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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

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LIV.

LONDON, ONTARIO, JULY 31, 1919.

No. 1401

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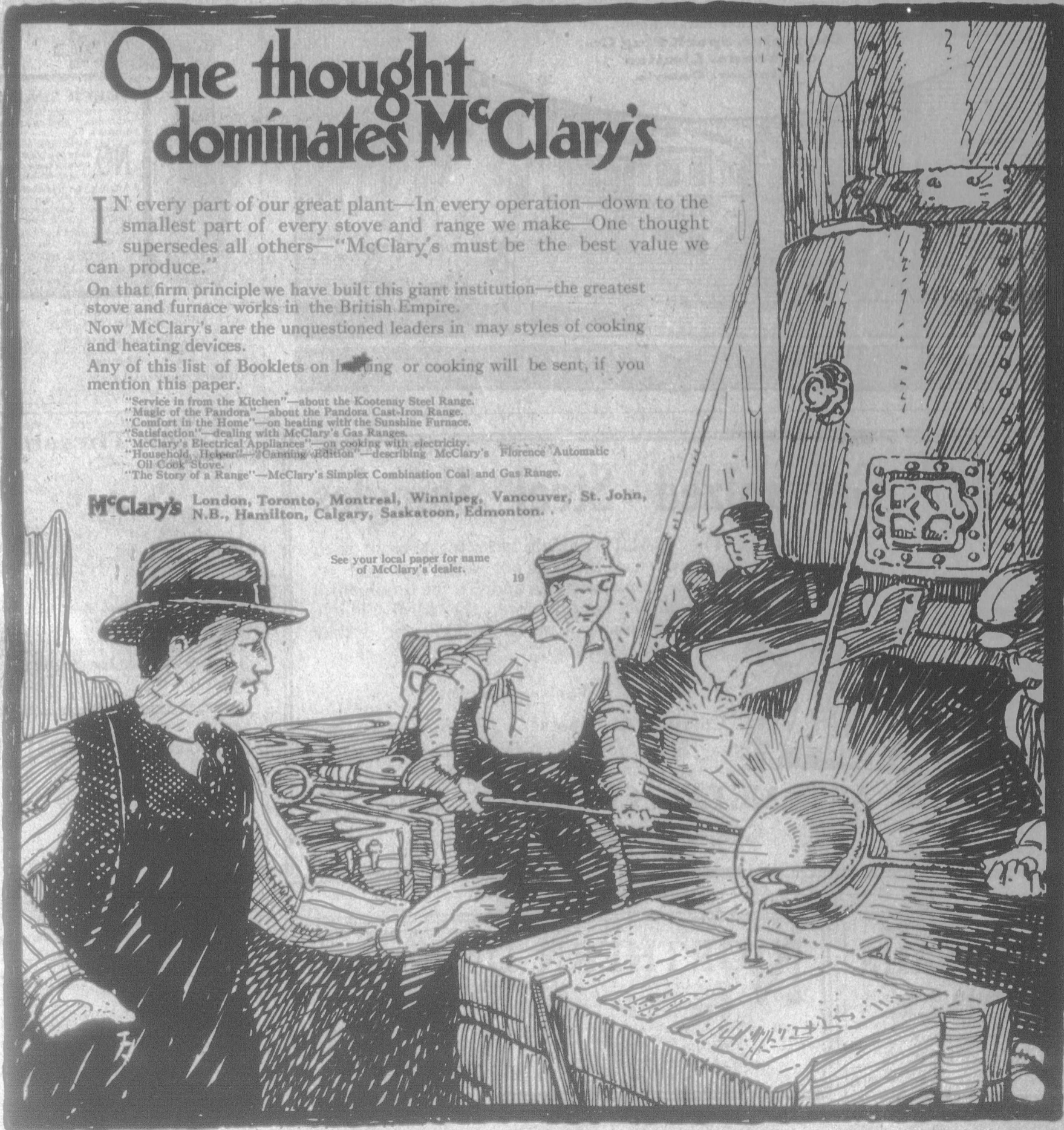
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- "Satisfaction"—dealing with McClary's Gas Ranges.
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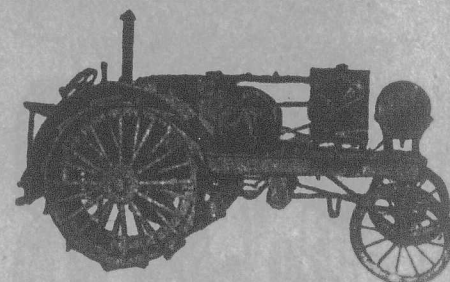
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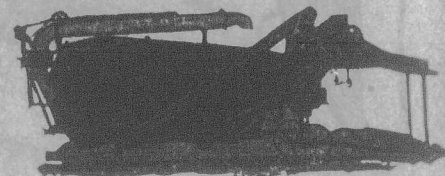


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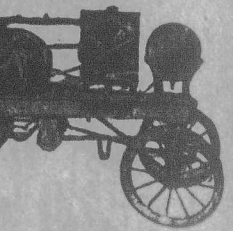
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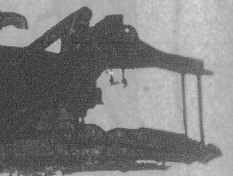
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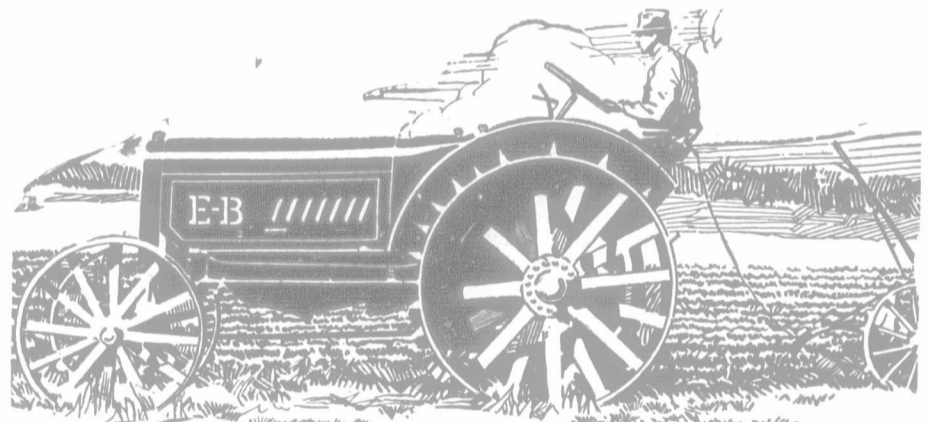
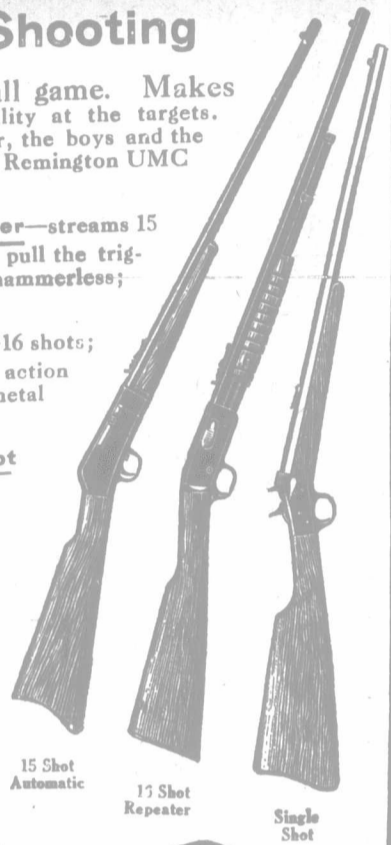
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The Farmer's Advocate and Home Magazine

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LIV.

LONDON, ONTARIO, JULY 31, 1919.

1401

EDITORIAL.

Get ready for fall wheat.

Look well to the feed supply for next winter.

Save something good for the fall fair, and get the young folk interested in the preparation of an exhibit.

The growing chickens should be given every chance to mature early. Early-maturing pullets are the most profitable winter layers.

Salvage the shelled grain in the fields with poultry. They will pick up a good living, for a time, in the harvest fields, and convert waste into money.

The participants in the race war in Washington would have no need to wear badges to indicate allegiance to either party. It was a straight fight of black against white.

Unmown fence corners, neglected lanes and weed-infested roadsides make clean farming a difficult task. With environments such as these a farm will never look or do its best.

Have the school grounds in your section received any attention since school closed for the holidays? Don't allow this little community centre and seat of learning for the young to take on a deserted appearance and become an eye-sore to the district.

In some parts of the country the apple crop will again be small. It is good advice, but perhaps poor satisfaction, to be told to hold on through poor years as well as good. Experience has shown that in the long run well-cared-for orchards are profitable.

After-harvest tillage is now the order of the day. Clean farming has received a set-back during the labor shortage, and, while help is as scarce as ever, many farmers can improve dirty fields by thorough cultivation of the unseeded stubble fields.

Farmers who ship live stock to the stock yards should familiarize themselves with the new regulations which are to be made effective by the Dominion Department of Agriculture in August. These are designed to give protection to farmers, and all others dealing in the yards.

This will be a lean year agriculturally for Canada. Alberta has been burnt up, over half of Saskatchewan has been dried out and Ontario crops, taken in their entirety, are considerably below the average. The effect will be universal, and conservation and thrift still remain a good motto.

Through this dry weather the corn cultivator will do a great deal to conserve what moisture there is in the soil, and thereby increase the crop of corn for feed next winter. The dairyman who has his silos full this fall will be in a defensive position next winter. Feed generally promises to be very short.

While war on a large scale has ceased and peace has been celebrated, the battle flags have not been tumbled the world over, for from Russia and other distant lands there still come rumors of advances and retreats. The ex-Kaiser kindled a flame that will not be entirely extinguished, perhaps, until after the light in his despoiled body has flickered and gone out.

After-Harvest Tillage.

Each year teaches new lessons and reviews the old ones taught over and over again by the recurrence of droughts, weed infestations and the attacks of insects and fungous diseases. Clean farming is a more arduous task than it was years ago when more labor was available, and the hand-hoe was used freely to supplement the work of the cultivator and harrows. More than that, weeds have been permitted to distribute themselves through artificial channels in addition to the means provided by Nature, and insects have become more depredations on account of the increased advantages afforded them. After-harvest cultivation, always a good practice, has now become a prime essential in good farming methods, for as forests are cut away or destroyed by fire, the conservation of soil moisture becomes more and more important, as man has interfered with Nature's plans, and must, therefore, take steps to provide the substitute.

Insect control is of growing importance, but weed eradication and conservation of moisture now renders after-harvest tillage one of the most essential of farm operations. The unseeded stubble fields lying idle through-out the long autumn provide a splendid seed-bed for the growth of weeds, which often come to maturity and infest the land. Furthermore, water channels are established to the very surface, and water is pumped from the reservoir below and given off to the air above.

Stirring the surface produces a mulch that checks this evaporation and, at the same time, makes conditions favorable for the germination of weed seeds that otherwise might lie dormant until the following or subsequent springs. Then a later cultivation destroys the young plants and rids the soil of many troublesome weeds.

There is also another point to be considered in connection with after-harvest cultivation, namely, the improvement made in the physical condition of the soil and the increase in fertility thus brought about. Much plant food is unlocked and made available by the very working of the land, and one really adds fertility when he practices after-harvest tillage.

Don't Be Satisfied With the Average.

We have often heard the farm press criticized by farmers for giving information concerning high yields and good results without mentioning at the same time the comparatively small returns of the vast majority. They claim it is misleading to the general public to relate the experiences of the most successful in the various branches of agriculture, and that an impression is likely to get abroad that farming is highly remunerative under almost any circumstances. They favor average results being published, so those outside the field of agriculture may not form wrong conclusions or labor under the impression that it is due to some fault of farmers themselves that all are not equally prosperous. It is expedient and necessary, now more than ever before, that people generally, should have a correct understanding of the various industries which are considered the essential ones. Nevertheless, it is one of the chief functions of a farm paper to guide its readers and keep them informed concerning the most modern and up-to-date methods of farming. If a man, by the use of legumes, good cultural methods, or fertilizers, builds up a worn-out farm or improves a good one, so it will produce an abundance of corn, grain and roughage, and as a result more live stock can be maintained to still further enhance the fertility of the soil, information concerning his practices should be of interest and benefit to thousands of others working under similar conditions. His results indicate the extent of his success, and should, therefore, be made known. There is, perhaps, no phase

of general farming that will permit of more improvement and show better financial returns for any forward step made than will dairying. Many take cows as they are and attempt to get along with them as best they can, while others set about to build up a herd of known producers and money-makers. The average production per cow is in the neighborhood of 4,000 pounds, but through breeding, weeding and feeding it is possible to double or treble on that amount for every mature cow in a good dairy herd. Why be content with the average? It is always below what the ordinary man can accomplish if he applies himself and attempts to get above the surging sea of humanity made up of just "average" persons. "The Farmer's Advocate" has never neglected to keep before the public mind the handicaps under which agriculture is carried on, nor has it neglected to make suggestions, which, when acted upon, tend to make farming more pleasant and profitable, yet as a farmers' adviser this publication is always on the lookout for new ideas which have been put to the test and proved sound. These should be conveyed, we feel, to farmers who are endeavoring to progress and get away from the "average," with which too many are content. There will be lean years, such as the present, and there will be fat years, but through them all the progressive, up-to-date, practical farmer will be in the lead, and to him other ambitious farmers will look for guidance and information.

Fall Wheat as a Crop.

Fall wheat as a farm crop in Ontario has had its ups and downs, but always it has been held in favor by farmers situated in districts specially favorable to its production, and on certain holdings known as good wheat farms. War needs forced it back more generally into the rotation, and a great many farmers have found it a not unprofitable crop when a reasonable acreage is devoted to it. Fall wheat is risky, that is true, but on a great many places this year it is the only grain crop that will amount to very much. It has been disappointing this season—not when compared with the yields of coarse grains, but when the threshing results are contrasted with the promise it gave two or three weeks prior to harvest. However, considering the season, fall wheat has done fairly well and, no doubt, a considerable acreage will be prepared for it again this autumn. Farmers find in fall wheat a cash crop which, at the same time, contributes liberally to the supply of straw, and thus adds to the roughage which is never too plentiful on a stock farm or where the ordinary type of mixed farming is practiced. The land is prepared and seeding done in what may be termed a mid-season, if such now exists, and the crop is taken off, and in many cases threshed, between haying and the main grain harvest. Labor is thus distributed, a cash crop is produced which is marketable at a time when receipts are not heavy, and a generous supply of straw is obtained. Many do not care to get along without a certain percentage of wheat in the chop fed to hogs or cattle, and would grow it for that reason if for no other.

