Sun Spurge.

You will please find enclosed a weed which I got in my rape seed. Would like to know if it is hard to destroy; also its name. It is scattered over about six acres. D. B.

Ans.—The plant is Sun Spurge, an erect annual quite common in Eastern Canada in gardens and waste places, especially in light, sandy soils. It is not usually troublesome in cultivated land, worked under a short rotation of crops with clean cultivation. Special care is required to prevent the seed ripening. If the field is plowed and worked this fall, and crops are rotated in coming years, it is not likely to be very hard to get rid of.

Gossip.

A big Ayrshire auction is to be held on the New England Fair Grounds, Worcester, Mass., Thursday, November 13th, to close out the estate of the late Robt. Hunter, of Maxville, Ont., and Ferndale Farm, Anhurndale, Mass., consignments are being made from three other choice herds. See the advertisement in this issue, and write L. F. Herrick, Worcester, Mass., for catalogue.

SCOTTISH CLYDESDALE SALE.

At Lanark, Oct. 14th, eighteen head of Clydesdales from the stud of Robert Park, Brunstane, sold at auction for an average of £79, the top price being £294, paid by D. Adams, for the two-year-old colt, Ivanhoe of Brunstane, by Diana's Prince. A 1913 filly foal, by Baron of Buchlyvie, sold for 185 guineas. On the same day, twenty head from the stud of the late Robert Chapman, Johnston, Gartcosh, sold for an average of £139 12s., the highest price being 520 guineas, for a colt foal, also by Baron of Buchlyvie, purchased by J. Kilpatrick. A two-year-old filly, by the same sire, sold for 300 guineas, and a filly foal by Apukwa, for the same price. On the same day, at Lanark, fifteen head of mares and fillies, from the stud of A. M. Simpson, Kilbride, sold for an average of £48, the highest price being 280 guineas, for a two-year-old filly. On the last day of the Lanark sales, 320 fillies and geldings averaged £42. "Clydesdales," says the Scottish Farmer, "will soon be as dear as Shorthorn bulls. The most speculative animal that can be bought is a foal or a calf."

A DUAL PERSONAGE.

The lanky country youth entered the crossroads general store to order some groceries. He was fourteen years old, and was passing through that stage of adolescence during which a boy seems all hands and feet, and his vocal organs, rapidly developing, are wont to cause his voice to undergo sudden and involuntary changes from high treble to low bass.

In an authoritative, rumbling bass voice he demanded of the busy clerk: "Give me a can of corn." (Then his voice suddenly changing to a shrill falsetto) "and a sack of flour."

"Well, don't be in a hurry. I can't wait on both of you at once," snapped the clerk.

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PULLMAN SLEEPERS**

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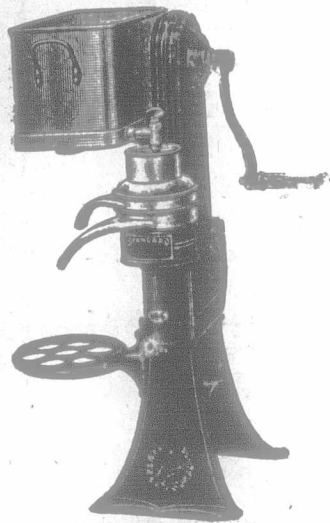
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The best and latest mill for Cleaning and Grading all kinds of Seed and Grain.

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THE TEMPLIN MFG. CO., FERGUS, ONTARIO



Where do we hide its brains?



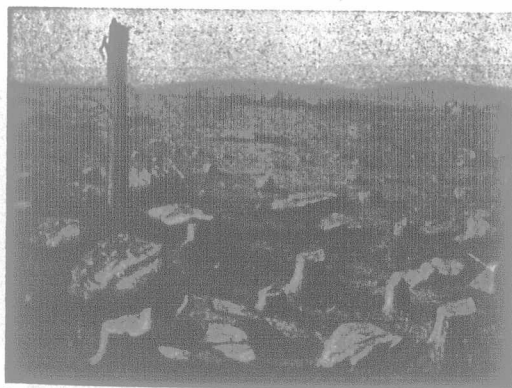
SAID a dairyman: "Where do you hide the brains of that machine?" "Why, what do you mean?" asked our surprised agent. "Well," said the dairyman, "that Standard Cream Separator of yours is such a really wonderful machine; it seems to know just what to do and how best to do it, and it does some things so much better than any other separator I ever saw, that it really seems as if it must have brains of its own."

When you come to think of it, it does seem, as that dairyman said, that the

Standard

Cream Separator must have brains of its own. For instance, think how intelligently it looks after the oiling. You never have to think about seeing if there is enough oil in the neck-bearing or any other part. The Standard attends to the oiling of every gear and bearing itself. It also keeps the discs clean by automatically depositing the foreign matter from the milk in the space between the bowl and the discs edges. And it also, automatically, brings all the gears to a stop the moment you let go of the handle. But the way it gets the cream from the milk, only allowing one-tenth of a pound of butterfat to escape in every 1,000 pounds of milk skimmed, would do credit to the best money-making brains in the land. See this "brainy" money-making machine at our agents, or write direct for catalogue and easy-payment offer.

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Sales Branches at Sussex, N. B.; Saskatoon, Sask.; Calgary, Alta.
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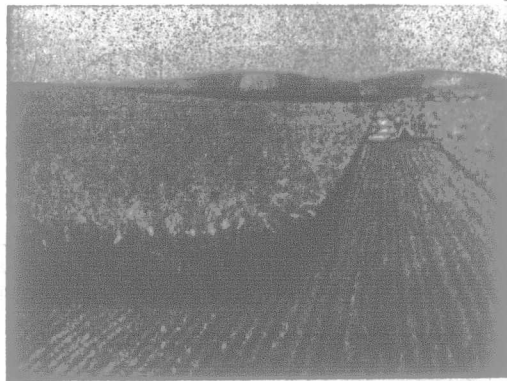
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Unproductive Field

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Write us about arranging demonstrations, also for our free booklet; it tells you how the above facts were accomplished.



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A CANADIAN KNIGHT DISTINGUISHED SERVICE ORDER COMPANION OF THE RANGE

A PASTE | THE F. DALLEY & CO. LTD. | NO DUST
NO WASTE | HAMILTON CANADA | NO RUST

Questions and Answers. Miscellaneous.

Ayrshire Calves.

Will you please tell me, through your paper, where is the best and cheapest place, nearest to this post office, where I can get pure-bred Ayrshire calves? H. B.

Ans.—We can only refer you to our advertising columns.

Luxation of the Patella.

I have a colt one year and a half old which has had something the matter with his stifle ever since foaled. He seems to be all right when he walks, but when he starts to trot he drags that leg. There is a soft lump on stifle the size of a goose egg. The colt is healthy. Could I do anything to cure that? G. L. O.

Ans.—The trouble is luxation of the patella. Seeing that the colt had the trouble when dropped, the trouble may not yield to treatment. However, tie the colt so he cannot bite the parts. Clip the hair off around the swelling, and blister with two drams each of biniodide of mercury and cantharides, mixed with two ounces vasoline. Rub well with the blister once daily for two days. On the third day wash off and apply sweet oil. Let loose now and oil every day until the scale comes off. Repeat if necessary.

Gossip.

Barber Bros., of Gatineau Point, Que., sailed for Scotland on the 23rd of October for their annual importation of Clydesdales. In a letter received from Mr. Barber, he assures us that his selection will be as good as money can buy, and judging from the superior character and quality of the many past importations made by this firm, we look for something real good when Mr. Barber returns. Parties interested will be consulting their own interests by watching these columns for the review of this lot when they arrive.

E. H. Dollar, of Heuvelton, N. Y., in changing his advertisement in these columns, reports the sale from his "Fairview Farms," of one of the best sons of Pontiac Korndyke, to D. E. Summers, Winchester, Ont. He is out of a two-year-old heifer with a record of 19.82 lbs. of butter in seven days, averaging 4.9 per cent. fat. The sons of Pontiac Korndyke are proving great sires. One of them is the sire of the world's-record cow, K. P. Pontiac Lass, and another is the sire of the Canadian-record cow, Brookdale Korndyke Netherland. Collier V. Robbins, of Riverbend, Ont., took another son of this great sire, and out of a three-year-old heifer with a record of 20.87 lbs. of butter in seven days, averaging 4 per cent. fat. A large number of Holstein breeders in Canada have selected herd-headers from "Fairview Farms" in the past, and Mr. Dollar always has something good to offer. See his advertisement.

During the three days of Shorthorn sales in Northern Scotland, over 400 head were disposed of for a wonderful total of fully £31,000. Shorthorn breeding obviously is a prosperous business in Scotland, and great enthusiasm was shown at the sales by a large and representative company of breeders from all parts of the country. Foreign and Colonial buyers were present in large numbers, and helped the bidding considerably. For the first time in the history of the Collynie sales, the bull calves were sold after having undergone the tuberculin test. The female stock at Newton has always been of a very high standard, and it is interesting to know that ten Clippers realized £2,698. An analysis of the sale list of the females brings out the following record of average prices for some of the leading families disposed of at Newton: Ten Clippers averaged £269 8s. 1d.; two Secrets, £257 5s. 1d.; three Newton Jealousys, £194 5s.; four Nonpareils, £191 12s.; two Lavenders, £178 10s.; three Augustas, £162 15s.; four Newton Mollys, £148 11s. 6d.; two Countesses, £136 10s.; five Butterflies, £128 10s. 4d.; three Princess Royals, £91 13s. 4d.; and four Brawith Buds, £70 6s. 9d.

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We teach you by mail to stuff and mount all kinds of birds, animals, game heads, etc. Be your own taxidermist. Decorate your home with beautiful trophies or make big money doing taxidermy work for others. Go in business yourself—clear \$30-\$50 a month during spare time. **\$2000 a Year** Yes, \$2000 is an everyday occurrence. You can now learn the art of taxidermy easily, quickly and perfectly right in your home during your spare time, by mail. **Write Today** for our great, new, free book. We will send you full particulars of our wonderful offer. Don't delay. Write today. Northwestern School of Taxidermy 5638 Elwood Bldg. Omaha



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The Greener Single Barrel Hammerless is an ideal gun for trap shooting, well balanced, ventilated rib, large grip, 30- or 32-inch barrel. Guaranteed to throw 75% patterns. Price, delivered Montreal

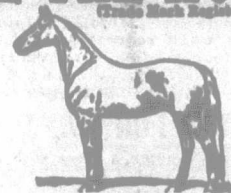
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THE LAME HORSE is never cured whose owner reads and doubts—**BUT FAILS TO ACT**—Here is a case in point—And what happened to this subscriber is taking place with thousands.

Letter No. 1. Orleans, Vermont, April 26, 1912. Troy Chemical Co. Binghamton, N. Y.—Your adv. has given me courage to try again. I have a valuable pacer. Two years ago he went lame. I tried every remedy, and doctors have blistered three times for spavin and twice hip. The symptoms are—etc., etc. I determined to see what you think. **HALE MASON.**

Letter No. 2. Orleans, Vt., May 2, 1912.—I received your letter and book yesterday, and believe you are right about its being a bone spavin. I was so encouraged I drove eight miles and bought a bottle of Fred D. Pierce, druggist at Barton, and will closely follow your special instructions. Thanking you for your quick reply to my first letter, I remain, **HALE MASON.**

Letter No. 3. Orleans, Vt., Oct. 2, 1912.—Perhaps you expected to hear from me before, but I have been waiting to see if any trouble would return after stopping the treatment. I am pleased to say the horse is well. I cannot thank you enough for your interest and the advice you gave. If I had known about it two years ago it would have saved me a lot of money. Yours respectfully, **HALE MASON.**

Save-The-Horse has stood alone and unique among veterinary remedies for over 17 years.

Every bottle of Save-The-Horse is sold with an ironclad contract that has \$60,000 paid-up capital back of it, guaranteeing to permanently cure or refund the money; no matter whether it is Bone or Bog Spavin, Tendon disease or Puffs—nor how aged, serious or complicated the lameness or blemish may be.

But write, describe your case, and we will send our—**BOOK**—sample contract, letters from breeders and business men the world over, on every kind of case and advice—all free (to horse owners and managers).

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can be cured, not merely of the habit, but of its cause. The Arnott Institute has permanently restored natural speech to thousands—is doing it to-day. Write for full information and references to:

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N. Hallman, Manager, 4 years with John Hallman; E. J. Lager, 11 years with John Hallman; J. L. Jewell, Buyer, 6 years with John Hallman; G. Hagen, Secy., 7 years with John Hallman.

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Exporters of Pedigree live stock of all descriptions. Illustrated catalogues and highest references on application. We are doing a very large business in draft horses of all breeds, but especially Percherons, and we are offering unsurpassed values. All over the world there is a shortage of wool and mutton sheep will go higher, and we solicit orders for show flocks. Our prices on big bunches of field sheep will surprise you.

DR. BELL'S Veterinary Medical Wonder. 10,000 \$1.00 bottles FREE to horsemen who will give The Wonder a fair trial. Guaranteed to cure Inflammation, Colic, Coughs, Colds, Distemper, Fevers, etc. Agents wanted. **Dr. Bell V. S., Kingston, Ont.**

Questions and Answers. Miscellaneous.

Wart.
I have a heifer coming two years old. Would you advise me, through your valuable paper, what to do, as she had a wart come on the inside of her ear. It is growing quite large, and seems to be spreading all over inside of ear?

M. J. L.

Ans.—Repeated applications of castor oil sometimes are effective in removing warts, but we would try applying a little butter of antimony with a feather. Be careful not to get any of it on the surrounding tissue.

Colt Lame.
Spring foal is lame in hind leg. When moving he makes a clicking sound.

SUBSCRIBER.

Ans.—This is luxation of the patella, commonly called stifled. Tie so he cannot bite the parts. Clip off the hair from the parts, and rub well with a blister composed of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces of vaseline, once daily for two days. On the third day wash off and apply sweet oil. Let loose now, and oil daily until the scale comes off. Repeat in a month if necessary.

Fistula—Abortion.
1. Clydesdale mare contracted fistula in 1912, running in field with foal. My veterinarian treated her for two months or more and cured her. Has not been worked since spring of 1912. Would it be safe to keep her to work and breed, or is the fistula liable to come back on her again?

2. Clydesdale mare raised two colts; next two came: one at 9½ months, and lived one day, and the other at 10 months; it was dead. She was not over-worked. Had no foal this year, but is with foal now. Would it be safe to keep her? Would she be liable to drop next foal too soon? Give cause and remedy, if any.

J. M.

Ans.—1. Fistula is always caused by injury. If a complete cure has been effected, the mare should be all right to work and to breed.

2. No one can tell whether or not this mare will raise the colt she now carries. Abortion sometimes becomes a habit. Give her good care, the best feed, give bran and roots, clean, well-cured hay, regular and sufficient exercise, and watch her carefully for signs of abortion.

Property in Bees.
A owns and lives on a farm on which there is a bush. B locates a tree on it containing bees. B cuts said tree and takes honey without telling A that he found it, and without asking A's permission to cut the tree. A claims that he had discovered the tree before B, but, if so, he had no mark on or around the tree to indicate that he had found it. A threatens to prosecute B.

1. Now, as I understand the law, all A can do is to make B pay a fair value for the tree, which will give B the ownership of the tree to do as he pleases with. Am I right?

2. Or can A prosecute B for trespassing on his (A's) property, while he (B) was hunting or cutting tree, B doing absolutely no harm or injury to any of A's property, other than the tree, while doing so?

3. If A has to give B the tree after B pays him, can B compel A to let him trespass and make a road on his (A's) property for the purpose of removing tree?

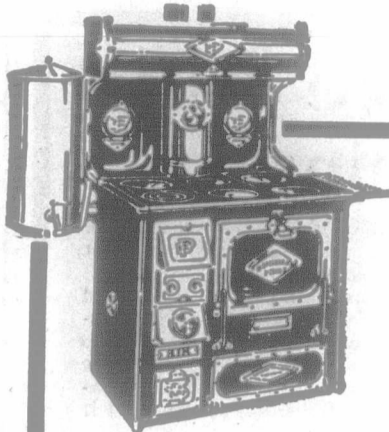
4. Would the fact that A had found the tree before B alter the case any?
Ontario. QUANDARY.

Ans.—1. We do not think that you are right; and we would refer you to Chapter 48, of the Ontario Statutes of 1910, for the legislation on the subject.

2. Assuming that A was the true discoverer, we are inclined to think that A could reasonably prosecute B for trespass.

3. We do not see how B could possibly become legally entitled to remove the tree itself in any way, otherwise than by agreement with A.

4. It is the most important point in the whole matter.



WE PAY THE FREIGHT.

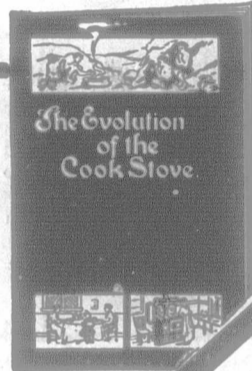
At the Factory Price

Buying at the factory will land this range at your station freight prepaid for \$20.00 less than the next best stove on the market. You pocket the dealer's profit—about 30 per cent.—get a beautiful steel and malleable iron range built to last a lifetime. And what's more you save money every month on your fuel bill.

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NEW ENGLAND FAIR GROUNDS, WORCESTER, MASS.
Thursday, November 13, 1913
Closing out the estate of late
Robert Hunter, Maxville, Ont., and Ferndale Farm, Auburndale, Mass.
Consignments from
MRS. F. D. ERHARDT, WEST BERLIN, VT.
E. J. FLETCHER, GREENFIELD, N. H.
J. B. WILBUR, MANCHESTER, VT.
For catalogue address L. F. Herrick, Worcester, Mass.