If forced to make use of raw and inexperienced help in haying and harvest, be as patient as possible and show them the little tricks of handling a fork in pitching on. Once they get the "knack," what is really hard work will not seem so hard.

Don't fail to provide the hogs with plenty of fresh water daily, especially those on pasture feeding from a self-feeder.

Do not breed swine small in the bone if you would have good-doing, thrifty stock.



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"Advocate"

The Farmer's Advocate and Home Magazine.

THE LEADING AGRICULTURAL JOURNAL IN THE
DOMINION.

Published weekly by
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JOHN WELD, Manager.

Agents for "The Farmer's Advocate and Home Journal,"
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1. THE FARMER'S ADVOCATE AND HOME MAGAZINE is published every Thursday. It is impartial and independent of all cliques and parties, handsomely illustrated with original engravings, and furnishes the most practical, reliable and profitable information for farmers, dairymen, gardeners, stockmen and home-makers of any publication in Canada.
2. TERMS OF SUBSCRIPTION.—In Canada, England, Ireland, Scotland, Newfoundland and New Zealand, \$1.50 per year, in advance; \$2.00 per year when not paid in advance. United States, \$2.50 per year; all other countries, 12s. in advance.
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THE WILLIAM WELD COMPANY (Limited),
London, Canada

Nature's Diary.

A. B. KLUGH, M.A.

The Birds of an Old Homestead.

Just out of the village of Malpeque, on the north shore of Prince Edward Island, stands a fine old homestead known as North Shore House. About the house are huge willows, several spruces, paper birches, and other trees, as well as a good many shrubs, which provide foraging and nesting places for birds.

Three pairs of Robins nested about the house, one pair having their nest on a ledge over one of the windows. The males were the earliest musicians of the morning, beginning their blithe carol before it is yet light, and they were also the last songsters of the evening, singing on into the dusk after night had wrapped the landscape in her encircling shadows. The songs of these three males differed considerably in quality, and one of them sang a most characteristic refrain, in which the syllables "Rip-rip—ter-rurr" occurred very conspicuously and with great frequency.

Two pairs of Yellow Warblers had their nests on the premises, one of the nests being placed in a gooseberry bush. It was built in a fork and was composed of dried grass, pieces of twine and yarn, and bits of birch-bark, lined with hair and a few chicken feathers. When the female was hunting material for her nest she frequented the lawn, verandah and walks, and accepted pieces of yarn on her hunting territory with alacrity. When she was seeking hairs with which to line the nest she seemed to find the verandah the most promising field, and finding a hair caught in a crevice she pulled at it, now from this direction, now from that, swinging round and round, hanging on to the end of the hair. Usually she secured the hair, but occasionally her efforts to dislodge it proved fruitless, and she abandoned it to try for others not so securely attached. She laid four eggs which she incubated most conscientiously. The male appeared to take no part in incubation, but brought insects to his mate, sang his "Sweet-sweet-sweet-sweet-sweet" to her from the neighboring trees, and showed considerable solicitude if the nest was approached. Three of the eggs hatched, and the shells and the unhatched egg were removed from the nest. For the first two days the female spent most of her time brooding the young while the male was busy foraging. As he approached the nest he invariably sang, and when the female heard him she usually slipped from the nest and went off to secure a few insects, sometimes for herself, sometimes to give to the young upon her return, while the male fed the nestlings. In the early days of feeding whole insects were not given to the young, but the insects were pounded and swallowed by the male, then regurgitated into the mouths of the nestlings. Sometimes the female remained on the nest when the male approached, and he gave her insects which he carried in his bill.

Several pairs of Song Sparrows were inhabitants of

the grounds, and two pairs of Juncos had their nests in a row of spruces.

The Barn Swallows built their mud nests in various situations, under the eaves of the house and barn, in the barn and drive-shed, and all day long they coursed about, now high, now low, depending upon the altitude at which most insects were to be found.

A pair of Ruby-throated Humming birds spent a good deal of their time on the premises, particularly when the Horse-chestnuts were in flower, as these blossoms seemed to provide a brand of nectar most acceptable to them. Like winged gems they hovered, motionless but with fast-whirring wings, in front of a flower, then with a sudden dart shifted to another, and after feeding in this manner for a time they rested on a branch, to return in a few minutes to their feast.

The most persistent singer of all the feathered denizens of the grounds was a Least Flycatcher. His chief haunt was in one of the tall willows, and here he sat and uttered his "Chebec-chebec-chebec-chebec-chebec" so persistently that one wondered when he found time to eat. Once I saw him describe an arc in the air and sing a song while in flight, a song quite different from his usual "Chebec."

A pair of Purple Finches had their nest somewhere in the vicinity, and the male was a frequent visitor to the grounds. He was an exceptionally fine singer, and his rich, long-sustained, warbling refrain was a most delightful piece of bird music.

A pair of Kingbirds lived somewhere close by and spent a good deal of their time in the willows, while an Olive-sided Flycatcher, whose home was in a patch of spruces down the road, occasionally paid a visit to the grounds, and sitting high up in a tree uttered his loud, ringing notes.

A dead limb on one of the willows proved attractive to a couple of Flickers who came and pounded on it to their heart's content, and mingled their varied calls with the sound of their hammering.

A Race with the Rain on the Glorious 12th.

BY SANDY FRASER.

A lot o' people are unco' superstitious about things that will be turnin' up every day. They wouldna start on a journey or get married or any little thing like that on a Friday, for fear they might hae some bad luck in connection wi' the thing. I'm no' that sort myself, but just the same I've never been in the habit o' cuttin' ony hay before the 12th o' July, or gin I did I'd mak' it a point to hae it in the barn before that date, for I dinna think I ever saw an Orange Walk yet but had a guid rain to finish up the day with.

But this year I says to myself: "what's the use o' lein foolish? The weather is lookin' settled and it's only a notion onyway about it rainin' on the 12th. I'll tak' a chance." So the day before I went at it an' cut doon about three acres o' clover. It wis Friday too, but as I tauld ye, I'm no' superstitious. I counted on gettin' the hay raked up an' into coils the next day, as it's only once in a dog's age that I tak' in an Orange Walk. This year Jim, my hired man, says to me, "If ye're no' goin' yersel' Mr. Fraser, I'd like to be takin' the woman an' the children tae the 12th. The youngsters seem tae be set on going. I wouldna gie a straw for the thing sae far as I'm concerned myself."

"Gae ahead," I replied, "I guess ye're a better Protestant than I am, onyway. I'll stay at hame and hauld the auld ranch doon till ye get back."

Sae, on the mornin' o' the day Jim wisna' lang in gettin' what wark had to be done oot o' the way and in joinin' the procession that wis headin' for the toon.

It wis an unco' fine day, wi' not a cloud in sight, an' I says tae the auld wumman: "Weel Jean, for the first time in yer lang life ye are gaein' to see a 12th o' July wi'oot rain. The country is certainly gainin' dry in earnest," says I.

"Dinna be too sure," returns Jean. "A habit is hard to get over."

My niece Jennie is back frae the city on her holidays just noo, an' she says to me that day: "I think I'd like to go the Orange Walk myself, Uncle Sandy. I've heard that there is quite a bit o' excitement at these celebrations sometimes."

"You'd better stay by yer Auntie, Jennie," I replied "Ye might be gettin' tramped on if ye got intae a crowd like that. Dae ye no ken that an Orangeman is not held responsible for onything he may do on the 12th o' July?"

Jennie juist turned up her nose at me, but I could see that she had a hankering to be wi' the crowd, and she wis a wee bit disappointed.

About nine o'clock I took a fork an' went back to the field to turn over some o' the hay where it wis too heavy to dry oot well. I wis all through by the time Jean called me to dinner, and things looked good for gettin' it raked an' coiled up in guid time, even if I wis alane on the job.

After dinner I went into the front room an' lay doon on the sofa, intendin' to tak' a short nap, accordin' to a habit I hae got intae the last couple o' years or so. I slept langer than I had intended to, an' when I got outside I saw some clouds comin' up in the west that I dinna like the looks o' ony too weel. It didn't tak' me lang to get the auld mare hitched up to the rake an' headed for the hay-field.

When Jennie saw me gettin' in a hurry she followed me oot an' says she: "Let me rake the hay, Uncle Sandy, and you can get yer fork an' lunch it up."

"I dinna think ye'd better," I said. "This wild animal I'm tryin' to drive has made a vow that no fly

will get ony o' her blood this day, an' it tak's all my time to keep her on the job."

Juist then a big horse-fly lit on the mare's nose, an' she backed the rake an' me an' all right up intae the fence-corner. That wis enough for Jennie, an' she says: "Weel, I'll get a fork an' help ye one way or anither." And away she went to the barn for a pitch-fork. When she cam' back she started wark at the far end o' the field while I finished up the raking. When I had pit the auld mare in the stable I got anither fork an' went over to where Jennie had started bunched up the hay. As soon as I saw what she wis daein' I called oot to her; "Hoot, Jennie," says I. "What like coils are those that ye are makin'? Is that the way they mak' hay in the city? Ye must hae been takin' lessons frae yer Auntie when she made that nest for the auld settin' hen yesterday. Watch me for a meenute," says I, "an' I'll show ye the orthodox style o' pittin' up hay so that it will hae a chance to shed a wee bit o' the rain that may be comin' before lang." For by this time things were beginnin' to look bad enough.

When Jennie had watched me for a few meenutes she went at it again, an' before lang she wis makin' a pretty guid fist o' gettin' the hay into coils, as we call them doon here.

By this time the sun wis oot o' sight behind the clouds, an' I found myself beginnin' to get in a hurry. Jennie had taken note o' the signs too, an' she wis daein' her best. There wisna muckle o' a breeze goin' an' she wis a guid bit warmer, I'm thinkin', than mony anither time when she would be complainin' o' the heat. There wis no use tellin' her to quit, though, so I said naething. I wis losin' some sweat myself by this time. "I'll tak' na mair chances on havin' hay oot on the 12th o' July, after this," thinks I. "It must be the beatin' o' the drums that brings the rain, I guess."

"We'll not ony mair than mak' it," says Jennie, as we cam' to the last two windrows. I said naething. I wis too busy. I wis going to get that hay up if my fork-handle held oot. By this time Jennie had got the knack, an' she could handle her fork like an auld-timer. We took those last two windrows together, an' she wis in at the finish if onything a wee bit ahead o' me. But there wis na time for us to argue about the matter. It wis rainin' some before we had the finishing touches put to the last coils, an' we made a run o' it for the hoose. But we couldna mak' it. Before we'd got half way the rain struck us wi' a splash. I wis dressed about as light as the law allows, an' that could rain made me gasp. By the time we reached hame it didn't matter much whether we kened enough to "come in oot o' the rain" or not. The water wis rinnin' oot at my boot-tops.

Jean opened the door for us, an' I says to her: "Ye mind what ye were sayin' about Jennie here? That naething could dampen her spirits. Look at her noo." "Oh Auntie," says Jennie, pushing the hair oot o' her eyes an' tryin' to look sober; "I always heard that people that lived in the country never had ony o' the modern conveniences o' city life, but here you even have a shower-bath."

That night at supper as Jennie wis showing her appreciation o' Jean's cookin' by helpin' hersel' to anither hot biscuit, she says to me: "Weel Uncle Sandy, we saved that hay from destruction to-day, onyway, didn't we?" "Weel, whether we did or not," I replied, "we did what we set out to do. We got ahead o' the auld Clerk o' the Weather, for once."

"Sure we did," says Jennie, "it was more fun than going to an Orange Walk."

Optimism vs. Pessimism.

BY FRED. SCOTT SHEPARD.

Optimism and pessimism have had many definitions or designations, as, "The optimist sees the doughnut; the pessimist sees the hole," or, "The optimist believes in mascots; the pessimist believes in hoodoos," or, "The optimist thinks the times are ripe; the pessimist thinks they are rotten," but however designated or distinguished it is always very apparent that they are directly opposite one to the other, that the one can never be the other—that the one is constructive, while the other is destructive.

The optimist goes through life with his eyes open, his head up and his courage firm. He knows that the sun shines behind the clouds, that assurance begets confidence, that courage is contagious, that what man has done man can do, and so he wins or dies fighting—his face to the front.

The pessimist is ever looking downward, his steps lead to the shadows, his heart fails at the thought of the unknown and uncertain, his doubts are stronger than his faith, and he is doomed to failure before he begins.

Successful men in all walks of life—commercial, professional and religious, are always optimists; the slothful, the laggards, the failures, the down-and-outs are always pessimists.

Optimism and pessimism are alike contagious, but one is positive while the other is negative. As in other realms of life, the positive is stronger than the negative and so the practice and acquirement of the cheerful, the hopeful and the courageous will make for the overcoming of the dismal, the doubtful and the fearful.

The cultivation of faith in God, faith in men and faith in one's self is a certain antidote to pessimistic tendencies, and leads from the shadows of the valley to the radiance of the hill top, from the gloom of despair to the glow of success.

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THE HORSE.

Young Horses.

It is an easy matter to teach young horses to submit quietly to having their heads handled. All that is required is to handle the head and ears occasionally for five minutes or so. Most young horses that have not been spoiled or rendered nervous by rough treatment do not naturally object to their heads being touched. If they do at first evince any objection, this is easily overcome by a little gentling and the exercise of some patience.

It certainly is desirable that young horses should be gentled about the head at an early age, because the longer this is put off the more likely are they to object to the head being handled. In most cases, where broken-in horses have the fault of refusing to let their heads be touched or to keep them steady, it is the result of mismanagement.

Probably one of the most frequent and potent causes is the application of the ordinary twitch, of which blacksmiths and grooms are so fond. The frequent use of this instrument is sufficient to make the most even-tempered animal shy about the head, and to cause him to resent it being touched. Once a horse has been spoiled in this way it takes a long time and requires a great deal of patience to make him steady about the head again. There is no question that the twitch is very greatly abused by ignorant men who have to deal with horses.—Live Stock Journal.

How the Hoof Grows.

Poor feet in horses are abhorred by practically everyone, yet there are comparatively few who understand the hoof of the horse, and give it intelligent treatment. Many a good-footed horse has been spoiled by lack of attention to the growing hoof, or by careless shoeing. Smiths should use judgment based on knowledge when shoeing a horse, and farmers ought to watch the young horse carefully, using the rasp or chisel when necessary. Dr. John W. Adams, an authority on shoeing, prepared a treatise on this subject some time ago for the U. S. Government, and from it we quote in the following paragraphs:

All parts of the hoof grow downward and forward with equal rapidity, the rate of growth being largely dependent upon the amount of blood supplied to the pododerm, or "quick." Abundant and regular exercise, good grooming, moistness and suppleness of the hoof, going bare-foot, plenty of good food, and at proper intervals removing the overgrowth of hoof and regulating the bearing surface, by increasing the volume and improving the quality of the blood flowing into the pododerm, favor the rapid growth of horn of good quality; while lack of exercise, dryness of the horn, and excessive length of the hoof hinder growth.