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My 1913 importation from France and Scotland are now in my stables. If you want the best in Percheron, Clydesdale and Shire stallions and fillies, come and see my offering; 30 head to select from. Also Hackneys and French Coach stallions. I have all ages of best breeding and highest quality, and the prices are low.

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CLYDESDALES, Imported and Canadian-bred
With over 25 head to select from, I can supply, in either imported or Canadian-bred, brood mares, fillies, stallions and colts. Let me know your wants.

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To the Clydesdale men of Canada we wish to say our 1913 importation is home, and we have some of the best show material in this country. More size, more style, more quality, more character and better breeding than ever before, in both stallions and fillies.

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I have just landed a big importation of Clydesdales and Percherons, if you want a big ton stallion with the best of quality come and see me, I can show you the best lot of stallions and fillies you ever saw.

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When in want of a high-class Clydesdale stallion or filly, or something that has won and can win again in Hackney stallions or fillies, visit our barns at Hudson Heights, Que.

T. B. MACAULAY, Proprietor E. WATSON, Manager, Hudson Heights, Que.

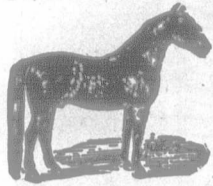
IMPORTED CLYDESDALES
A few choice young stallions always on hand and for sale. Frequent importations maintain a high standard. Prices and terms to suit.

BARBER BROS., Carleton Pt., Que., near Ottawa.

CLYDESDALES, IMPORTED STALLIONS AND FILLIES
In the modern Clydesdale there must be, big size, draft character, quality at the ground, and straight clean action. Come and see what I have with the above requisites in both Stallions and Fillies, also one French Coach Stallion.

JAMES TORRANCE, MARKHAM, ONT., G.T.R., LOCUST HILL, C.P.R.

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GOMBAULT'S
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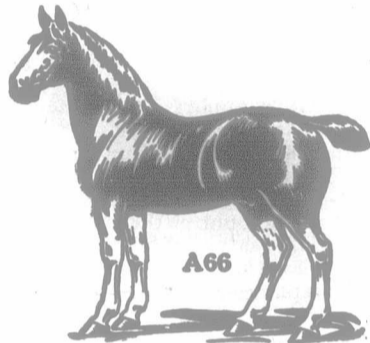


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The safest, Best BLISTER ever used. Takes the place of all liniments for mild or severe action. Removes all Bunches or Blemishes from Horses and Cattle. SUPERSEDES ALL CAUSTIC OR FILING. Impossible to produce scar or blemish. Every bottle sold is warranted to give satisfaction. Price \$1.50 per bottle. Sold by druggists, or sent by express, charges paid, with full directions for its use. Send for descriptive circulars.
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Make Your Lame Horse
Sound, Like This

You Can Do It While He Works.

We want to show you that there isn't any affection that causes lameness in horses that can't be cured, no matter of how long standing. We want to send you our instructive book, "Horse Sense" No. 2.



It describes all. And with the book we want to send you an expert's diagnosis of your horse's lameness. All this is absolutely free. Simply mark the spot where swelling or lameness occurs on picture of horse, clip out and send to us telling how it affects the gait, how long animal has been lame and its age.

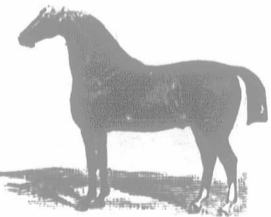
We absolutely guarantee Mack's \$1,000 Spavin Remedy to cure Spavin, Bone or Bog Spavin, Curb, Splint, Ringbone, Thoroughpin, Sprung Knee, Shoe Bole, Wind Puff, Weak, Sprained and Ruptured Tendons, Sweeny, Shoulder or Hip Lameness and every form of lameness affecting the horse. We have deposited One Thousand Dollars in the bank to back up our guarantee. Cures while he works. No scars, no blemish, no loss of hair.

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Price \$2.50 per bottle and worth it. Address: McKellar Drug Co., Binghamton, N. Y. LYMAN BROS. CO., LTD., TORONTO, ONT. Distributors to Drug Trade.

DR. PAGE'S ENGLISH
SPAVIN CURE

For the cure of Spavins, Ringbone, Curbs, Splints, Windgalls, Capped Hocks, Strains or Bruises, Thick Neck from Distemper, Ringworm on cattle, and to remove all unnatural enlargements.



This preparation, unlike others, acts by absorbing rather than blistering. This is the only preparation in the world guaranteed to kill a Ringbone or any Spavin, or money refunded, and will not kill the hair. Manufactured by Dr. Frederick A. Page & Son, 7 and 9 Yorkshire Road, London, E.C. Mailed to any address upon receipt of price \$1.00.—Canadian agents:

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Commission Agent and Interpreter,
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Will meet importers at any port in France or Belgium and assist them to buy Percherons, Belgians, French Coach horses. All information about shipping, banking, and pedigrees. Many years' experience; best references; Correspondence solicited. P.S.—Nogent is in the heart of the Perche horse district.

Shires and Shorthorns

In Shire stallions and fillies from the best studs in England we are offering some rare animals at rare prices. Scotch Shorthorns of either sex or age of highest breeding and quality. John Gardhouse & Son, Highfield, Ont. L-D 'phone.

Gossip.

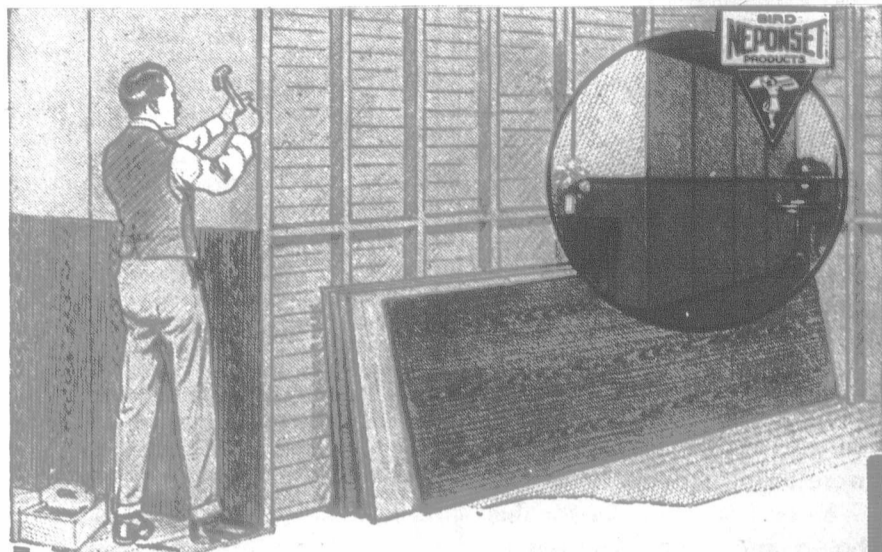
The Panama-Pacific Exposition, to be held at San Francisco in 1915, will cover 635 acres, and will have a frontage on San Francisco Bay of two miles.

HILTON FARM HOLSTEINS AND TAMWORTHS.

Under Government official testing for the R. O. P., the splendid Holstein herd of R. O. Morrow & Son, of Hilton, Ont., on ordinary feeding, with ordinary care, and with morning and evening milking on y, have made the remarkable records of 17,000 lbs. for adults; 12,000 lbs. for three-year-olds, and 10,000 lbs. for two-year-olds. Again, at the big dairy-cow show in Peterboro, in the dairy test, they won first in mature-cow class and second in two-year-old heifer class. This is certainly a wonderful showing for this herd, and worth particular notice for anyone wanting breeding stock. On their sire's side the breeding has been on official-record lines for many years, as richly-bred bulls have always been in use. The young things are the get of Riverside Johanna Wayne, whose four nearest dams have records averaging 22½ lbs. in seven days. For sale are a number of heifers and four young bulls, two of them yearlings, and two six months of age, got by the above bull, and out of R. O. P. dams. In Tamworths, for sale, are sows of breeding age and younger, and two-months-old boars, all from prize-winning sires and dams, bred from imported stock.

A CHOICE LOT OF SHORTHORNS AT KYLE BROS.

The seventy-five head of Scotch Shorthorns that go to make up the herd of Kyle Bros, at Ayr, Ont., will certainly be a surprise to any Shorthorn admirer that visits the herd without any previous acquaintance with it, or knowledge of the essentially high-class character of the herd as a whole. The splendid uniformity of modern type, the heavy fleshing and nice, level lines, so conspicuous all through the herd, are due to years of systematic breeding along the best-known breed lines, and to a thorough and persistent culling of all not reaching the high standard of ideal in vogue ever since the foundation of the herd a decade ago. Imported and Canadian-bred, their blood lines are all that has made the modern Shorthorn the most perfect and beautiful of all the bovine tribe, and on their sire's side the vast majority of them are the get of the great Bapton Chancellor (Imp.), the Toronto junior champion; Imp. Clipper Chief, the present great and successful stock bull and sire, Imp. Newton Ringleader. The last named, now at the head of the herd, is fast making a name for himself as one of the great sires in the breed's Canadian history. High-class show form is much in evidence in many of his get, and he is yet scarcely at his best. Assisting him in service is the roan two-year-old, Nonpareil Ramsden, a son of Imp. Nonpareil Archer, and an imported Miss Ramsden dam. This fall, at Toronto, in only moderate field condition, in a class of seven, he stood in the middle, three on each side. Another year, properly fitted, as he will be, it will certainly take something sensational to beat him. Very many Toronto, London and Ottawa prizewinners have been bred in this herd, but never in the herd's history has it contained so choice a lot of young things, both heifers and young bulls, as now, sons and daughters of Imp. Newton Ringleader, and Imp. Scottish Pride (who we forgot to mention when speaking of the sires in use). Individual mention among so many good ones cannot be attempted. Toronto and Ottawa winners this year included many firsts, and the Ottawa championship for best female any age, and junior bull championship at Toronto. Eight of these young things were exhibited, and seven of them were in the money, besides winning second place for three the get of one sire, an honor that added to the fame of Imp. Newton Ringleader. This is the quality of young bulls and heifers that the Messrs. Kyle are offering for this season's trade. First-, second-, and third-prize winners, and champions in both bulls and heifers. Already buyers are scouring the country, and the tardy buyer may have to take the poorer ones.



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Building Papers If NEPONSET Waterproof Building Papers are built into walls and floors, the building will be warmer, will cost less to heat and will last years longer. Recommended by architects, engineers and building owners everywhere.

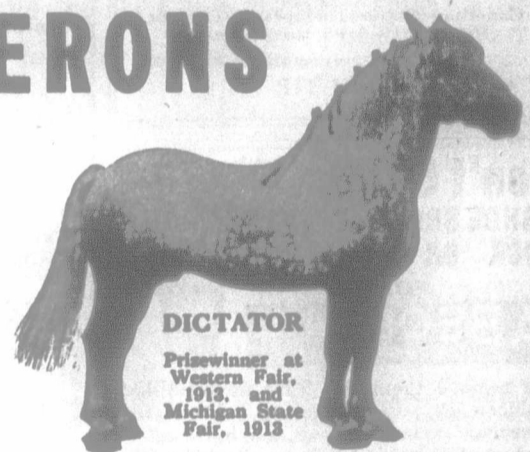
Wall Board NEPONSET Wall Board is a scientific product which takes the place of lath and plaster; comes in sheets 32 inches wide. Remember, it is the only wall board with waterproof surfaces that requires no further decoration. Anyone can put it up.

Are you going to build? Write for more facts about the products in which you are interested. Send for samples, free booklet and name of nearest NEPONSET dealer.

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Stallions two years old and over, dapple greys and blacks, 1,800 to 2,100. Stallions that are breeders. Stallions with style and action. Stallions that you can get business with. Mares that are breeders, for they have all raised colts and are now in foal to the best horses.



DICTATOR

Prisewinner at Western Fair, 1913, and Michigan State Fair, 1913

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F. J. Sullivan, Windsor, Ontario

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WE have again landed at our stables a large and choice collection of Clyde Stallions and Fillies of strictly high-class show calibre. We never had a lot that measured up to the standard of this lot, big, flashy quality; close, straight action and bred in the purple. We can supply winners in any company. Write us.

SMITH & RICHARDSON - Columbus P.O.
 Brooklyn, G. T. R.; Myrtle, C. P. R. L-D 'phone,

Imp. CLYDESDALES, PERCHERONS Imp.

I sold more horses last year than any other Canadian importer. Why? because I had a bigger and better selection than any other man in the business and my prices and terms are the best obtainable. This year I have 80 head to choose from and their breeding, size, quality, character and action are at the top of all others, Clydesdales, and Percherons, stallions and fillies.

T. H. HASSARD - Markham, G.T.R., Locust Hill, C.P.R.

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Your horse need not be kept in the stable one hour on account of icy roads, if you use

Red Tip Calks

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will remove them and leave no blemishes. Reduces any puff or swelling. Does not blister or remove the hair, and horse can be worked. \$2 a bottle delivered. Book 6 K free.

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Aberdeen-Angus of Show Form and Quality. For this season my offering in young bulls and heifers, are toppers, every one. Show-ring form and quality and bred from show-winners. T. B. BROAD-FOOT, Fergus, Ont., G.T.R. and C.P.R.

Questions and Answers. Veterinary.

Melanotic Tumors.

Gray mare has a lump about the size of a goose egg on each side of her head, one just under the ear, and the other further back. They are not sore.

G. N.

Ans.—These are melanotic tumors, which are not uncommon in gray horses. They will probably do no harm unless they become quite large. They can be dissected out by a veterinarian, but on account of the blood-vessel of the part, it would be very dangerous for an amateur to attempt to operate.

V.

Bursal Enlargements.

I have done some driving with a two-year-old filly. About two months ago a swelling like a wind-gall appeared at fetlock joint. It has increased to the size of a hen's egg, and is quite hard. She is a little lame.

R. C.

Ans.—Give her a few months' rest, and blister the joint once every month. Get a blister made of 2 drams each of biniodide of mercury and cantharides, mixed with 2 ounces vaseline. Clip the hair off. Tie so that she cannot bite the part. Rub well with the blister once daily for two days. On the third day apply sweet oil, and let her loose in a box stall. Oil every day until the scale all comes off.

V.

Miscellaneous.

Mating Turkeys.

Would it be advisable to keep the same breeding of turkeys and gobbler three years in succession? I have them two years now.

W. M. G.

Ans.—Provided they have been good breeders, and are healthy and hearty, old birds generally give better results than young ones.

Stabling Queries.

1. How rich should cement be mixed for stable floors?

2. Are cinders satisfactory for grading under concrete? Is it advisable to have a gutter for cattle, also for horses, and if so, how far from manger, and how deep, and also how much slope should floor have?

SUBSCRIBER.

Ans.—1. About one to seven.
2. Broken stones or good gravel would be preferable. A gutter is advisable. Stalls are built different lengths. Horse stalls should be from eight to nine feet, and cattle stalls from 4½ feet to 5½ feet, or where large cows are stabled, 5 feet 9 inches.

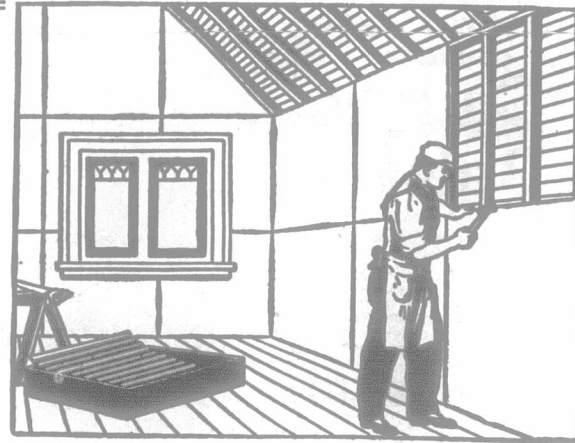
The Right Karakule.

The production of Persian lamb, that lustrous, tightly-curled fur so much in demand for winter caps, has been for generations monopolized by the herdsmen of Bokhara, Southern Russia, Persia, and Afghanistan. Now, an American investigator claims to have imported into the United States, Karakule sheep, which he hopes will enable Americans to produce the much-prized fur themselves.

According to the investigator, there are several varieties of the Karakule sheep, some of them having a considerable admixture of an Afghan fine-wool strain, which is very objectionable. A close examination of these will reveal an underlayer of short, dull, fine wool, concealed beneath the long, lustrous, coarse outside covering. If animals of this type are imported for Karakule sheep breeding, the result will be a failure.

The right kind of sheep, from which the genuine Persian lamb is produced, are the Arabi and the Doozhai. These are closely related but the latter is larger. The investigator affirms that his experiments have proved that by crossing a good ram of one of these breeds with a ewe of some long-wool common variety, such as the Lincoln, lambs can be obtained with a more lustrous and more tightly curled fur than if both sire and dam were Karakules of an inferior kind.

Canadians will be interested in these experiments, particularly as it is reported that there is some prospect of the new industry being established in Prince Edward Island, with headquarters at Charlottetown. It will be interesting to see if the Island Province will still further augment its resources by adding the production of Persian lamb to its already famous silver foxes.—Conservation.



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Bishopric Wall Board goes on DRY, so that you can move into the house the day it is finished, without weeks of waiting for it to set and dry.

On account of the lath (and Bishopric is the only Wall Board made with lath) it makes a flat, rigid, substantial wall. On account of the patented Asphalt-Mastic it makes a moisture-proof, rat- and vermin-proof, fire-resisting wall, warm in winter and cool in summer. On account of the surface of sized fibre-board it makes a wall that is easily painted or papered.

The first cost of Bishopric Wall Board is less than that of lath and plaster—it never falls off, so costs nothing for repairs—and it saves on the fuel bills every winter.

If you are building or remodelling, write us—a post card will do—it will bring you information of real dollars-and-cents value. Address Dept. "L."