The average rate of growth is about one-third of an inch a month. Hind hoofs grow faster than fore hoofs, and unshod ones faster than shod ones. The time required for the horn to grow from the coronet to the ground, though influenced to a slight degree by the precited conditions, varies in proportion to the distance of the coronet from the ground. At the toe, depending on its height, the horn grows down in eleven to thirteen months, at the side wall in six to eight months, and at the heels in three to five months. We can thus estimate with tolerable accuracy the time required for the disappearance of such defects in the hoof as cracks, clefts, etc.

Irregular growth is not infrequent. The almost invariable cause of this is an improper distribution of the body weight over the hoof—that is, an unbalanced foot. Colts running in soft pasture or confined for long periods in the stable are frequently allowed to grow hoofs of excessive length. The long toe becomes "dishd"—that is, concave from the coronet to the ground—the long quarters curl forward and inward and often completely cover the frog and lead to contraction of the heels, or the whole hoof bends outward or inward, and a crooked foot, or, even worse, a crooked leg, is the result if the long hoof be allowed to exert its powerful and abnormally directed leverage for but a few months upon young plastic bones and tender and lax articular ligaments. All colts are not foaled with straight legs, but failure to regulate the length and bearing of the hoof may make a straight leg crooked and a crooked leg worse, just as intelligent care during the growing period can greatly improve a congenitally crooked limb. If breeders were more generally cognizant of the power of overgrown and unbalanced hoofs to divert the lower bones of young legs from their proper direction, and, therefore, to cause them to be moved improperly, with loss of speed and often with injury

to the limbs, we might hope to see fewer knock-kneed, bow-legged, "splay-footed," "pigeon-toed," cow-hocked, interfering, and paddling horses.

If in shortening the hoof one side-wall is, from ignorance, left too long or cut down too low with relation to the other, the foot will be unbalanced, and in travelling the long section will touch the ground first and will continue to do so still it has been reduced to its proper level (length) by the increased wear which will take place at this point. While this occurs rapidly in unshod hoofs, the shoe prevents wear of the hoof, though it is itself more rapidly worn away beneath the high (long) side than elsewhere, so that by the time the shoe is worn out the tread of the shoe may be flat. If this mistake be repeated from month to month, the part of the wall left too high will grow more rapidly than the low side, whose pododerm is relatively anemic as a result of the greater weight falling into this half of the hoof, and the ultimate result will be a "wry", or crooked foot.

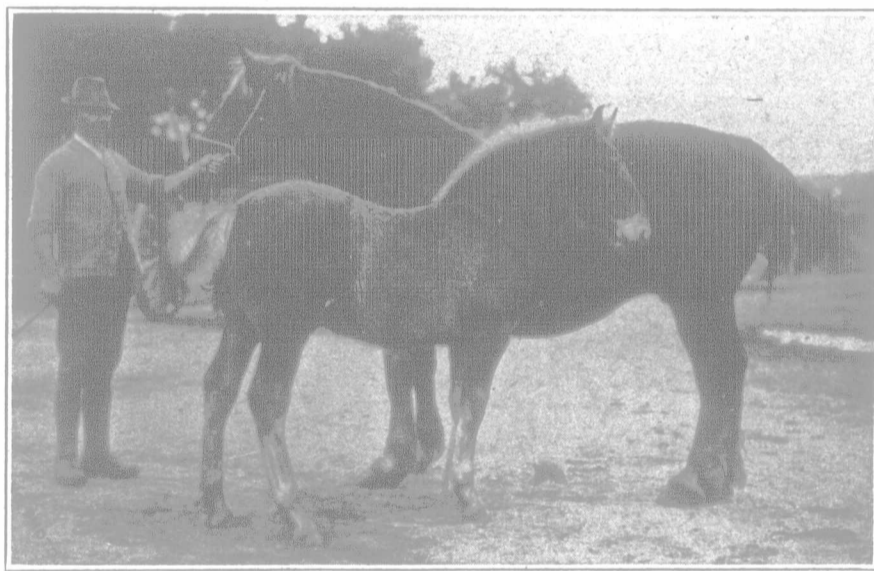
The colt should have abundant exercise on dry ground. The hoofs will then wear gradually, and it will only be necessary from time to time to regulate any uneven wear with the rasp, and to round off the sharp edge about the toe in order to prevent breaking away of the wall.

Colts in the stable cannot wear down their hoofs, so that every four to six weeks they should be rasped down and the lower edge of the wall well rounded to prevent chipping. The soles and clefts of the frog should be picked out every few days, and the entire hoof washed clean. Plenty of clean straw litter should be provided. Hoofs that are becoming "awry" should have the wall shortened in such a manner as to straighten the foot-axis. This will ultimately produce a good hoof and will improve the position of the limb.

LIVE STOCK.

The lambs to be fattened and the ewes for breeding should be put on fresh pasture. Second growth clover or rape are excellent feeds for the flock.

The sows due to farrow this fall require a little more than grass to sustain them and to put them in condition



A Suffolk Mare and Her Filly Foal.

to feed a litter. Don't deprive them of exercise and green feed, but add grain to the ration. Have the sow in good condition at farrowing time.

We haven't heard of pure-bred breeders falling over themselves in an offer to replace a grade sire with a pure-bred, in order to advance the campaign to banish the scrub sire.

The wet spring followed by prolonged drought has resulted in this being a lean harvest so far as spring-sown crops are concerned. Every care should be taken to garner what there is in as good a condition as possible, and to save it from deterioration after it is harvested. Straw may be used to advantage, especially when fed with silage.

Supply and demand largely set the price of farm produce. Therefore, judging by the prices paid for pure-bred stock of all breeds, one may conclude that the demand has greatly increased the past few years. Monied men are prominent at many of the large auctions, and have helped raise prices by competitive bidding. However, the small land holder is also in the market for good stock, and is paying the price for the animals of quality and breeding.

The scrub and grade sires have become pretty strongly entrenched in Canada, and it will require more than talk to banish them from the herds. Action on the part of stockmen is necessary. If one would only stop to figure out on a dollar-and-cent basis the benefit to be derived from higher quality, commercial as well as breeding stock, few grade or scrub sires would be used next year. The breedy animal feeds better, looks better and sells better than the mediocre stuff.

Parasitic Diseases of Sheep.

External Parasites—Sheep Scab.

The mite of sheep scab is a nearly round, light-colored parasite, the female measuring about 1/40 of an inch in length, and the male about 1/50 of an inch. By placing the mites on a sheet of black carbon paper and holding this in strong sunlight, they can be seen. The life-history of these mites is interesting. After mating, the female deposits about a dozen eggs at the base of the wool fibers. These eggs hatch in 3 or 4 days; in about a week the young mature, and in 3 or 4 days more they will have mated and the female laid her eggs. It is estimated that the entire life cycle is completed in about 15 days. Using these figures as a basis for calculation, it has been estimated that the progeny of a single pair of mites may attain to about 150,000,000 in about 4 months.

Symptoms.—When a sheep becomes infested with one or more mites, small inflamed zones occur where the mites pierce the skin to obtain food. This is soon followed by itching and the formation of papules, and, as the mites multiply in numbers, the area of inflammation rapidly increases. Serum oozes from the papules, and it is during this stage that the disease is usually noticed. The infected animal shows symptoms of intense itchiness and irritation, bites or rubs the body against anything with which it can come in contact.

The wool soon becomes taggy and commences to fall out, crusts form on the skin from the dried exudate. It is under the scales or crusts that the mites live. In proportion to the severity of the infection the disease progresses more or less rapidly until the patient appears to be in continuous agony. It becomes thin; the wool falls out in patches, usually along the back, flanks and shoulders; larger and larger areas of the skin become inflamed and covered with crusts; other sheep become infected, until the whole flock is involved.

Differential Diagnosis.—More or less itchiness and the loss of wool in patches may occur from causes other than scab. In cases caused by mammitis or to exposure the skin of the denuded areas is soft and normal in appearance. There is nothing but a "bald spot" with no pimples, vesicles, papules or inflammatory zones. The exposed skin, due to the loss of wool from the various types of eczema, shows a reddening of the skin without the thickening that accompanies "scab."

Treatment.—It is wise, in all suspicious cases, to suspect "scab" and act accordingly. It is compulsory for the owner or the veterinarian in attendance to immediately notify the Health of Animals Branch, Department of Agriculture, Ottawa, Ontario, and a member of the government staff of veterinarians will be sent to take charge. Failure on the part of the afore-mentioned renders the same liable to a heavy fine.

In the mean-time, it is wise to adopt curative treatment. Dipping with any of the commercial sheep dips, according to instructions, gives fair results. Of course, all infected sheep must be isolated, or all the non-infected moved to non-infected quarters. The latter plan is the better.

The "lime and sulphur dip" has been the mainstay for years where the disease is common. The official dip is prepared as follows: Take of unslaked lime 8 pounds, flower of sulphur 24 pounds, water 100 gallons. Of course, lesser or greater quantities can be made in the same proportions, according to the quantity required. The lime is placed in a water-tight box or bucket, and sufficient water added to slack it and make a thin paste. The sulphur is then slowly sifted in, mixing the mass until it is of about the consistency of mortar, which is put into a kettle containing 30 gallons of water, and boiled for two hours. Water should be added as needed, to keep the quantity up to 30 gallons. While boiling it should be kept well stirred, else the paste will cake in the bottom of the kettle. After being boiled for 2 hours the liquid to be transferred to a barrel to settle. The barrel should have a bung hole 4 or 5 inches from the bottom in order that the sediment may settle below it, and not escape when the plug is removed, as its presence in the dip will injure the wool, or may harm the eyes of the sheep.

When ready to dip, the clear liquid is drawn off into the dipping vat, and 70 gallons of water added. The mixture should be warmed to about 100 to 103 degrees Fahr.

The size of the vat should depend upon the number of sheep to be treated.

In dipping, the head of each sheep should be ducked once, and the animal kept in the solution for at least 2 minutes. In cases where the scabs are extensive they should be hand dressed to soften the crusts.

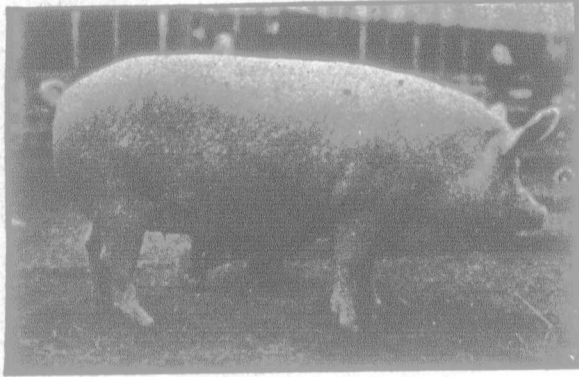
To eradicate scab from a flock of sheep, each animal should be dipped two or three times at intervals of 3 or 4 weeks; kept under close supervision, and at the least symptom of its recurrence, re-dipped. The vitality of the mite is so great that it is not considered wise to expose sheep to quarters that have been infested within a year.

Pigs running out of doors require shade; a neglected orchard makes a suitable refuge, but a board or brush shelter can be quickly and cheaply constructed.

Allow the boy to fit something for the fall fair and show it himself. It will be good experience in feeding, and likely to awaken a keen interest in live stock.

Fitting Hogs for the Show.

While hogs do not require quite so much fitting as other classes of stock, the show pens should have been selected long ere this, and attention given to having the various entries in the pink of condition, especially if one is showing at the larger exhibitions. For the local fairs, there is yet time to select the herd and fit the animals to make a creditable showing. Pigs of good type for the breed must of necessity be selected. Exhibiting those slightly off type is a detriment to the welfare of the breed, as the exhibitions are supposed to set the standard. Experience has proven to feeders that strong, heating feeds in large quantities must be avoided, unless they are fed in combination with green.



In Good Fit but Not Overdone.

feed or roots. Some corn and barley, with middlings, finely-ground oats, skim-milk and roots, make a very good ration. The oats, middlings, and skim-milk are excellent feeds for growing the pigs, but the corn and barley are needed in the ration for finishing. Green feed should be available every day. A clover or rape paddock is the easiest way of furnishing this essential part of the ration. Care must be taken not to get the pigs off their feet; crippled hogs are a poor advertisement in the show-ring. Forcing the hogs to take regular exercise and feeding plenty of green feed will assist in preventing crippling, when the pigs are being forced. The exercise aids digestion and strengthens the legs and pasterns, so that the body is carried gracefully. The pigs should be washed occasionally, and if there is any scurf on their bodies a little sweet oil might be applied. This helps to make the skin soft and the hair silky. Hogs are harder to train than are other classes of stock. However, with practice they can be taught to be on good behavior when being examined by the judge. Taking a little time to make the hogs stand correctly avoids difficulties on show day. Points of excellence may be more clearly shown when the animal is standing right. It is impossible to get the hog in show-ring condition on the morning of the fair. The exhibitors should aim at making the show of educational value to the public, as well as bringing financial gain to themselves. The following paragraphs, on selecting the show herd, fitting and feeding it, written by a successful exhibitor, which were published in the report of the Kansas State Board of Agriculture, may assist the amateur, and may also give pointers to the professional exhibitor:

Selecting the Show Herd.

The selection of the show herd requires a knowledge of what it takes, when well fitted, to win. One should commence months in advance of the show to make his selections, first making up his mind whether or not he wishes to fill all the various classes listed in the premium lists, which are now so made up that the same animals can show throughout the circuit without being required to carry along other animals of various ages from those first selected to fill the classes. In making the selection of the show herd, commence first by selecting the animals that are required to show in the "aged class." The aged-sow class should be made up of animals that have proven themselves breeders, and should show by their appearance that they have been breeders. Let them, however, be well fitted without overdoing, and as uniform as possible in type and conformation, with an aged boar of the same general type, showing that he has been a breeder, only of a more masculine appearance, thus making up a desirable herd for the aged class. The tusks of the boar should be removed before starting out on the show circuit, and should be so closely cut that no trace of the same can be seen. This should be done both for the safety of the caretaker and those about the show-ring.