Working Plan for Bishopric Model Home—Send six cents to cover cost of mailing to our office in Ottawa, and we will send you architectural plan for building, etc.

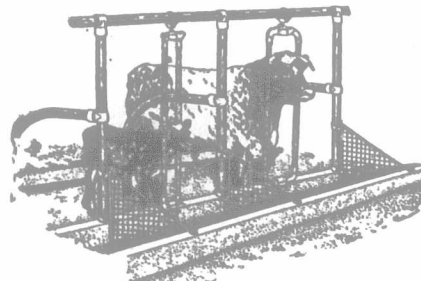
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SUPERIOR BARN EQUIPMENT CO., Fergus, Ontario



Canada's Champion Herefords When selecting a herd header or foundation stock come to Canada. I have always both sexes for sale.

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We have females of all ages and of the best Scotch families for sale. Those interested should come and see us. Correspondence invited.
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We have for sale, Scotch- and English-bred Shorthorns. A few bulls of improved breed in on big milking lines; also other pure Scotch and heifers of both breed lines.

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SHORTHORNS

material of either bulls or females.

of breeding, style and quality. If in want of an extra choice herd header, carrying the best blood of the breed, or a limited number of right nice yearling heifers, write us; we can supply show
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MEADOW LAWN SHORTHORNS OF RICHEST AND MOST FASHION-ABLE SCOTCH BREEDING, and of high-class type and condition. I can supply young bulls and heifers—Cherets, Roan Ladys, M.Breds, Stamfords, etc. L.-D.-Phone
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8 head from 10 to 18 months bred from cows which are from imported dams and sired by choicely bred bulls, prices are not high as I need the space for stabling cattle.
Shropshire and Cotswold ewes bred to imported rams.
BLAIRGOWRIE FARM JOHN MILLER, Jr. ASHBURN, ONT.

Bog Spavin

Cure the lameness and remove the bunch without scarring the horse—have the part looking just as it did before the bluish came.

Fleming's Spavin Cure (Liquid) is a special remedy for soft and semi-solid bluish—Bog Spavin, Thoroughpin, Splint, Curb, Capped Lock, etc. It is neither a liniment nor a simple blister, but a remedy unlike any other—doesn't irritate and can't be mistaken. Easy to use, only a little required, and your money back if it ever fails.

Fleming's Vest-Pocket Veterinary Adviser describes and illustrates all kinds of bluish, and gives you the information you ought to have before ordering or buying any kind of a remedy. Mailed free if you write.

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WOODWARD BASINS

will give your stock a drink before they feed and keep fresh water before them all the time.

Do not take a substitute; insist on the Woodward. They cost no more, but they are better.

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Shorthorns

Fourteen good young bulls, from 6 to 12 months old, and a number of females. Would appreciate your enquiry for same

H. CARGILL & SON, Cargill, Ontario

Shorthorns, Cotswolds, Berkshires

In Shorthorns an offering cows and heifers and calves of either sex. In Cotswolds have ram and ewe lambs and breeding ewes for sale. In Berkshires have a nice lot ready to ship.

CHAS. E. BONNYCASTLE,
P. O. and Station, Campbellford, Ontario.

Oakland—42 Shorthorns

Here is a herd of breeders and milkers. Only one young bull left ready to go, and he is a good one. We also offer our two stock bulls, #72692 and #81845. Write your wants. Price sells.

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1854 MAPLE LODGE STOCK FARM 1913

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I have a most excellent lot of young rams for sale mostly sired by imported Connaught Royal something very choice in young bulls. House one mile from Lucan Crossing, G. T. Ry.

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Spring Valley Shorthorns

A few of the best young bull prospects we ever had. They will please you. Will sell females too. Visit the herd; we think we can suit you. Particulars on application.

KYLE BROS., R. R. No. 1, Drumbo, Ont.

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Three yearling bulls, four big, thick heifers and young cows of choicest breeding, due to freshen soon; all at prices that will surprise you.

Stewart M. Graham, Lindsay, Ont.

Spruce Lodge Shorthorns & Leicesters

Present offerings: young cows and heifers in calf from good milking families. Also a choice lot of Leicester rams and ewes of all ages.

W. A. Douglas, R. R. No. 2, Caledonia, Ont

CEDARDALE SHORTHORNS

All bulls sold out some time ago, but have still several fine heifers and good cows for sale of rare value, Scotch-bred and of good individual type. Heifers in calf and being bred to our superior stock bull. **DR. T. S. SPROULE, Markdale, Ont.**

Shorthorns and Swine

—Have some choice young bulls for sale; also cows and heifers of show material, some with calves at foot. Also choice Yorkshire sows.

ANDREW GROFF, R.R. No. 1, Elora, Ontario

Gossip.

MINSTER HOLSTEINS AND YORKSHIRES.

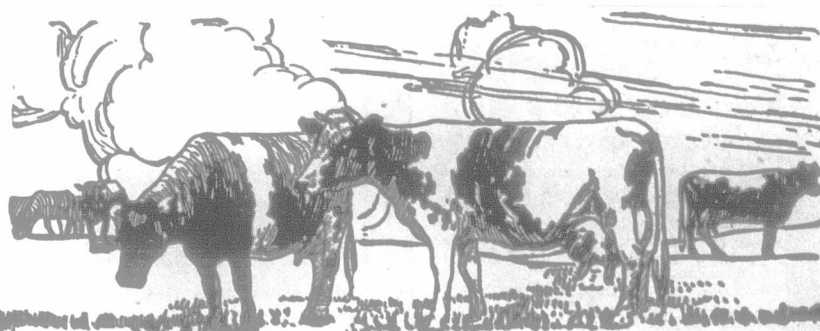
Annual R. O. P. official testing has demonstrated the persistency and producing ability of the noted Minster Holstein herd of R. Honey & Sons, of Brickley, Ont. Practically all of the herd in milk are now in the official records, ranging in production from 14,753 lbs. for four-year-olds, to 9,151 lbs. for junior two-year-olds. All of the herd of to-day are young, and many of them are daughters of Lakeview Burke Fayne, a nephew in blood to the ex-world's champion, Grace Fayne 2nd's Homestead. Younger ones are by Triumph Vestra, whose several nearest dams gave 100 lbs. and over of milk in one day. Now in use is Ourvilla Sir Abbecker, whose four nearest dams have records averaging 26.43 lbs. From such breeding as this, for sale, are young females and several young bulls. Among them are several winners at local shows; a superior lot. In Yorkshires are some particularly nice young sows of breeding age. Write Mr. Honey.

SHORTHORNS, COTSWOLDS, AND BERKSHIRES.

C. A. Bonnycastle, of Campbellford, Ont., as a breeder of Shorthorn cattle, Cotswold sheep, and Berkshire swine, is well known all over this country. Stock bred on his farm, and particularly Shorthorns, have been distributed to widely separated districts, from one end of the country to the other, for very many years, and a proof of the universal satisfaction they have given their purchasers, is found in the repeat orders continually coming in. Forty-two head now constitutes the herd the majority of them of the milking Anchovy tribe, probably one of the best all-around, general-purpose tribes in existence. Others are daughters and granddaughters of Imp. Nonpareil Countess 2nd, and still others are Miss Ramsdens. The present stock bull is the Clementina-bred Woodholm Victor #8064, by Imp. Dorothy's King, dam Clementina Princess 5th, by Imp. Brilliant Star. Preceding him was the Stamford bull, Nonpareil Stamford 74525. For sale are six two-year-old heifers, and several yearlings. A snap for someone wanting Shorthorns to go on and make them money. Also five young bulls, seven and eight months of age. The offering in Cotswolds consists of ram lambs, sh arling ewes, and ewe lambs, an offering that will please intending purchasers, as they are a big, growthy lot, and well covered. In Berkshires, there are young stock of both sexes. Write Mr. Bonnycastle your wants.

PERCHERONS, HOLSTEINS, AND POULTRY, AT BEAVER CREEK STOCK FARM.

In the County of Lincoln, about five miles from Smithville Station, on the T., H. & B. railway, is Beaver Creek Stock Farm, the property of Albert Mittlefehldt, breeder of Percheron horses and Holstein cattle; also Buff Orpington poultry. In Percherons, all the breeding stock are imported, among which are the two great brood mares, Glancine (imp.) #0665, a black, by Manretout, and Galipette (imp.) #0664, a gray, by Colonel. Out of the former, for sale, is a black four-year-old stallion, by Distingue (imp.). This colt is possessed of exceptional draft character, and his underpinning is strong and of good quality. He will make considerably over the ton when developed, and the man that owns him then is likely to have one of the best draft horses in the country. The gray mare has a particularly nice filly foal at foot, by St. Charles 2nd. None of the Holsteins have been officially tested, but last winter there were eight of them milking, and the average weekly churnings totalled 120 lbs. of butter. This is reliable, and demonstrates as no other test can possibly demonstrate, the persistent producing ability of those cows, and with this is the nicest of type. The sire of most of the young things is Riverside Sir Aaggie De Boer, a son of Sir Pietertje Posch De Boer, whose dam and sire's dam have records averaging 25.67 lbs. butter in seven days, and on his dam's side he belongs to the noted high-testing and high-producing Aaggie tribe. Of the Buff Orpingtons there are for sale a number of cockerels and pullets, perfect in color. Write Mr. Mittlefehldt your wants.