Next, select the senior yearlings—a boar and three sows—which should carry as much size, or nearly so, as the aged herd, but would naturally be somewhat smoother, owing to the difference in age and previous service. Be sure that these are also uniform in type with the aged herd. Next, select the junior yearlings—a boar and three sows—which are, generally speaking, the sweetest things in the show-ring, and being at an age that shows full development and yet not required to have produced any offspring, naturally will be much smoother and more in bloom. This class is usually the best of all at any breed shown. These should be of the same general type as the older ones selected, and should be in the pink of show condition, well developed at every point, carrying all the flesh that goes to make an ideal show animal, yet under no circumstances to be

overly fattened or fleshed to a condition of unevenness or roughness.

This same careful selection must be carried out also in the boar and three sows under twelve months of age. This is really the hardest class to fill satisfactorily—first, for the reason that the young boar over six and under twelve months of age is passing through a crisis in his development, this being an age that almost invariably, if the boar is a vigorous one, finds him fretting and champing more or less when in sight of other animals. The sows also of this age are harder to properly develop and bring out in their best form, as they, too, are passing through a period of life when there is more or less restlessness and excitement than when older.

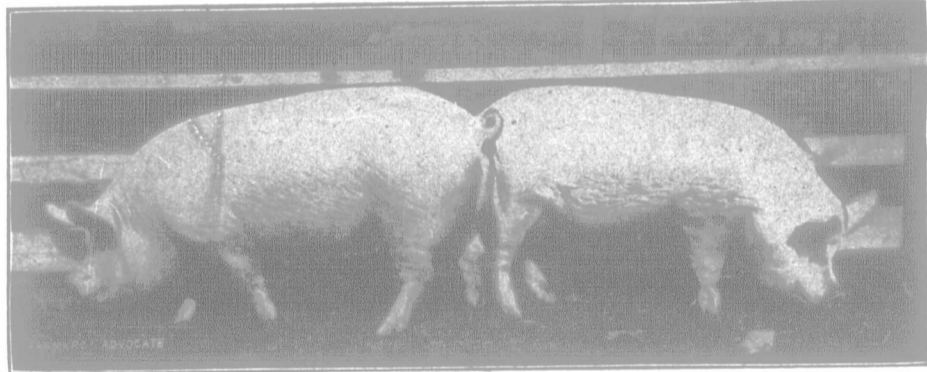
Some people greatly enjoy bringing out a herd under six months of age, as there are often enticing prizes offered in this class, and it is a good way to show the class of pigs you are producing. While this class should also be as uniform in type and conformation as the others, and should be well fitted in flesh, care should be taken that they are not pushed too hard and become overdone and more or less wrinkled in appearance.

Fitting the Herd for Show.

We will now suppose that the herd has been selected along proper lines, and we are ready to start the fitting process with a bunch of animals of the same type. The question now is how to fit these animals to the best advantage without overdoing them, so they will show, when the fair season opens, in the best possible bloom.

Always remember that "bloom" is a desirable thing in a show animal. When "in bloom" a hog is at its best, and this "bloom" lasts only for a short time, and is as easily lost as the bloom of a ripe peach; hence the matter of fitting should commence in time, and be carried on in a manner to have the animals "in bloom" when the fair season opens.

For convenience in handling and caring for them, the show animals should be kept by themselves and not allowed to roam with the general herd. The four boars being fitted for the different herds should be carefully prepared and put together in one lot, where they can be fed and handled together, so that there will be no danger of their fighting should it be necessary to



A Pair of Well-fitted "Yorks".

drive them to or from the show building together. The aged sows, the senior and the junior yearlings should also be fed and kept in one enclosure for best results during the fair circuit, when it is necessary to exercise them mornings during the show season. The over-six-months and under-six-months sows can also be kept together for the same reasons.

The yards or lots where the animals are to be fitted during the next few months should have an abundance of succulent pasture, either natural grasses or other green forage crops provided, and each lot should have a water fountain that should be kept well supplied with pure, clean water at all times. Of course, ample shade should be provided, either natural or artificial, and no dust should be allowed to accumulate where these animals lie in the shade. If possible, a cement bathing pool large enough and deep enough in the deepest part to practically cover them should be provided, in which the water should be changed every few days, always remembering to add a little disinfectant and crude oil to the water, preventing any skin troubles or lice.

Proper Feeding of Herd.

When one starts out to fit a herd of show animals for the large fair circuits, the matter of expense must, in a measure, be forgotten, as these animals should have the best feed possible to put them in just the right condition to show all that is in them. We have found, when fitting animals for show, that we have to make some changes in our regular grain mixtures for best results. I have found nothing better in this case than to feed a nice, rich slop feed, made up about as follows:

For the older animals, above one year, I would use equal parts of finely-ground cornmeal and the best quality of white heavy middlings, with an addition of ten per cent. old-process oil meal, thoroughly mixed together before being wet, and if sweet skimmed milk or that from the separator is possible to be had at any reasonable price, the feed should be mixed with this, and all fed in a sweet condition. If it is found impossible to get milk, add tankage to the oil meal (eight to ten per cent. oil meal and five per cent. tankage), and the mixture of meal and middlings, and mix this

with fresh water and feed it after it soaks a few hours—but never allow it to become sour.

I think two feeds a day, even in the fitting of a show herd, is as good as three, generally. However, it would be proper, and perhaps as well, to give these animals a little soaked shelled corn, that has soaked long enough to become soft, as a noon-day meal. Where this is done the morning and evening feed can be fed a little earlier and later, respectively.

For the younger herds of over six and under twelve months, as well as the herd under six months, I should certainly urge the use of skimmed sweet milk for best results. I have known showmen, while fitting young hogs, to feed whole milk fresh from the cow. This is entirely useless, and I think is one of the surest ways of overdoing the pig and causing him to break down in the pasterns, and it is also almost a certainty that pigs fed fresh, warm whole milk will become more or less wrinkled, but skim-milk is not so apt to cause this trouble, and this is especially true when well balanced with the ground feed.

Always remember, however, that too much milk is worse than none. The proper amount is three pounds milk to one pound of grain; with this your ration is practically balanced, or at least gives the best results. If any animals at any time during the fitting do not eat with as much relish as would seem best, there are many kinds of condiments that could be used to make the feed more palatable. A sufficient amount of brown sugar or blackstrap molasses to well sweeten the mixture will make the feed more palatable. This would be the case even when milk was used instead of water in mixing the feed.

I would by all means urge, while fitting these hogs for show, that a mixture of mineral matter be used. It may be well to mention here that this should be made up of ground limestone, with perhaps some slacked lime, together with ground phosphate rock, or any other material that would contain plenty of phosphate, and the whole mixed with salt to make it more palatable. I urge the use of this material, so that while fleshing these animals there would be no danger of breaking down the bone, as the mineral matter is essential for bone growth. If any of the younger animals in the

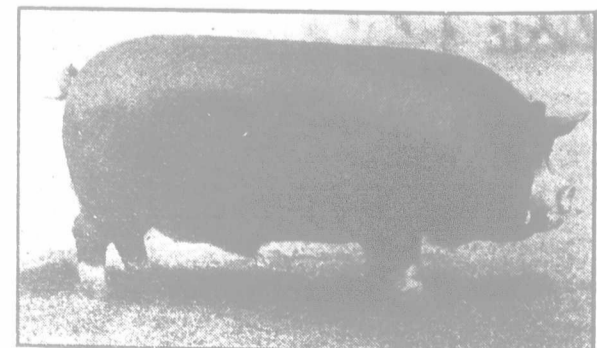
show herd were inclined to be a little weak in the feet or pasterns, I would buy one hundred pounds of finely-ground bone meal or bone dust and mix it with the mineral matter, or even add it in small quantities to the slop feed.

Much care should be taken in fitting the show herd not to break them down, and as a help in this matter, as well as in keeping them in better condition, it is necessary that the show herd be given some special exercise other than that which they will naturally take in their enclosure. By taking the three older boars out each day and driving a half mile or more you will not only have them under perfect control, but will also have them in a condition to show at their best when driven in the show-ring, and the same is true of the show sows, and even the under-a-year herds.

We have all noticed, while standing about a show-ring and watching the animals come in from their pens, that many of them, while in good flesh, are not really in show condition, for the reason that they cannot walk with ease and grace, but wobble around. A show animal should not be so heavily loaded with fat as not to be able to walk with ease and comfort. It is not always the amount of flesh that an animal is carrying that makes it show at its best, but the smoothness in which it is put on, and the ease with which it is carried.

It is my opinion that what is known as "strong breeding condition"—i. e., flesh enough to round out every point without overloading—is the proper show condition.

What I have said about the feed to be used in fitting the show herd need not be considered as an absolute iron-clad rule. Any of the mixtures of grain, grasses,



Berkshire Show Finish.

etc., that is all that among w The real and not ar

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etc., that will come close to being a balanced ration is all that is necessary. I merely name these feeds as among what we have found to be the most satisfactory. The real object is to feed what will flesh them rapidly and not add too much fat, but more red meat or flesh.

Other Things Necessary Besides Feed.

While fitting the herd for the show-ring they should be handled daily by the feeder, by brushing them a little or scratching them and coaxing them to lie down where he can handle them about the legs and feet, so that when you are ready to trim the toes and hoofs into nice shapes they will not get excited, but will lie quietly and let you work over them as you wish.

The foot and pastern of the show pig can be improved one hundred per cent. by proper trimming. When the pig is lying down, quietly take the foot in the left hand and with a very sharp knife trim the lower edges of the hoof, commencing well back and following around the entire hoof, shaping the toe up as close as possible to the fleshy part of the foot without injury. If the dewclaws are of unusual length, these too can be shaped up at the bottom and pared down to proper shape. All this work should be done at odd times before starting out to the fair.

A nice brushing every day or two after sprinkling with disinfectant and crude oil is very essential, not only to make the show herd quiet and docile, but to improve the condition of the skin and hair. All this is a help in shedding the old coat. The earlier this is commenced in the preparation of fitting a show herd the better. Every animal except the under-six-months pigs should shed off his or her old coat not later than the first of August, that the new coat may be nicely started before the fair season opens. Generally all this will come along in due time if the animals are fed as above and are gaining in flesh constantly. If any of the herd should not begin to show an inclination to shed by the middle of June or the first of July, I would give them a wallow hole in which some clay has been placed, if it is not naturally a clay soil, keeping this hole rather thick in mud, and adding some wood ashes.

Many showmen are in the habit of clipping the hair of their older animals when they do not shed off in time. While this, in some instances, looks better than an extremely coarse coat of hair, it always shows every little unevenness in the flesh of the animal.

Before entering the show-ring, or as early after arriving on the fair grounds as possible, the herdsman should take a hand clipper and clip the long hairs off the edges of the ears and about the nose and jaw of the hogs, and also clip the tail clean from the brush back to the tail head, giving a much more finished appearance to the animal than though this was neglected. The above suggestions properly followed, and the bringing of the herd to the shows in a thoroughly docile, well-mannered condition, add much to their credit while in the show-ring. It is pretty hard for a judge to properly examine an aged boar, or one even younger, if he is brought into the ring with four or five men, each bumping him around with a short hurdle—the boar certainly is not showing to the best advantage.

Dressing.

A nice dressing to use after the hogs are fitted and in show condition, before entering the ring, is made as follows: Take a good quality of cottonseed oil, adding enough wood alcohol to thoroughly cut and make a nice, thin, easy-running dressing. After the hog is thoroughly washed and his skin is clean, apply with a brush and rub it in thoroughly. One of the most detestable dressings that I have ever come in contact with as judge at the great shows is made of oil and lampblack. The animals as they come into the show-ring are not only a mass of grease and lampblack, but the attendants are about as badly blacked up as the hogs, and before the judge is half through he is also more or less greased up. I have known of cases where the judge had to send his clothes to be cleaned each night, or put on a clean pair of overalls each day. All that is necessary as a dressing is something that will make the hair glossy and yet not be gummy.

Exercise on the Show Circuit.

The good herdsman and caretaker does not lie in bed until late in the morning, but is up early and has his show animals out on the grass somewhere about the fair grounds, and drives them around for an hour until each animal is thoroughly emptied out and has had proper exercise.

Handling the Show Herd While in the Ring.

The proper fitting and handling of the show herd before it starts out on the circuit will prevent much trouble in handling the animals in the ring. With the herd properly trained, there is nothing with which to handle them compared with a buggy whip, in the hands of a man who has sense enough not to whip the hogs, but quietly touch them on either side of the head to place them where he wishes. As a matter of fact, this has been my experience in the many years of handling show hogs. I never need a hurdle with our hogs. With some breeds it is absolutely necessary to have a hurdle in handling a mature boar, even though he is supposed to be well-mannered and docile, but there is no excuse in using a hurdle with a bunch of sows if they are half-way prepared before starting on a circuit. When a hurdle must be used let it be a light one, and made so that the hog cannot see through it. Don't make it of narrow slats a few inches apart, but cover it with heavy material, or else make it of boards tightly matched so there can be no seeing through it. When in the ring with the herd or a single animal, show to the best possible advantage. The showman has the privilege.

Be Careful About the Feeding While on the Show Circuit.

Many exhibitors seem to think that when they start out on the show circuit they must stuff the animals with all the feed possible, not only during the time they are on the cars going to and from the shows, but each day while on the grounds. It has been our experience that the man who follows this custom generally arrives home with his hogs much lighter in weight than when he started out, while if the hogs had been given only water to drink while en route to the shows, and fed lightly for the first day after arriving, and given plenty of exercise, they would wind up the circuit in much better condition than if they had been stuffed all the time.

I have known an exhibitor to buy warm milk from some of the dairymen and feed his pigs all they could hold, though they had never had a drop at home while being fitted. This generally results in a case of scours, with the pigs "off feed" for several days, and by the time they go into the ring they are badly gaunted up. Of course, if the pigs have had this ration at home it should be continued. Avoid radical changes in the rations.

Spring Crop of Lambs and Pigs on University Farm.

Dean Rutherford, of the College of Agriculture, University of Saskatchewan, reports very good results with the lambs and pigs on the University farm. "In view of the many breeds of sheep and swine that it is necessary to keep at a state or provincial agricultural institution," said Dean Rutherford, "success has again attended the lambing and farrowing periods at the University."

"The breeding flock of sheep gave perhaps a better account of itself last year than it has this season though one or two breeds, notably, the Shropshires and the grade flock, have surpassed any records previously



Prince of Jesters.

An Aberdeen-Angus winner in England.

made. The Shropshires which total in the neighborhood of 60 breeding ewes have given a lambing percentage of approximately 140 per cent. A small flock of grade ewes have made a similar showing. Hampshires and Suffolks have this year fallen away from previous records due primarily, it is believed, to the fact that several sheep were added to these two breeds last year from flocks that made the western fair circuit. Being heavily fitted for show, these ewes were undoubtedly too fat to be in the best of breeding condition. They gave birth to lambs all right but in many cases the lambs were weak, some were slightly goitred and others were born dead. Good feed and ample exercise had been provided throughout the whole season so the trouble cannot be traced to that quarter. Anyone raising sheep must see to it that his breeding flock does not become too fat during the winter months.

"The swine have done exceptionally well this year and it is doubtful if a finer, stronger lot of pigs ever scampered through the University hog paddocks. The three breeds, Tamworth, Yorkshire and Berkshire, are well represented, there being all told about 210 little fellows from 1 to 6 weeks old. Many of these will soon be weaned and about 80 or 90 will be sold to farmers throughout the country as weanlings. 26 sows are the mothers of the 210 pigs remaining alive, giving an average of 8 pigs per litter. The Yorkshires, as the following table will show, have again proven their prolificacy.

Breed	No. of Sows	Pigs Born			Died from other causes	% Pigs born alive	% Pigs raised	Aver. raised per sow
		Alive	Dead	Total				
Yorkshire.....	11	137	4	141	26	97.15	81.02	10.09
Tamworth.....	6	50	10	60	3	83.3	94.00	7.83
Berkshire.....	9	65	6	71	18	91.55	72.30	5.22

"The 26 sows were of different ages, from 1 to 6 years and this season's result combined with similar experimental figures for the past three years lead to the conclusion that sows from 1 to 3 years old give the best average results, make the best mothers and yield the greatest profit.

"A great deal of the credit for these gratifying results is due to those men caring for the sheep and hogs on the University Farm. Their patience, regularity, attention to detail and watchfulness count here just as much as any place. And when the whole thing is summed up there is really no excuse for any farmer remarking as one often does that he 'never did have any success with pigs anyhow.' That same man may surprise himself some spring if he just determines to make good."

THE FARM.

The Triumph of Protectionism.

BY W. D. ALBRIGHT, GRAND PRAIRIE, ALTA.

Largely shrouded in mystery as the industrial strikes still are to most of us on the fringe of inhabited Canada, we gather that a large part of their support is grounded in the high cost of living. When we are soberly informed by returned soldiers, and others, that it costs a man two and a half dollars a day to live decently in a Canadian city, and when Canadian-born veterans seriously consider the idea of returning to France to engage in reconstruction work there, claiming that though wages are lower, yet the cost of living is so much less that they have a better chance of making headway as laborers in that war-stricken land than in Canada, it makes one think.

Discount these statements heavily if you will, there remains an obstinate nubbin of fact to digest. When a vigorous young country like Canada, which, though participating actively in the war, yet in another way profited commercially through it, finds its people struggling to make ends meet and Bolshevism raising its malignant head, it may well lead us to reflect on the causes which have produced these results.

Let me make my own position clear. I am a radical, but a determined opponent of anarchy. I believe in education reinforced with the ballot as a means of effecting reforms. Never before were these agencies so potent as to-day. I deprecate wholeheartedly the violence and waste and bitterness of strikes, and particularly deplore their occurrence at the present critical juncture. To borrow an apt phrase, I believe in evolution rather than revolution.

This article, therefore, is not written to condone the revolutionary motive behind the big strike. Its purpose is to analyze briefly the causes of the ferment.

An immediate cause is the high cost of living. The other day a soldier showed me a very common, rather cheap-looking suit of clothes, he had bought in Toronto for forty-five dollars. Before the war it would have been worth about fifteen. Any relation, I wonder, between this disparity and the recent unblushing admission of a Quebec clothing manufacturer that his dividends had mounted from in the neighborhood of seven per cent. before the war to seventy-two per cent. in the latter year of it?

In a recent contemporary, Capt. Lattimer remarked that when a returned soldier, who has been receiving a dollar-ten a day, goes into a Greek restaurant in Toronto and pays forty cents for a piece of pie and a cup of coffee there is bound to be trouble. No wonder.

Needless to amplify. The cost of living as measured in terms of our old denominations is scandalous. Why so high?

Undoubtedly the dollar has depreciated in purchasing power. Measured in terms of goods, its equivalent value has declined. Undoubtedly, also, we are paying the piper for a riotous era of national, provincial, municipal and individual extravagance. We have been borrowing prodigiously, and the interest charges bear heavy upon us through devious channels whose courses we do not always perceive. Then again, we are all paying a heavy annual tribute to the landlords of city real estate who indirectly levy upon all of us and confer no value whatever in return. They control and exact rent for space which nature provided, and which the collective effort of the people makes valuable. Here are at least two heavy drains upon our incomes, viz., interest on debts and rentals exacted by landlords of city building space. But these items are not all.

This much I do know: The average cost of what we buy right here in Grande Prairie is out of proportion to the price of what we sell, and the disproportion is increasing.

It is commonly bruited—and I think it should be very thoroughly investigated—that profiteers are holding foodstuffs in storage for exorbitant prices, and that the Government is behind them. Whether that be true or not, we are convinced that a radical lowering of customs tariffs would go far to work automatic relief.

Numerous abuses lurk behind the shelter of that devious old tariff wall. It gives moneyed men a great opportunity to prey upon the consuming public. Canadian manufacturers who compete with American firms on equal terms in Europe claim they cannot compete in the home market without a twenty or thirty per cent.

tariff protection. What is that but a chance for profiteering? Our whole industrial and commercial system has been built upon a false bottom of that kind. The farmer, who cannot be effectually protected, sells his products at prices regulated by values in the open markets of the world. He buys what he requires in a market controlled by tariffs in the interest of rich men and profiteers. Free trade is fair trade. It is up to those who desire any exception to show why it is needed in each particular instance. To this end they should be obliged to open their books and plants to public investigation.

Ever since tariff protection was instituted as a fixed policy in Canada, we have been told that it was necessary in order that we might build up cities and achieve a well-rounded commonwealth. As time passed, this idea grew into a sort of assumption on the part of the beneficiaries of protection that big cities, affording opportunity for clever men to make fortunes, were about all that really mattered much in the scheme of nation building. Without putting it into bald language, they came to regard farmers as a class of yokels and artisans as bohunks. The really worth-while elements of the population, in their eyes, were the club, limousine and theatre-box class. The rest of us constituting a sort of inferior-caste, necessary to furnish the working basis to support the aristocracy and plutocracy in their estate of privilege. These comments are not tinged by bitterness. I am not driving at any one. I am simply interpreting a point of view which I have found not only among the would-be upper ten, but also among the so-called lower classes as well. I remember very well as a boy feeling chagrined and jealous to reflect that Canada could not boast as large a proportion of millionaires as did the neighboring Republic. Patriotic ambitions led me to covet an era of "Big Business" for Canada as an attraction to hold Canadians of genius within our own country. If I, as a poor boy, could covet such opportunity for my fellow Canadians, is it any wonder that they should think it quite the proper thing?

Well, time has modified my judgment. I still believe that it is desirable for a country to make some little sacrifice in order to be reasonably self-contained. The situation of the Allied countries with respect to the dye industry at the time war broke out illustrates why. But nature did not intend Canada to be wholly self-contained, and it would be suicidal for her to attempt to become so. Yet Protectionism aims precisely in that direction.

And I no longer regard rich people as so very desirable to a nation. We are coming to a pass where it is regarded as rather coarse and vulgar to be excessively rich, and that way of looking at the matter will gain headway as time goes on. Ruthless self-seeking, combined with ability, will amass wealth, but the time is coming when the man who has gotten rich that way will be as much in disfavor as the ruffian who extracts money from people with a club. The club of special privilege is a little more refined in method than the club of physical violence, but no more defensible from an ethical standpoint.

Have we not been proceeding about long enough on the old trail? We have been sacrificing the rights and interests of the farming class to build up cities. The cities have been populated rather largely with aliens and now these are tincturing the whole with the poisonous contagion of Bolshevism. The cities we have sacrificed so much to build have become such magnificent triumphs that a poor man can hardly live in them, and returning soldiers have to unite and force traitors out of jobs in order to find employment at all. Even then their wages are absorbed by the excessive cost of living. What a triumph for the National Policy! Surely the apostles of High Protectionism should rejoice over the temples they have raised to their god.

High Protection fosters Privilege.

High Protection hampers the occupations for which a country is naturally adapted in order to bolster up those for which it is not adapted.

High Protection tends to extravagance and waste.

High Protection burdens the many to enrich the few.

High Protection spells special privilege, and should be clearly justified by those who claim it.

High Protection cannot protect the Canadian farmer to any important extent.

Protection breeds plutocrats.

High Protection has built up cities where poor men cannot afford to live.

It is time for a change.

High Protection must go.

The Fall Wheat Harvest.

At time of writing considerable fall wheat has been threshed in Southwestern Ontario, and the results are somewhat disappointing. Towards the end of June the dry weather was not being so badly felt as later, and the prospects were for yields ranging from 30 to 40 bushels per acre. However, rain was not forthcoming; days of hot weather grew into weeks, and the kernels did not fill. The ultimate results, as told by the threshing machine, have been yields of 15 to 25 bushels per acre where 25 to 35 bushels were expected only a couple of weeks prior to cutting. The sample is not as plump as one would like, and, in some cases, has not weighed up to the standard per measured bushel. On the whole, however, the fall-wheat crop has been good, compared with the spring grain in many localities.

Land intended for seeding to fall wheat this autumn should be turned over, rolled and harrowed or cultivated. A loose, moist seed-bed is essential to a good start, and ample growth in the fall to give a strong, vigorous

top is very important. Of late years we have seldom seen a field of wheat in the fall with too much top, and for every case where lack of success is due to too much top there are 99 cases where it is due to lack of vigor and growth in the autumn.



A Veteran Flax Puller.

He was 70 years old when photographed and had pulled flax for 50 seasons.

CANADA'S YOUNG FARMERS AND FUTURE LEADERS.

Profit From Your Neighbors.

Not long ago the writer was present at a meeting where the subject of introducing pure-bred live stock was being discussed. The scrub bull and his evil effect upon progress in live-stock development was under fire, and the opinion was expressed that it would be necessary for the Government to join with all the farmers who realize the superiority of pure-breeds over grade or scrub stock, and put on a strong publicity campaign in order to show up to the fullest possible extent the baneful influence of these clogs in the wheels of progress. The normal rate of improvement was described as too slow and, as one speaker put it, "we must try and crowd into the next twenty-five years of agricultural history as much live-stock improvement as would normally require about 350 years." Everyone agreed that this would be very good if it could be done, but one speaker differed somewhat in point of view, and thought the surest form of progress was the slowest. He gave it as his opinion that personal influence within each community would be most effective, and instanced the case of a farmer who six years ago made a small start in pure-bred cattle. His neighbors thought him foolish at the time, but have since adopted pure-breeds themselves in several instances. Of course, improvement of stock and general farm practice by this method is slow, but it is the normal method. Most of us are willing to profit by some success of our neighbors if we find out that they have been successful, and if we have the enterprise to adapt their success to our own conditions. The great trouble with a lot of us is that we make slow progress because we are either too independent to take advantage of some idea that a neighbor has found profitable, or too unobservant to see its value.

Not long ago a farmer living in a district we know very well fertilized part of a grain field with very marked results during the growing season. Of all his neighbors, only one that we know of took any real interest in this experiment, which was an unusual thing in the neighborhood, and the chances are that very few farmers in the locality benefited from this test during the succeeding years. Another man in the same neighborhood moved on a badly run-down farm on which was a good-sized orchard. He immediately made the care of that orchard an important part of his work, at the same time growing crops of grain equal to or a little better than his neighbors. In the course of a year or two he bought a good family automobile from the proceeds of the orchard, but the orchards on neighboring farms are no more profitable than before, notwithstanding the fact that most of them are planted to good varieties and are on equally good soil.

Now it doesn't make any particular difference what line of farming one is engaged in, the opportunities of picking up valuable hints here and there are as good in one line as in another. No farm can be worked to itself, without regard to what is being done elsewhere if the greatest success is desired. Nothing will prove this quicker than a farm management survey. If one happens to be in one of the few districts where surveys have been conducted, there is a great deal of valuable information to be gleaned from a good analysis of the results. When each farmer, whose record for a year has been taken, gets a copy of his own year's business and compares it with the average of similar farms in the district, there are few who cannot see some room for improvement. One of the very good innovations noticeable during the last two or three years in farming districts is the farmers' automobile trip through other sections of the province (usually through one or more adjoining counties) in order to see what other farmers are doing, and pick up what ideas it may be possible to glean by the way. If one is really looking for helpful pointers it is next to impossible to take a drive through the country without gathering in some useful idea; and there are few useful ideas that are not profitable, either directly or indirectly.

Young farmers should be particularly alert to pick up hints from other farms. There are few successful business men who do not keep a pretty close eye on what their competitors are doing so as to stop any little leaks in their own business. Farmers do not enter into competition with each other to the same extent, but at the same time there are ways of operating a farm that are more successful than others, just as there are ways of operating a manufacturing business that are more successful than others.

No farmer of to-day can afford to disregard the successes or failures of his neighbors. Time spent in studying what others in the same business are doing is never profitless, provided one tries to put into effect new ideas that seem applicable to one's own conditions.

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

The Farm Machinery.

In order to farm to-day it is necessary that a considerable sum of money be invested in the machinery to do the work when it should be done. There was a time, when labor was plentiful, that much of the work was performed by hand. As labor became scarce, however, the inventive genius of man produced and perfected machines to expedite the work and relieve man of much of the arduous labor on the farm. Now a lot of expensive machinery is to be found on practically every farm, and this is used but for ten days or two weeks in the year. Some of this machinery would last a lifetime if it were given proper care, but if neglected it is shortlived, and, figuring the cost over a period of a few years, becomes expensive. It is rather significant that one man will have a binder in use for from twelve to fifteen years, while his neighbor finds it necessary to secure a new one every five or six years. Both machines may cut practically the same acreage, and the difference in the length of life is in the care and attention given. Keeping the machine properly oiled is important; oil is much cheaper than repairs. Then, too, it is essential that a machine such as the binder, mower and hay loader be gone over every day and the bolts and nuts tightened. One part becoming loosened not only puts greater strain and wear on that part, but affects other parts as well. Then there is the housing of machinery. Undoubtedly the elements do more towards wrecking many machines than does the work actually performed. The sun soon checks the wooden parts, causing the bolts and castings to loosen. Rust is rather a slow-working agent, but it is, nevertheless, very destructive. Where possible the machinery should be kept under cover. Many farmers have a driving shed built so that they can easily back the machinery into it. The implements are brought to shelter every night. It is found as easy to hitch on to them in the shed as it is in the field, and the implements are kept looking as good as new for many years. An implement shed is rather an expensive structure to erect at the present time, but implements have also doubled in price in the past few years. The lengthening of the life of the implements would soon pay for the cost of erecting a suitable shed. However, we cannot always do as we would like, but in the case of the farm implements it is advisable to keep them under cover as much as possible when not in use.