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For sale—Imported yearling show bull; 14 bull calves 8 to 14 months old; cows and heifers and show material all ages. Herd headed by three high class imported bulls, all three were prize-winners at Toronto this year.

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—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 in price

ROBERT MILLER, Stouffville, Ontario.

5 Shorthorn Bulls 5

—We have for sale at moderate prices 5 Scotch Shorthorn bulls, including one of our herd bull. Also a number of high-class heifers and heifer calves

A. J. HOWDEN & CO., COLUMBUS, ONT.
Myrtle, G.T.R. & C.P.R. Long-distance phone

Irvine Side Shorthorns

We are offering just now some very choice Scotch-bred heifers, high-class in type and quality, bred in the purple; also one right nice yearling roan bull.

L.-D. phone. JOHN WATT & SON, Salem, Ont.

Shorthorns and Clydesdales

Shorthorn offering for October and November include 7 good young bulls from 9 to 15 months old. A catalogue of our Clydesdales will be mailed on application. **W.G. Pettit & Sons, Freeman, Ont.** Bell phone Burlington Jct. Sta., G.T.R.

Springhurst Shorthorns

Four of the first-prize Shorthorns at the late Guelph Show, including the champion and grand-champion fat heifer, were all sired by bulls of my breeding. I have now for sale ten young head leaders of this champion-producing quality. **HARRY SMITH, HAY P. O., ONT.** Exeter Station. Long-distance Telephone.

SHORTHORNS

—Records show that cattle bought from the Salem herd won numerous ribbons the past season; we have others. Several young bulls are priced reasonably.

ELORA G. T. R. and C. P. R. J. A. WATT, SALEM, ONT.

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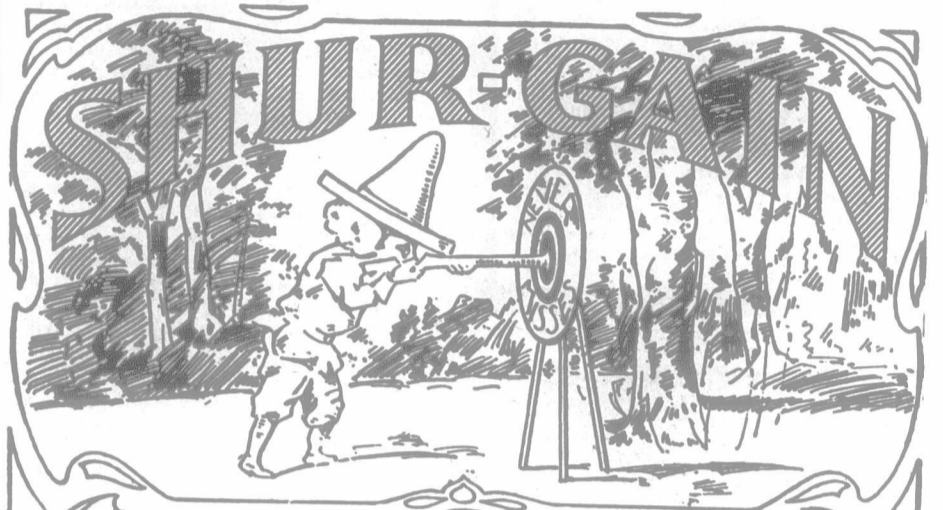
Some Advice for Beginners with Sheep.

Here is some advice for the beginner in sheep, which is too good to let go by. It is taken from the Shepherd's Journal, and is worth reading:

Begin slow and go slow. Grow up with your work. Many of our most prominent flockmasters started this way. If you start with pure-bred stock, don't start with show stock, but rather at the bottom of the ladder. As an amateur you will meet discouragements, but keep on and you will be successful in the end. If you start with grades, use nothing but pure-bred rams. Sell your culls to the butcher rather than to the novice. The sheep is a very bad animal to doctor, therefore keep your flock healthy. Be careful not to buy disease with your flock. Sell your customers a good animal; it means doing business ultimately with their friends. Don't be everlastingly changing breeds; be a stickler. Don't attempt to tear other breeds than that which you are handling to pieces. Have singleness and tenacity of purpose. Don't invent new make-shifts; such bring disaster. Keep salt, worm powders, and fresh water before your flock at all times. Be regular in feeding. Change pastures often. Don't charge your mistakes to bad luck. Don't allow your new purchases to die of homesickness. Don't try to raise February lambs in summer barns. Visit your State and County Shows, and don't fail to examine the contesting carcasses at the fat-stock shows. Train your eye to detect the thrifty or unthrifty animal. Don't feed your sheep moldy rations until you enjoy such yourself. Where possible, pasture your sheep by themselves. Stick to your business until you have built up a reputation, and things will come easy to you, but remember, reputations are not a ready-made product. You had better buy scrubs than pure-breds unless you are prepared to give the pure-breds proper care. Use only the best blood on the male side. Study individuality as well as pedigree. Infusion of blue blood is one of the best tonics to be administered to the flock. Observe caution and avoid all hazardous undertakings. Let the sheep you keep be the best of their kind. Condition powders are all right in their way, but good feed and care often dispense with their use. Don't breed indiscriminately; have an ideal and breed to it. If you like sheep for dollars and cents only, you had better keep out of the business. Good books, and the advice of good breeders, are safe guides, but experience will teach you something they cannot tell you. Remember that the British breeds are children of care. Don't expect to raise good stud sheep without succulent rations. Change your flocks in the cool of the morning or evening, during the hot summer months. Don't allow a dog on your farm unless it be a well-trained shepherd dog. Don't sell out because prices are very high or very low. Keep on, and in a series of years you will make just as much out of sheep as out of any other business. A small, well-managed flock, is more profitable than a large one poorly managed. Let uniformity be one of your ideals. Don't pamper. Don't allow your sheep to shift for themselves. No matter what class of ewe you keep, use only pure-bred rams. Don't feed timothy hay if you can help it. Don't feed grain in excess. Use oats in the breeding flock in preference to corn. Increase the grain ration just before lambing. Feed lightly for several days after lambing. Don't put your money into elaborate barns before you have found out your ability as a shepherd. Start with good sheep, even if they have to be good grades.

When Booker T. Washington started his school at Tuskegee, he had to resort to a chicken-house for a class-room, as he had no other place unoccupied, for his students. He called on an old friend of his, and said: "Uncle Rastus, I want you to come over to my place at about 9 o'clock to-morrow and help me clean out a hen-house." Uncle Rastus looked at him in surprise. "Why, man," said he, "don't you know that you can't clean out a hen-house on de main street in de daytime?"

GUNNS

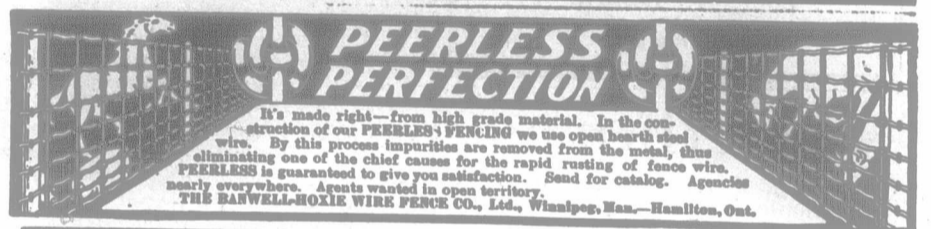


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A son of PONTIAC KORNDYKE, out of a cow with a record of over 31-pounds in 7 days. Calf is nearly ready for service. Have only a few sons of this great sire left, and remember these are the last. LOOK UP THE RECORD OF SONS OF PONTIAC KORNDYKE, AND SEE WHAT THEY ARE PRODUCING.

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Herd headed by Count Hengerveld Fayne De Kol, by Pietertje Hengerveld's Count De Kol out of Grace Fayne 2nd. He has 12 daughters already in the Record of Merit and many more to follow. Junior sire—Dutchland Colantha Sir Mona, by Colantha Johanna Lad out of Mona Pauline de Kol (27.18 butter) the dam of one daughter over 30-lbs. and one over 27-lbs; also the dam of the World's champion junior three-year-old for milk production. A few bull calves for sale. **E. F. OSLER, Bronte, Ont.**

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When wanting some right nice Holsteins of any age, workers and bred from workers, also young bulls, write me. One 4-year-old and one yearling, Percheron Stallions for sale, also Buff Orpington Cockerels and Pullets.

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Fit for service, a brother to sire Canadian-bred Champion Queen Butter Baroness, 33.17 lbs. butter in seven days. His dam the only cow in Canada with two granddaughters averaging 31.71 lbs., and six averaging 27.56 lbs. in seven days.

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We are offering for sale at a moderate price a son of Netherland Favorit, the Canadian champion two-year-old for 30 days. Seven days 21.65, 30 days 89.65 lbs. butter. Send for photo, price and breeding, or come and see him.

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Headed by Prince Aaggie Mechthilde. Present offering: Bull calves and bulls fit for service, from Record of Merit dams, with records up to 20 lbs. butter in 7 days. Prices reasonable.

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The most important factor in dairying today.

The Sharples Milker means cleaner milk—a problem of serious import to the modern dairyman. It means a large saving in milk production. And it eliminates the most disagreeable part of dairying—the drudgery of hand milking.

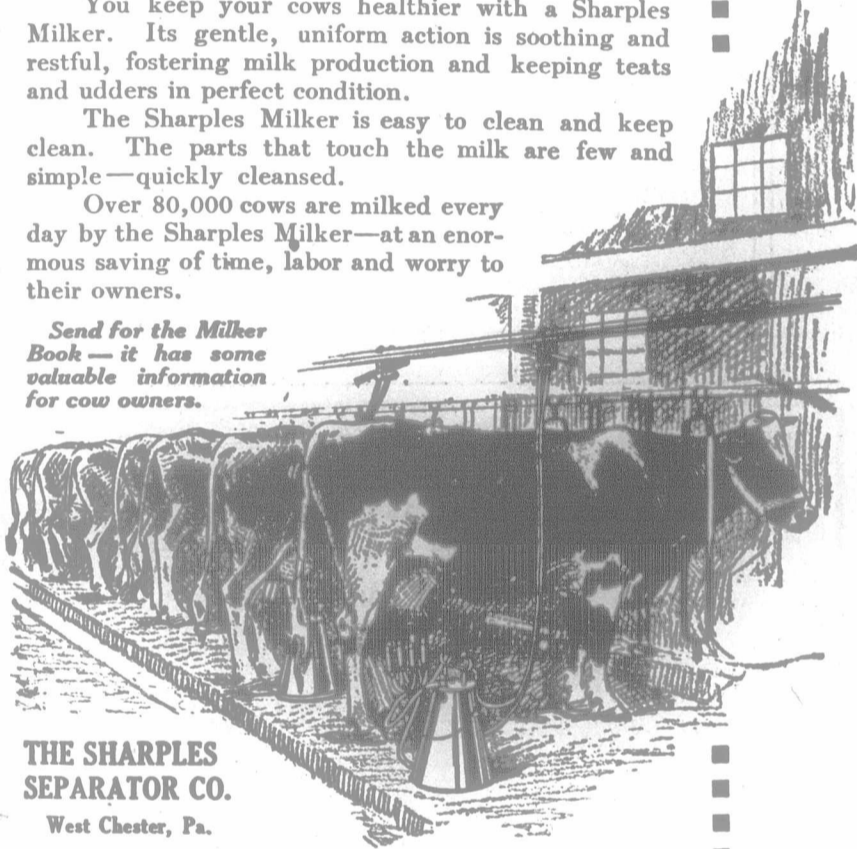
Think what it would mean to you as a dairyman to be able to save more than a third of your present payroll. Remember, too, that the Sharples Milker is on the job every day, year in and year out, saving you all kind of worry and care.

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Bulls for service, of different ages; females all ages. Calves of both sexes. All bred for production and type. A few pigs of either sex ready to ship. Menlo P.O., Ontario

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One two-year-old, one yearling, one calf, males only, for sale, from R. O. P. cows, and sired by bulls from R. O. P. dams. JAMES BEGG & SON, R. R. No. 1, ST. THOMAS, ONT.

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This fall I have the best lot of lambs I ever bred. I have plenty of show material, bred from the best stock procurable in England. Order early if you want the best. Ram lambs, shearlings and ewe lambs Yorkshires of all ages. J. A. CERSWELL, BOND HEAD P.O., ONTARIO

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Shropshires and Cotswolds In my 1913 importation of 60 head just arrived are show rams and ewes, field rams and ewes of both breeds. I also have 50 home-bred yearling rams and ewes, and a fine lot of ram and ewe lambs. Will be pleased to hear from you if interested in sheep as "No business no harm" is my motto. JOHN MILLER, Brougham, Ont., Pickering Stn., G.T.R. 7 miles. Claremont Stn. C.P.R., 3 miles.

When Writing Advertisers Please Mention Advocate.

Poison Ivy.

Quite frequently enquiries come to this office re poison ivy. For the benefit of all our readers, we are publishing an extract on this plant from the Dominion Botanist's report.

It is safe to say that no poisonous plant in America is better known by name than poison ivy. One would consequently expect to find it also one of the most generally known at first hand, of all our plants, but it is astonishing how many people confess themselves unacquainted with it. Not only town-folk, but many farmers, and not a few of those who profess to be interested in natural-history studies, are unable to recognize it. This being the case, it is not so strange that there are many misconceptions abroad as to its nature, and the precautions to be taken against it. This should not be so, as the plant is so plentiful in nearly every part of North America, and especially in the East, that almost everyone must have had an opportunity at one time or another, of meeting with it; and as the danger incurred by many people in coming in contact with it is so great, its recognition should be a matter of importance to all.

Poison ivy differs from the majority of poisonous plants in that it does not require to be eaten in order to produce its ill effects. Mere contact with it is sufficient; and indeed many people declare that they are affected even in its presence, though they do not touch it at all. The possibility of ivy poisoning without contact is not admitted though, by those who have studied the nature of the poison to which its effects are due. This poison has been found to be a non-volatile oil, to which the name "toxicodendrol" has been given. All evidence tends to show that it is a mistake to suppose the poisonous principle can be diffused through the air about the plants. The poisonous substance is found in all parts of the plant, and a very little of it reaching the skin is sufficient to set up its painful irritation. Probably many cases of poisoning which appear to be explainable only on the ground of transmission through the air, might be accounted for by the contact of shoes or clothing with the weed, and then with parts of the body which may not have touched it directly.

It is well known that not all persons are equally susceptible to injury by poison ivy. Some can handle the plant freely without any fear of unpleasant consequences. It would appear also, as if animals were immune, as birds are reported to feed upon the fruit, and cows have been known to eat it and show no evil effects. Poison ivy growing along a fence, was kept almost completely eaten down on the one side, where cattle were being pastured. No effects sufficient to attract notice were suffered by any of the animals.

Poison ivy grows most commonly along the borders of fields and woods, by roadsides, or in open woods; or less frequently it occurs in deep woods where it may become a tall climber supporting itself on the trunks of trees. In the open it is low and bushy, or often climbing or trailing. The leaves are all composed of three ovate, coarsely-toothed leaflets, and serve well as a means of identification. There are no other plants of similar habit in Canada with leaves which would easily be confused with them. The Virginian Creeper is often held in suspicion, quite needlessly though, as it has five, not three, leaflets, which spread from one point like the fingers of the hand. The poison ivy can also be known when in fruit, by its upright auxiliary panicles of whitish berries of about the size of peas.

Measures of eradication must be directed toward the uprooting of the plants, as otherwise any effort to kill them would have to be repeated and continued as long as the roots retain enough vitality to send up new vegetation. It may be advisable to mow off and remove the stems before starting to grub up the roots, so as to lessen the danger of poisoning while at work. The tops may be got rid of also by spraying with a mixture of one-half pint commercial sulphuric acid in one gallon of water. As sulphuric acid is corrosive, it will be advisable to apply with a sprinkling can or an old sprayer which can be sacrificed to the purpose. Obviously, too, any work among poison ivy should be done by a person who knows that he is not

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High-class Ayrshires—If you are wanting a richly-bred young bull out of a 50-lb-a-day and over cow, imported or Canadian-bred dam or sire, write me. Females all ages. Prices are easy. D. A. MACFARLANE, Kelso, Que.

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Won every first in the single classes in SOUTHDOWNS and both champions at Toronto and London shows. A few good shearing rams for sale. If you want a good young Angus bull, write now and get first choice.

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HENRY ARKELL & SON, ARKELL, ONT. Phone Guelph 248-2.

FOR SALE—A number of Registered Oxford Downs ram lambs from show stock. Write for information. Prices moderate. N. A. McFarlane, Greenoak Farm, R. R. No. 2, Dutton Ont.

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Pedigree Shropshires Shearing Rams and Ram Lamb. Prices right. Apply

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We never had as choice a lot of lambs as this year. Our offering: Shearing ewes, ram and ewe lambs. WM. BARNET & SONS, R. R. No. 2, Fergus, Ontario. 'Phone.

Pure Shropshires for sale—Twenty-five ram lambs; price from \$10 to \$12 each, including pedigree. Also a few ewes and ewe lambs, all descendants from imported stock. Am offering pure St. Lambert Jerseys, all ages, at moderate prices. For particulars write: H. E. Williams, Sunnyside Farm, Knowlton, P. Q.