It will pay to oil the working parts of the machines before they are put away, and, if time will permit, both the wooden and iron parts should be gone over with paint. This not only improves the appearance but prevents deterioration. Altogether too many fail to take time to clean the implements when through using them, let alone oil and paint them. It is necessary that more attention be given to such details in order that the net revenue from the farm may be increased.

Practically everyone who has had much to do with farm machinery will have found, on taking the implements out in the spring or summer, that parts are badly worn or broken, and bolts and nuts missing. It is a good plan to make a memorandum of things needing repair, before they are stored, so that attention may be given in time to have them in condition when next they are required for use. Many will intend making the needed repairs before the following spring, but the

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memory is sometimes weak along these lines, and the best of intentions fail to be put into effect. The safer plan is to make a note of the repairs needed. There are odd times during the winter when such work can be done, and much time may be saved when the busy season opens up.

THE DAIRY.

At the first annual sale of Minnesota Holsteins, 76 head sold for a total of \$217,795, or an average of \$2,865. The highest previous average was at the National sale at Milwaukee in 1918 when the average was \$2,430. These are high averages and testify to the gaining popularity of the pure-bred.

For the months of March, April and May 76 Ayrshires completed the yearly test in the American Ayrshire Advanced Registry. Their average production was 10,250 lbs. milk, 412.66 lbs. fat, and an average milk test of 4.03 per cent. Thirty-eight mature records averaged 11,406 lbs. milk.

"Bonnie" is the Ayrshire cow leading the mature class for Ayrshires in R. O. P. tests from May 1 to July 7. She gave 10,740 pounds milk, testing 3.92 per cent. fat, or 421 pounds fat in 365 days of milking. Harley Princess gave 9,712 pounds milk, testing 4.5 per cent. fat, or 437 pounds of butter-fat in the same length of time.

Between June 1 and 30, 28 Holstein cows and heifers qualified in the Record of Merit. Pietertje Car Born De Kol heads the list with 760.9 lbs. milk and 31.01 lbs. of fat in seven days. A stablemate, Pontiac Cornelia Pietertje, was first in the senior four-year-old class with 25.24 lbs. fat. The leading cow in the junior four-year-old class was another stablemate. She was Belle Model Pietertje 2nd., with 462.1 lbs. milk and 21.9 lbs. fat. From the same herd came the two leading cows in the junior three-year-old class, in Echo Griselda De Kol with 21.91 lbs. fat, and Lady Pontiac Allie with 21.1 lbs. fat. Patti Belle De Kol headed the senior three-year-old class with 479 lbs. milk and 22.27 lbs. fat. In the senior two-year-old class, Claremont May Alcartra was first with 16.34 lbs. fat. Eighteen junior two-year-olds qualified, with Rose Echo Segis in first place with 21.17 lbs. fat. Only nine cows and heifers qualified in the R. O. P. test during the month of June; six of these were in the mature class, which was headed by Jemima Johanna of Riverside with 30,373 lbs. milk and 1,024 lbs. fat.



A Real Crop on a Well-kept Farm.

Large Shipment of Canadian Ayrshires.

The breeders of pure-bred Ayrshire cattle in Canada will be interested in the photograph on the next page, which shows part of a shipment of ninety-one registered Ayrshires, purchased in the Province of Quebec, for the Steybrae and Penobscott ranches at St. Mateo, California. Secretary Stephen of the Canadian Ayrshire Cattle Association is authority for the statement that this is the biggest deal in Ayrshire stock that has ever gone through in Canada, representing a total sales price of over \$25,000, or an average of over \$275 per head. The shipment was sent by express from Huntington, Que., on July 7, and it is hoped that as the animals were uniformly true to Ayrshire type and were good-sized commercial cows they will increase the popularity of Canadian pure-bred cattle on the Pacific Coast. Among animals included in the list were Maple Leaf Lily, Willowhaugh Spicy Jean, Willowhaugh Dolly Gray, Auchenbay Jean Imp., Burnside Miss Courtney, and a large number of others of individual merit. Included in the purchase was a group of calves sired by

Auchenbrain Timekeeper. Thirty of the cows included were daughters of Vaudreuil Pride 3rd., a son of Auchenbrain Pride Imp.

Hand vs Machine Milking.

The Dairy Husbandry section of the Michigan Experiment Station has made some extensive studies in the cost of milk production, according to a bulletin of the Michigan Agricultural College. Accurate figures were kept throughout the entire year with ninety-three herds, in districts that supply milk to condenseries in the state. Some interesting information was given by way of comparing hand-milking with milking by machine. Forty-two of the herds of which record was kept were handmilked, and fifty-one machine milked, so that the figures given herewith should afford a fair comparison. The accompanying table and the following paragraphs are taken from the bulletin mentioned.

"Milking is one of the largest items of labor in connection with milk production, and a study of the two methods of milking is of interest as well as of practical significance. Since considerable extra time and labor is involved where milking machines are used, in washing and caring for the machines themselves, it is obvious that these items should be included in order that a fair comparison might be made.

	Hand milked	Machine milked	Machine Milked	
			15 cows or less in herd	Over 15 cows in herd
Total number of herds.....	42	51	17	34
Average number of cows per herd.....	13.6	18.2	13.06	20.75
Hours milking, per cow per year.....	89.25 hrs.	57.91 hrs.	65.23 hrs.	55.61 hrs.
Care of milk and utensils per cow per year.....	11.19 "	13.37 "	14.71 "	12.95 "
Total time per cow, per year.....	100.44 "	71.28 "	79.94 "	68.56 "
Hours milking per 100 lbs. milk.....	1.26 "	.91 "	.99 "	.88 "
Care of milk and utensils per 100 lbs. milk.....	.16 "	.21 "	.22 "	.21 "
Total time per 100 lbs. milk.....	1.42 "	1.12 "	1.21 "	1.09 "

"The table shows that the average time spent in milking and caring for the milk and utensils in the 42 herds milked by hand was 100.44 hours per cow per year, as compared to 71.28 hours, the average time in 51 machine milked herds. The figures show that the extra time required to wash and care for the machines is made up many times in the greater speed of milking with machines. A saving of 29.16 hours per cow per

When Pasture Gets Poor.

We have now reached the season of the year when pastures regularly become short and farmers are usually hard put to it to find enough grazing for their cattle. Farmers who have been able to find substitutes during past years for their regular pastures during the hot, dry season will be able to agree with a prominent live-stock writer who says that "Our stockmen will never be worthy of their calling, nor their flocks and herds yield their best returns until ample provision is made against drought-ruined pastures in summer." This is based upon the fact that dairy cattle, in particular, need an abundance of succulent feeds. These feeds have a cooling and somewhat laxative action, by which aid the digestive tract of the cow is maintained in good condition. Moreover, succulent feed, such as rich grasses with plenty of moisture, are very palatable and serve to whet the appetite of the animal. During the early part of the summer, when the pasturage is good and when the grass is rich and green, nothing can be more ideal for dairy cattle than to be turned out on pasture. Most dairymen realize this to the fullest possible extent and utilize pastures as much as possible. But in a great many dairy districts it is difficult to get pasture throughout the entire summer season. Information supplied by the Dominion Experimental Farms says that "usually, good returns are obtained by supplementing the pasture with concentrates, soiling crops and other feeds," and mentions the fact that of late years a number of dairy-

men are using silage as a supplement, while still others confine their cows to the stable and feed silage entirely. This, in fact, has been done at one of the experimental farms in British Columbia, where it has given good results although "it seems an unnatural way of handling cattle." When this is practiced we find that during the hot weather the cows are put into paddock at night to exercise while during the day they are kept in a barn with screened windows. In cool weather they are allowed out in the pasture, and by handling them in this way it is stated that little trouble is experienced from flies or heat. In 1918 a fifty-day trial was carried on in which pasture versus silage were compared. We are told that it required very good grass to pasture one cow per acre for six months of the year, while a crop of corn at the rate of fourteen tons per acre, and made into silage, will feed two cows for six months. Naturally, therefore, the superintendent of this farm comes to the conclusion that "the big factor in favor of silage feeding as compared with pasture is the fact that the former method allows of more intensive farming, and consequently a greater number of cows per acre may be maintained." In the trial mentioned above, however, pasture feeding gave the best results from the standpoint of production, ten cows on pasture giving more than 2,000 pounds more milk in the same period than another lot of ten cows fed silage. Estimated at two dollars per cow per month for pasture, and five dollars per ton for silage, the milk from silage-fed cows cost 52 cents per hundred pounds more to produce. Grain was fed to both lots in the same quantity. We are called upon to remember, however, that in this test the time was early summer when the pasture was excellent and flies had not become troublesome. Nevertheless, the conclusion reached from this experiment was that "if good pasture is obtainable it is to be preferred to silage for feeding dairy cattle, but if good silage is on hand it may be used with excellent results to supplement the pasture at such times as the latter may prove unsatisfactory."

In this connection experimental work done at the Ontario Agricultural College, in 1915 and 1916, is worth noting. Fifteen high-producing cows were fed in the stable during June, July, August and September, under what might be termed winter conditions. During the same months thirty-two cows of only average ability were pastured, with some grain in addition. Both groups of cows were in a position to average up about the same, so far as length of time and milk were concerned. The cost of feed was calculated and was charged up at the actual market price for all that was purchased, and at slightly less than the market price for that grown on the farm. The results showed that it cost 45 cents per hundred pounds of milk for feed alone on pasture, and 86 cents per hundred pounds for the cows in the barn, or a cost of 22 cents per pound of butter-fat for the latter group and 11 cents for the former. We are told, also, that "if labor had been also taken into account the results would have been much more marked in favor of the pastured cows."

Henry and Morrison compare summer silage with soiling crops, as a means of overcoming the shortage of pasture in dry seasons, and state that at the Wisconsin Station a silage ration was as efficient as that containing soilage in the production of milk and butter and also that it was far cheaper and more convenient.

They also state that corn and sorghum return greater yields of nutrients than many of the crops it is necessary to include in a soiling system. Bulletin 253 of the Ontario Agricultural College gives the same conclusion, but states that both systems are difficult to apply to many farms on account of labor conditions, so that an annual pasture mixture is recommended consisting of one bushel each of wheat, oats and barley, and seven pounds of red clover per acre. It is stated that during 1916, when the summer was very dry and hot, seventy-seven head of cattle were pastured on thirty-four acres of this annual pasture, and thirty-six acres of permanent pasture, from the first of June till last of August. No silage or other coarse feed was fed, but the milk flow of dairy cattle and the growth of beef cattle and young stock were kept normal during that time. From the last of August to the end of the season about half the stock was carried on this same area.

Cheese in the Diet.

It has been stated that the total consumption of cheese in the United States is about 300,000,000 pounds, or somewhere in the neighborhood of 3 pounds *per capita*. Canadian statistics would seem to indicate that the consumption of cheese *per capita* in Canada is also approximately 3 pounds. Our total make in 1917 was 194,904,336 pounds, and we exported 172,620,000 pounds. Cheese is a staple food in many countries, and apparently increases in consumption as the population becomes more dense. It is stated, for instance, that France, with about one-half the population of United States, produces and consumes about the same amount of cheese.

Cheese is a rich food, containing both fat and protein in appreciable quantities, and is low in carbohydrates. A bulletin of the United States Department of Agriculture says that "Cheese has nearly twice as much protein, weight for weight, as beef of average composition as purchased, and its fuel value is more than twice as great. It contains over 25 per cent. more protein than

gators in the United States, to recover the living organism of tuberculosis from cheese five months old, but this danger is much greater, if it does exist to any particular extent, from comparatively fresh cheese. The only point to be emphasized in this connection is that cheese should be made from thoroughly pasteurized milk, which would remove all danger of tuberculosis. In addition, there are, we understand, two forms of cheese poisoning which occur, but which can be prevented by the careful handling of the milk so as to reduce the number of bacteria which can gain entrance to it. Pasteurization should, of course, be introduced for this reason also.

With regard to the care of cheese for consumption in the home, and the proper place in the diet, the following paragraphs are quoted from Thom and Fisk:

"It has already been noted that cheese is used in general in two ways—in small quantities chiefly for its flavor, and in large quantities for its nutritive value as well as for its flavor. Some varieties of cheese are used chiefly for the first purpose, others chiefly for the second. Those which are used chiefly for their flavor, many of which are high priced, contribute little to the food value of the diet, because of the small quantity used at a time. They have an important part to play, however, in making the diet attractive and palatable. The intelligent housekeeper thinks of them, not as necessities, but as lying within what has been called 'the region of choice.' Having first satisfied herself that her family is receiving sufficient nourishment, she then, according to her means and ideas of an attractive diet, chooses among these foods and others which are to be considered luxuries. Those cheeses, on the other hand, which are suitable to be eaten in large quantities, and which are comparatively low priced are important, not only from the point of view of flavor, but also from the point of view of their nutritive value.

"One of the best ways of keeping cheese which has been cut is to wrap it in a slightly damp cloth and then in paper, and to keep it in a cool place. To dampen the cloth, sprinkle it and then wring it. It should seem hardly damp to the touch. Paraffin paper may be used

tion. The improvement of the health of the poor, especially the children, must be attended to at once. Printed propaganda will reach only 10 per cent. of these people at most. It is up to the dairymen of the country to do their share in this matter, and to help educate the people up to the value of dairy products. Investigations in New York City show that 20 per cent. of the people, young and old, are suffering from malnutrition. This does not mean insufficient food but rather bad selection. Experiments have shown that the type of diet which fails with animals also fails when adopted by human beings.

Dr. McCollum asked the members to give him their best assistance in his work. "It is up to the individual as well as the organization to demonstrate this important principle among the poorer elements in city, town or village, where the people live too much upon cereal foods. Observations of these communities should be made, and proper demonstrations prepared, showing the greater value of milk and other dairy products as builders-up of the human system." The speaker said he was interested in this movement from the public health standpoint. Members of The Holstein-Friesian Association are interested from the same point of view, plus the financial part.

In reply to questions as to the ideas of the foreign-born element in regard to food, Dr. McCollum stated that these people were not inclined to stint themselves, but they made the great mistake of not buying the essential foods—milk and butter—in sufficient quantities. There should be a milk route in every poor quarter of all our large cities, and the foreign-born people should be educated to the necessity of using milk as one of their chief articles of diet. This education must be given to children of these people, as it is only through this source that the coming generations in America can be developed into healthy, well-nourished citizens.

Market Clean Milk.

EDITOR "THE FARMER'S ADVOCATE":

If an insurance agent was asked "What is an insurance policy?" and could not answer, people would be surprised; yet if a dairyman was asked "what is milk?" how many are there who could answer correctly? The majority would say "what we get from the cow." The dictionary tells us milk is a whitish fluid secreted by certain glands in female creatures. As we are principally concerned with cow's milk, we will consider it more fully.

The average composition of cow's milk is: Water, 87 per cent.; fat, 3.5 per cent.; casein, 3.25 per cent.; albumen, .50 per cent.; milk sugar, 5 per cent.; ash, .75 per cent. The composition varies, however, with the individuality of the cow, period of lactation, and exhaustiveness of milking. As the fat content of milk is important to the farmer, we will consider this first.

Fat is present in milk, in the form of globules, about 1/5000 of an inch in diameter, which are composed of several separate fats, the principal of which are palmitin, stearin, butyric and olein. These globules are lighter than the milk serum, so that when subject to the force of gravity they rise to the top; or when subject to centrifugal force, as in the case of a separator, the fat is forced towards the centre. There is, however, a distinct difference between the terms milk fat and butter, as the former consists of the pure, dry fat and the latter—milk fat, together with a certain amount of water, salt and casein. The percentage of fat contained in milk is determined in Canada by the Babcock test, which roughly consists of adding sulphuric acid to a certain amount of milk. This burns up the milk solids, the mixture is then subjected to centrifugal force which causes the fat to rise to the top.

Casein, in a pure form, is a grayish white powder and plays a very important part in cheese making. It is also used commercially in the manufacture of imitation ivory, buttons, etc. Albumen is nearly the same substance as the "white of egg" and is of about the same composition as casein. When milk is boiled the coagulum or "scum" which forms on the surface is albumen. Milk sugar, in its pure state, resembles confectionery sugar in appearance, but not in taste. The milk sugar, or lactose, plays a very important part in the manufacture of butter and cheese, as the souring of milk (or cream) is caused by certain bacteria multiplying and forming lactic acid, which acts on the sugar, causing it to decompose, and separates it from the casein and ash. This brings us to the subject of bacteria. Milk, owing to its containing sugar and protein, is an excellent breeding place for bacteria.

The bacteria can be roughly divided into two classes, those injurious and those non-injurious to human beings. The former consist mainly of the typhoid fever, diphtheria, scarlet fever, and tubercular bacteria, and the latter consists principally of lactic acid bacteria. It is these lactic acid bacteria that are principally responsible for the souring of milk, and it has been proven by scientists that if milk could be produced and kept free from bacteria, it could be kept sweet indefinitely. The average farmer cannot produce milk free from bacteria, but it is to his own interests to keep them down as much as possible, so as to keep the milk sweet as long as possible. No dairyman likes to have his milk returned from the factory and by taking a few simple precautions this can be avoided, because milk produced under clean conditions, in a clean, airy stable, will keep a lot better than milk produced in a stuffy, smelly stable, swarming with flies, and with cobwebs hanging all over the place.

A common, though dirty, habit among some dairymen is milking with wet hands. The effect can easily be seen by looking at the hands in the middle of milking and



Part of the Large Ayrshire Consignment Purchased in Quebec for California Ranches.

the same weight of porterhouse steak, as purchased, and nearly twice as much fat." The ash is given as 3.8 per cent., of which a considerable part may be salt. Apparently then cheddar cheese takes a very high rank among foods as to fuel value. In another way it has also been stated that one pound of cheddar cheese contains as much protein as 1.57 pounds of sirloin steak, or 1.35 pounds of round steak, or 1.89 pounds of fowl, or 1.79 pounds of ham, or 1.81 pounds of fresh ham. In energy value, cheddar cheese has even more advantage over these products, with the exception of ham, where the advantage is somewhat lower. Cottage cheese, made from skim-milk, is also a very nutritious food, and, as far as protein is concerned, one pound of cottage cheese equals very nearly, on the average, 1.4 pounds of most of the common meats.

In experiments made as to the digestibility of cheese of several varieties and at various stages of ripening, all forms, to quote Thom and Fisk, "were found to be digested as completely as most of the usual forms of food. Approximately 90 per cent. of the nitrogenous portion (casein) was retained in the body. Unripe cheese in these experiments was apparently digested as completely as the ripened forms. These experiments make clear the possibility of making cheese a more prominent article in the regular dietary than is usual in America. They especially point to the desirability of the use of the skim and partially skim cheeses, which as cheap sources of protein when properly combined with other foods, may be made to replace meats as a less costly source of proteins. Cheese is then to be classed with meat and eggs, not with condiments. An ounce of cheddar cheese, roughly, is equivalent to one egg, to a glass of milk, or to two ounces of meat. It is properly to be combined with bread, potatoes and other starchy foods, lacking in the fat in which the cheese is rich."

So far as cheese in its relation to health is concerned, it is possible, as has been proven by investi-

gators in the United States, to recover the living organism of tuberculosis from cheese five months old, but this danger is much greater, if it does exist to any particular extent, from comparatively fresh cheese. The only point to be emphasized in this connection is that cheese should be made from thoroughly pasteurized milk, which would remove all danger of tuberculosis. In addition, there are, we understand, two forms of cheese poisoning which occur, but which can be prevented by the careful handling of the milk so as to reduce the number of bacteria which can gain entrance to it. Pasteurization should, of course, be introduced for this reason also.

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Milk as a Food.

At the recent annual meeting of the Holstein-Friesian Association of America, held in Philadelphia, Dr. E. V. McCollum gave an interesting address on "The Newer Knowledge of Nutrition." He dealt at some length on the value of dairy products as health-giving and vitality foods for human beings, drawing comparisons between the development and health of the people of various nationalities and showing, beyond a doubt, that non-users of milk and its products are not as healthy and as virile as the peoples of nations that are large consumers of these products.

Among Kansas school children, said the speaker, the effect of a plentiful supply of green, leafy feed and a liberal amount of milk is being successfully demonstrated. The children have responded to the diet in a remarkable manner, increase of weight being a noticeable feature. Sporadic attempts at reaching children in their homes, through the children themselves, have already been made, said Dr. McCollum, but the time has not come for real concerted action. In some communities school lunches consisting of vegetable soup, baked beans, bread and butter have been introduced. This was not a sufficient diet and children failed to respond. Liberal amounts of milk and leafy foods are necessary. The speaker maintained that it was a most shameful condition of affairs when large groups of school children were found suffering from malnutri-

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noticing the dirty milk dripping into the pail. If the cow has got used to being milked with wet hands, a little chemical vaseline can be used. This, besides being far cleaner, is an excellent thing for cows' teats.

The milk-strainer is also a very important thing. This, to be of very much good, should consist of at least four thicknesses of cheesecloth, if a cloth strainer is used, or two thicknesses of cheesecloth, with cotton between them. This not only keeps the visible dirt out, but also a large number of bacteria. If possible, as soon as the cow is milked, the milk should be carried away from the stable into the dairy, because if the milk is poured into a can or another pail in the stable, in passing through the air it is liable to get tainted. Another way a large amount of dirt gets into the milk is from the cow itself, through dirt and hairs dropping into the pails during milking. This can be largely avoided, if time permits, by curry-combing and brushing the cows once a day. This not only has a good effect on the cleanliness of the milk, but is also very good for the cows, as it stimulates the blood and makes the skin soft and pliable.

I have, no doubt, a good many farmers having read so far will say to themselves, "Why should I worry about strainers, or a little dirt in the milk? I get paid just the same for my milk." It is there that they make their mistake. Suppose the milk is sent to a cheese factory. Ask the cheesemaker what is the cause of poor-quality cheese, and he is almost sure to answer "poor quality and dirty milk." Poor cheese does not sell as well as good cheese, nor, if the milk is not good, will the amount of cheese per hundred of milk be as great. Therefore, in two ways the farmer will not get so much for his milk. This not only applies to cheese making, but also to the creameries and condenseries.

Another point to be borne in mind is that if poor or dirty milk is mixed with clean milk, the bacteria soon multiply and effect the clean milk; therefore, by one man in a community not caring whether his milk is clean or not the careful farmers have to suffer, and surely no Canadian farmer wishes another farmer to lose money because he is too lazy or careless to clean up the stable or dairy.

Middlesex Co., Ontario.

E. C. C.

Quality of Cream For Churning.

One of the reasons why creamery butter possesses a greater degree of standard quality and uniformity of grade is that the factors which contribute most to the manufacture of high-grade butter are more easily controlled in the creamery than in the farm dairy. Temperature, for instance, is one of the most important factors, if not the most important factor, influencing the churning process. It is necessary to have the globules of butter-fat sufficiently warm so that they will stick together, but on the other hand if the cream is too warm when churned the butter will be greasy, or there will be a greater amount of butter-fat lost in the buttermilk. If the temperature is too low the cream will whip instead of churn, in which case it is necessary to remove part of the cream from the churn and warm it sufficiently to raise the entire quantity up to the proper temperature. The danger of adding warm water is that some of the butter-fat will be melted, and, moreover, the buttermilk will be diluted. Where a hand-churn is used and the cream tests 30 to 40 per cent. butter-fat, the temperature should be from 56 to 62 degrees Fahrenheit. In the creamery the temperature should be from 48 to 54 degrees Fahrenheit, and cream should be lowered to these temperatures for several hours before the churning actually takes place, so that the fat will have plenty of time to re-crystallize or harden. Careful regulation of the temperature will help along, with other factors, to keep the butter from having a broken grain, and from being greasy. When all the other factors are normal the temperature should be such as will allow the churning to be completed within a-half to three-quarters of an hour.

Rich cream will churn more readily than poor cream, for the simple reason that there is a comparatively small amount of other material in the richer cream to prevent the cohesion of the fat globules and for this reason cream for easy churning should have some 30 to 40 per cent. of butter-fat. If the cream should happen to be too rich in butter-fat, it will adhere to the sides of the churn and cause difficult churning. Ripe or sour cream has less viscosity than sweet cream. This viscosity consists partly of albumen, which may be seen in the form of slime around the separator bowl after the milk is separated. It will also consist partly of the membranes surrounding the globules of fat. When cream is ripened or pasteurized, the viscosity is broken and, consequently, the cream will churn more easily. Sometimes butter-fat is too hard to churn easily, and in such cases the temperature must be raised higher than usual in order to soften these hard fats. Butter-fat which is high in olein is softer than fat which has less olein and a greater percentage of volatile acid.

The hardness of the butter-fat is affected by feed, breed and individuality of the cow. Such feeds as cotton-seed meal tend to cause a firm body and a better keeping quality. For this reason, cottonseed meal will tend to produce a butter that will stand up in warm weather. This effect of cottonseed meal is due largely to the cottonseed oil. Eckles and Shaw state that the feed of the animal is probably a greater factor in influencing the nature of butter-fat than either breed or individuality. Breed certainly has some influence. Results of investigations at the Indiana Agricultural Experiment Station show that the butter-fat from Ayrshires and Holsteins contains less volatile acids and more olein than from Jerseys, and consequently makes

a softer butter. One would infer that the fat from Jerseys and Guernseys would be more difficult to churn, but actual experience, according to Guthrie, shows that butter-fat from these breeds collects more readily than from Ayrshires and Holsteins, the probable reason being that the fat globules in the milk of Guernseys and Jerseys being larger cohere more readily. This factor, however, is not very important in the creamery where large quantities of cream from numerous herds are being handled. The large fat globules come in contact with each other more easily than the small ones, and anyone who has tried to churn "strikers" cream knows that very often it is more difficult to churn than usual because the fat is hard and the globules are small. It was found at Indiana that milk from fresh cows contains larger fat globules than milk from cows that are well advanced in the period of lactation. The size of the fat globules is also temporarily increased by abrupt changes of feed.

If the churn is too full of cream it is usually necessary to raise the temperature a few degrees, for the reason that in a full churn the agitation is not as great as when the churn is only partially full. For this reason, the latter should be from one-third to one-half full, so as to provide enough cream to fall readily and yet not too much to prevent the required amount of agitation. When too little cream is used, too large a proportion of it sticks to the sides of the churn. In this connection, also, it is advisable to get the greatest amount of agitation possible, but this does not always mean that the faster the churn is operated the greater the amount of agitation. Just before the cream breaks it is very thick and sticks to the walls of the churn, and it is advisable at this stage when using a hand churn to slow up the speed to a certain extent. When the glass in the churn becomes clear, the churning process is nearly completed. Particles of butter should be about the size of a pea or a kernel of corn, since the buttermilk drains off more readily in such cases than where the granules are very small. If churning is continued too long the butter particles collect in large lumps, with the result that too much buttermilk is incorporated into the butter. This means that the sugar, casein and albumen in the buttermilk will attract the growth of bacteria, and the flavor of the butter will be injured.

The purpose of working butter is mainly to distribute the salt, which is applied in varying quantities to suit the market. Working also compacts the butter, and in order to prevent the occurrence of greasy butter, the working should be carefully done. It should be worked until only a few holes show, and if it has not been sufficiently worked, it will appear mottled after it has been made for a short time. The body of the finished butter should be waxy in texture; if it is too low in temperature it will be hard and working will cause it to be talloxy. If the temperature is too high the butter will be greasy. When the working is completed, the butter is ready to be put into packages for the market.

HORTICULTURE.

New Pointers in Transportation.

The information in this article has been received from George E. McIntosh, who is in charge of transportation matters for the Fruit Branch, Department of Agriculture, Ottawa. There are many alterations constantly being made in tariff schedules of express companies and railways, and fruit growers and associations are constantly making representation to the companies for better service facilities. New regulations which appear from time to time are necessary information which the fruit grower should have, and the following notes and comments cover most of the newer changes as respects the transportation of fruit in Canada.

There has been considerable misunderstanding among consignors and consignees with regard to certain proposed regulations covering the payment of freight charges. Mr. McIntosh says, however, that the Canadian Railway War Board agree to make very little change in general shipping conditions, while business principles are applied in making settlement of transportation charges, the bonding feature—to which considerable objection was offered—has been eliminated and credit rules substituted whereby bills or accounts accumulated from the 1st to the 7th of each month must be paid by the 14th; from the 8th to the 14th, must be paid by the 21st; from the 15th to the 21st, by the last day of that month, and from the 22nd to the last day of the month, settlement must be made by the 7th of the following month.

The Dominion Express Company's special fruit tariffs applying on shipments from Ontario points were amended by supplements effective May 7, whereby the cartage service at shipping point was cancelled. This change, however, has since been annulled, leaving for the present the cartage service the same as last season.