Tower Farm Oxford Down—16 shearing rams, (1 imported) 3-year-old ram, ewes, rams and ewe lambs; all from imported and prize-winning stock. A quantity fitted for show. E. Barbour, Erin P.O. and Sta. L.-D 'phone

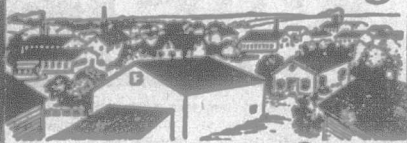
Oxford Down Sheep, etc. Yorkshire Hogs—Present offering: Lambs of either sex. For prices, etc., write to John Cousins & Sons, Buena Vista Farm - Harriston, Ont.

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A fine lot of yearling rams, ram and ewe lambs for sale, have been dipped if needed for export. R. J. HINE - St. Marys, Ont

Sheep for Sale—Thoroughbred Oxford and Southdown yearling and ram lambs. S. LEMON, Poplar Lodge Farm Kettleby, Ontario

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We are sold out of Tamworths, also females in Holsteins, but still have some choice bulls for sale, from two to six months, officially backed and right good ones.
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I am offering for sale one Boar, 18 months old, bred from imported stock, for quick sale address: BOX "T." FARMER'S ADVOCATE

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 Yorkshires, Tamworths, Berkshires, Hampshires, Chester Whites, Poland-Chinas, and Baroc-Jerseys. I have constantly on hand both sexes of all ages. Show stock a specialty.
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Both sexes and all ages, from imported stock. Prices reasonable.
 G. A. POWELL, ARVA, ONTARIO
 Four miles north of London.

Prize Chester White Swine—Winners High-class in type and quality, bred from winners and champions. Young stock both sexes, any age, reasonable prices.
 W. E. Wright & Son, Glanworth P.O., Ont.

Poland-China Swine for sale from the champions of Canada; also a few good Chester Whites, and choice young Shorthorns of either sex. Prices right.
 Essex Co. Geo. Gould, Edgar's Mills, Ont.

Advertise in the Advocate

sensitive to the poison. Every possible effort should be made to remove this nuisance from places frequented by children and others.

It will be desirable to add a word as to the treatment to be given in cases of ivy poisoning. Washing with water alone will not remove the oil, though vigorously scrubbing the parts with soap and water and a brush will help. The most effective treatment is to scrub thoroughly and repeatedly with an alcoholic solution of lead acetate. This brings the oil into combination with the lead so that it can be washed off readily by the alcohol. This remedy should be applied early, as the skin when once inflamed can only be left to heal in the natural course.

Gossip.

SOME BIG, THICK SHORTHORNS.

'Tis seldom, indeed, that so much immense thickness of flesh is seen in one herd of Shorthorns as is in evidence in the herd of F. W. Ewing, of Elora, Ont.,—great, massive cows, with their tremendous amount of flesh, evenly distributed. There are no better-doing Shorthorns in this or any other country. Victoria Stanfords, Claret Cups, Wimples, English Ladys and Marthas, represent their breeding on blood lines, and at their head is the strictly high-class and remarkable breeding bull, Proud Monarch, a Brawith-bred son of Imp. Blood Royal. There are few better bulls in the country than Proud Monarch, and no better breeding bulls. An exceptionally choice son of his that is for sale is a red, nine months old, out of an imported Claret Cup dam. There is certainly a future ahead of this youngster if he gets in good hands. Another well-balanced son is a roan yearling, out of an English Lady dam, by Imp. Scottish Beau. Still another is a roan, ten months old, got by the Rosewood-bred bull, Rosewood Chief, and out of a Wimple dam, by the thick, mellow bull, Queeston Archer. All of these young bulls are for sale. In heifers, there are some nice ones. A splendid show proposition is a white yearling, Martha, by Proud Monarch. Parties wanting something good in heifers or young bulls, should get in touch with Mr. Ewing. His address is R. R. No. 1, Elora, or long-distance phone to farm.

SHORTHORNS, YORKSHIRES, AND BERKSHIRES, AT MAPLELEAF.

That noted old herd of Shorthorns that has produced so much show stock that for so many years was owned and successfully operated by Israel Groff, was again visited by a representative of this paper and found as they have invariably been found in the many years we have been acquainted with the herd, in prime condition, and up to a high standard of modern type and excellence. The majority of the herd belongs to that grand old, thick-fleshed and excellent-milking tribe, Cruickshank Lady Fannys, better than which there are none. Other tribes represented are the Minas, Kerry Maids, Miss Ramsdens, Nonpareils, and Jealousys—all of them tried, proven, and popular tribes, that have made the breed popular as a dual-purpose breed, not only in Canada, but in the country in which they originated. In females of these great tribes, for sale, are a number of heifers from ten months to three years of age, several of them got by the successful breeding bull, Mina's Gloster, among which are a number of high merit, deep in flesh, and smooth from end to end. In young bulls, there are some nice, level lads. One is a white, eleven months old, by a son of Imp. Blood Royal, dam a Lancaster, got by Imp. Sittytton Victor. Another, also white, is seven months old, a Cruickshank Lady Fanny, by Proud Monarch, dam by the Duchess of Gloster bull, Valley Farm Argonet. Another is a red, six months old, a Mina, by Proud Monarch, dam by Imp. Proud Gift. The present stock bull is a grandly-fleshed roan, Matchless Leader, by Cunningham, dam a Matchless. Write Mr. Groff your wants in Shorthorns. The Yorkshires are headed by Maplegrove Winner, whose sire was three times champion at Toronto, and out of an imported dam. The brood sows are of Monkland breeding. For sale are young things of both sexes, out of litters of sixteen; also Berkshires.

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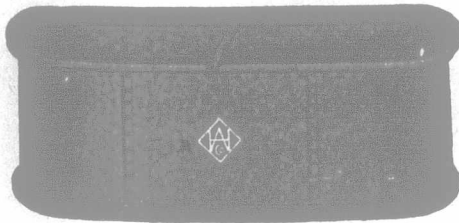
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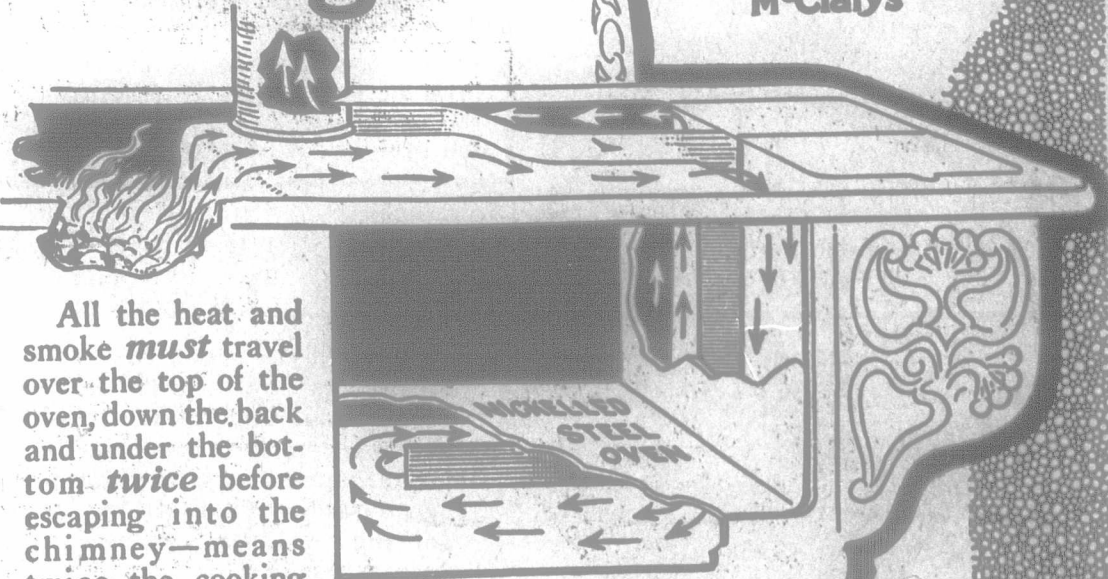
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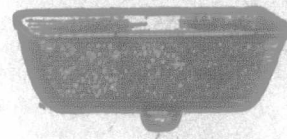
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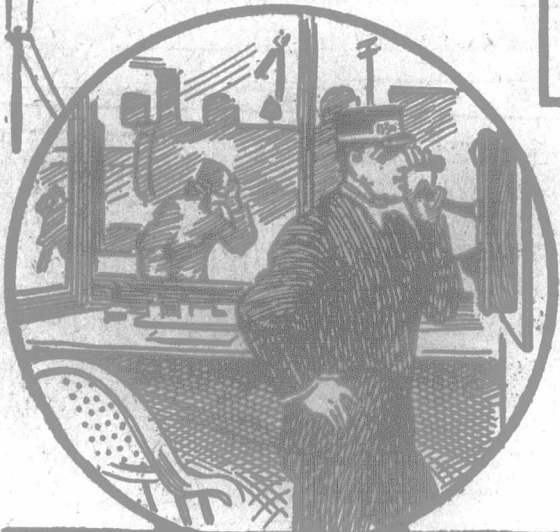
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