For the purpose of improving the working conditions of their employees and to accommodate what seems to be the general public sentiment, the Express Companies have adopted the eight-hour day, effective June 1, 1919. Collection and delivery service will be confined to the hours between 8 A. M. and 5 P. M. Depot offices where night staffs are maintained will be open for the delivery of incoming shipments to consignees calling for them, and for the receipt of outgoing shipments which are not ready when last vehicle call is made.

To meet the wishes of shippers and facilitate distribution of the British Columbia berry and cherry crop, the Dominion Express Company is permitting partial unloading at two intermediate points on shipments of berries and cherries governed by carload Tariff C. R. C. 4540. Cars containing shipments of

currants may be partially unloaded at one intermediate point only. The change became effective June 28.

Special local rates on Canadian-grown berries, cherries and currants in carloads are made effective June 1, 1919, by the Dominion Express Company, from Creston, Duck Creek, Hatzie, Huntingdon, Kelowna, Penticton, Summerland, Vancouver and Vernon, B. C., to Calgary, Edmonton, Camrose, Winnipeg, Moosejaw, Regina, Saskatoon, Weyburn and Yorkton. The rate to Yorkton is \$2.25 per 100 pounds; to all other points \$2 per 100 pounds. These rates expire about August 31, 1919, unless sooner cancelled, changed or extended.

Estimated Weight for Apples.

During the coming season the railway companies will accept domestic shipments of apples in barrels at actual weights. For export shipments, however, the new Canadian standard barrel will be accepted at an estimated weight of 155 lbs. On barrels made from the old stock they will accept shipments from Nova Scotia at an estimated weight of 150 lbs., and from Ontario, 165 lbs. per barrel. Shippers must specify on their shipping orders and bills of lading whether the apples are in Canadian standard barrels or in barrels made from old stock. Where a car contains both, the shipping order and bill of lading should specify the number of each. Unless this is done railway agents will bill the entire car at a weight based on 165 lbs. per barrel.

If ice is required by shippers at points of origin, in transit, or at destination, on carload shipments or perishable freight in refrigerator cars, the following charges will be made: 1, When furnished at all stations except as shown in paragraph (2) \$4 per ton; minimum charge for each icing, \$2 per ton. 2, When furnished at points in British Columbia, including points in Alberta West of Edson on G. T. R. Ry., \$5 per ton; minimum charge for each icing, \$2.50 per ton. Salt, when furnished in connection with icing will be in addition to the cost of the ice, and will be charged for as follows: At all stations each of Duluth, St. Paul, Minnesota Transfer, Minn., Fort William Port Arthur, Westfort and Armstrong, Ont., 75 cents per 100 lbs.; minimum charge 75 cents.

Beginning July 1, the Canadian railways resumed the issuing of through bills of lading through Canadian North Atlantic ports. Since the fall of 1914 initial line railroad receipts have been sent to seaboard to be exchanged for ocean bills of lading, which were issued and returned to carrier for surrender to shippers, except where shipper had their representatives at seaboard. All this delay will now be done away with.

The recent change in C. P. R. Tariff No. W4143, whereby only one change of destination was permitted, and in regard to which considerable complaint was made by British Columbia fruit shippers, will, on and after July 5, be amended to apply on traffic other than fruit and vegetables. It is possible, however, the privilege may be limited to two changes for these commodities.

Miscellaneous Notes.

Improved shelter accommodation at Penticton for express shipments of fruit was asked for in the fall of 1917. Advice has now been received that the Kettle Valley Railway Company have erected a shelter 40 by 60 feet, slatted sides, and so arranged that teams can drive under cover for unloading purposes.

An improved service for the fruit shippers around Erickson, B. C., will be provided by the Dominion Express Co., this season, by the appointment of an agent at that point.

Some shipments do not reach the markets in proper condition because of illegible writing; labels will not stick on; tags which tear apart or are easily pulled off; two or more addresses on a shipment; pencil marks easily rubbed off in transit by dampness.

The Canadian Express Company established the regular daily special fruit train service in the Niagara district on June 23. This is about ten days earlier than usual, but it was found necessary in order to maintain as efficient service as possible.

Cost of Growing Strawberries.

W. T. Macoun, Dominion Horticulturist, Ottawa, gives, in a recent bulletin entitled, "The Strawberry and Its Cultivation in Canada," some estimates as to the cost of growing an acre of strawberries, which we reproduce herewith. Generally speaking, estimates are not altogether reliable, and, gathered as these are, from correspondence with different growers, it would be unwise to treat them as absolutely correct. Moreover, one should always remember that the cost of production will vary with different sections and under different conditions. There are fourteen estimates given in the accompanying table, numbers 1 and 2 being from Prince Edward Island; 3 and 4 from Nova Scotia; 5 and 6 from New Brunswick; 7 and 8 from Quebec; and the remainder from Ontario, with the exception of No. 13, which is from British Columbia.

It will be noticed that the figures vary very widely. In the first instance the amount allowed for rent of land varies from ten to fifty dollars per acre, while the preparation of the soil costs from five to thirty dollars per acre, with an average of perhaps fifteen. Fertilizers cost anywhere from forty to two hundred dollars per acre, with an average of between fifty and one hundred. Even the cost of plants varies greatly, from \$17.50 in one instance to \$56 in another. The cost of planting is fairly uniform, although even here the figures vary from \$7 to \$22.50. In one instance it cost \$115 to cultivate the young patch, but in most cases this was done for less than \$50. The cost of mulching, which is very important, in no case runs over \$45, and in most cases from \$10 to \$20. About \$40

Cost of Producing Strawberries.

	1	2	3	4	5	6	7 (1918)	8 (1917)	9	10	11	12	13	14
Rent of Land.....	\$ 28.00	\$ 32.00	\$ 12.00	\$ 10.00	\$ 10.00	\$ 20.00	\$ 40.00	\$ 50.00	\$ 50.00	\$ 50.00	\$ 25.00	\$ 25.00	\$ 50.00	\$ 40.00
Preparation of Soil.....	5.00	30.00	10.00	10.00	25.00	5.00	5.00	6.00	5.00	8.00	15.00	15.00	5.00	8.50
Fertilizers.....	40.00	200.00	106.00	40.00	50.50	56.00	30.00	40.00	100.00	125.00	80.00	60.00	50.00	98.00
Plants.....	28.00	28.00	50.82	28.00	28.00	24.00	17.50	28.00	25.00	56.00	30.00	40.00	33.00	36.00
Planting.....	12.00	20.00	18.00	12.00	14.00	10.00	7.00	14.00	10.00	22.50	20.00	10.00	13.75	8.00
Cultivation.....	30.00	100.00	25.00	29.00	25.00	60.00	13.50	18.00	80.00	45.00	115.00	50.25	30.00	50.00
Mulching.....	24.00	20.00	45.00	20.00	40.00	10.00	12.00	16.50	20.00	36.00	.....	15.50	18.00	32.50
Crates.....	37.00	37.00	13.56	24.00	42.68	36.00	15.00	30.00	40.00	10.00	7.50	15.00	.....	.....
Boxes.....	37.00	37.00	21.67	20.00	43.75	42.00	22.50	52.50	25.00	54.00	35.00	57.50	106.10	.....
Picking.....	125.00	90.00	87.03	80.00	105.00	130.00	60.00	140.00	75.00	160.00	111.00	125.00	150.00	110.00
Marketing.....	40.00	60.00	43.35	20.00	78.00	40.00	45.00	71.00	50.00	45.00	70.00	50.00	15.00	.....
Insects and Disease.....	.....	35.00	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Management.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.00
Interest.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	10.00
Total.....	406.00	689.00	432.43	293.00	461.93	433.00	267.50	466.00	480.00	611.50	506.50	463.25	470.85	403.00
Crops in quart boxes.....	5000	5000	4335	4000	7000	6000	3000	7000	5000	.....	5550	9500	5000	4000

are required for crates and another \$40 for boxes, according to these estimates, while the cost of picking runs from \$60 to \$150. Only one estimate makes an allowance for insects and diseases.

Most of these estimates, we understand, are for the year 1918, which was a very profitable year for the strawberry grower who had taken care of his planting. The strawberry season that has just closed, however, will be just the reverse for many growers, on account of the hot, dry weather which caused thousands of crates to be thrown on to the market, and very rapidly lowering the price. Commenting on the estimates, Professor Macoun said:

"The profits in growing berries will, of course, vary with the price obtained for the fruit. Only four of the growers gave their net profits based on the expenses given above, and on the price obtained for the fruit. At the Agricultural College, Truro, N.S., the fruit was sold in 1918 at 17 cents a box, and the net profit per acre was \$304.52. Col. O. W. Wetmore, Clifton, N.B., sold his fruit at 20 cents a box in 1918, and his profit per acre was \$767. At Macdonald College, Que., the fruit sold for 10½ cents a box in 1917, and the net profit per acre was \$284. In 1918 the price obtained was 18¼ cents a box, and the profit was \$280. Although the price obtained per box in 1918 was nearly twice as much as in 1917, the crop of 1918 was less than half that of 1917, so that the profits of the two years were nearly the same. Geo. A. Davenport, Hammond, B.C., received 10 cents a pound for his fruit in 1918. He estimates the net profit on his fruit at \$165.25, but valuing the plants available for setting out a new plantation in 1919 at \$50, his total net profit is \$215.25. His cost for boxes includes crating. As he sold his fruit to a local canning factory he was saved the cost of boxes and crates charged in above table. The value of plants available for a new plantation the following year has not been estimated in the above figures by other growers, but should be taken into consideration.

"The prices obtained for strawberries in 1918 were abnormally high, and 10 cents a box would probably be more like the price they are likely to bring when conditions are more normal. The cost of growing strawberries is also somewhat above what it has been in the past, and what it should be in a few years. The average crop of strawberries will run from 4,000 to 5,000 boxes per acre. There is about a pound of fruit in a quart box. In the colder districts occasional injury from winter and spring frosts are the chief causes of reducing the average crop; in the warmer districts spring frosts and drought in the fruiting seasons cut down the yield, and in other places insects attacking the roots greatly reduce the crop."

Financial History of a Peach Orchard.

Profit and loss accounts figured by fruit growers during the past four or five years in respect to individual orchards and their success from a monetary standpoint, are not likely to prove a satisfactory basis from which to draw correct conclusions in general. The conditions with regard to fruit growing have been so upset, labor has been so scarce and prices so abnormal that no one is able to tell now exactly where matters stand. Nevertheless, there are some interesting points in connection with the financial history of a twelve-year-old peach orchard, described in special bulletin No. 94, of the Michigan Agricultural College. The financial results of this orchard for a period of twelve years are given, and, because Michigan conditions are not so much different from those which are met with in Ontario, we feel that some of the figures at least will be interesting to our readers.

The orchard in question is located on a gravelly, sandy loam, with clay or sand sub-soil, not far from a good-sized city. It is the third bearing peach orchard upon the same land, and was set in the spring of 1907, to the following varieties: New Prolific, 100 trees; Engles, 370; Kalamazoo, 200; Gold Drop, 120; Elberta,

125; Banner, 100; Fitzgerald, 100; Smock, 275; Salway, 200. The trees were set twenty feet each way. Some general farm crops are produced on the same farm, along with apples, pears, plums and quinces, while a small dairy is also operated. The labor was charged at the current rate in the neighborhood, and the owner's work was charged up at the same rate.

The accompanying large table shows the total expenses, total receipts and net profits of the orchard for each year, and shows that the total cost of the orchard for the twelve years was \$7,831.37, or an average cost per year of \$652.61, or an average cost per acre per year of \$43.50, as compared with an average return per acre per year amounting to \$106.08. The figures compiled show a net profit per year averaging \$938.58, or \$62.57 per acre per year. The total crop for the twelve years amounted to 16,972 bushels, which would show an average net profit per bushel for the twelve years of 66 cents. In addition to the charges which are included in the above, there is the overhead charge to provide for the orchard's share in the farm buildings, which would amount to approximately \$35 a year, and there is also the expense of clearing the land when the trees become unprofitable or are killed by frost. It is expected that there will be five or six more crops on this orchard before it becomes unprofitable from age, especially since the first peach orchard on the same site produced twelve crops before it was pulled out. Judging from the wide variation in the size of the crops and the prices received, notwithstanding that the care of the orchard was the same every year, weather influences show a tremendous influence on fruit production. This leads us to conclude that averages are the only rule by which the profit from peach growing can be correctly estimated. Variation is not only evident in yield but in prices, the latter depending not only on the size of the crop, but on the time of marketing and the condition of the market. Marketing expenses are shown in the following table, and it is possible to judge relatively the marketing expenses from this table, especially since the size of the crop is given as well as the total expenses for the year incurred through the marketing of the crop.

Year	Size of Crop	Expenses for Orchard	Per Acre
1911	2,064	\$467.85	\$31.19
1912	2,128	511.93	34.12
1913	1,800	405.87	27.05
1914	3,926	866.26	57.75
1915	2,272	535.52	35.70
1916	3,013	751.34	50.09
1917	1,115	328.28	21.88
1918	640	146.37	9.75

Twelve-year Summary of Peach Orchard.

Year	Age	For Entire Orchard			Per Acre		
		Total Expenses	Total Receipts	Net loss or profit	Total expenses	Total receipts	Net loss or profit
1907	1 yr.	\$ 415.06	\$ 509.50	\$ 94.44	\$27.67	\$ 33.96	\$ 6.29
1908	2 yrs.	225.25	None	L 225.25	15.01	None	L 15.01
1909	3 yrs.	204.60	65.00	L 139.60	13.64	4.33	L 9.31
1910	4 yrs.	238.28	None	L 238.28	15.88	None	L 15.88
1911	5 yrs.	772.43	2,561.25	1,788.82	51.49	170.75	119.26
1912	6 yrs.	832.84	2,920.99	2,088.15	55.52	194.74	139.22
1913	7 yrs.	755.13	1,800.00	1,044.87	50.34	120.00	69.66
1914	8 yrs.	1,292.77	4,015.45	2,722.68	86.18	267.69	181.51
1915	9 yrs.	873.35	1,090.56	217.21	58.22	72.70	14.48
1916	10 yrs.	1,064.51	2,832.22	1,767.71	70.96	188.81	117.85
1917	11 yrs.	618.74	1,672.50	1,053.76	41.25	111.50	70.25
1918	12 yrs.	538.41	1,626.95	1,088.54	35.89	108.46	72.57
Totals		\$7,831.37	\$19,094.42	\$11,263.05	\$522.05	\$1,272.94	\$750.89

POULTRY.

What to Look for in Candling.

When candling eggs the room should be dark, so that the full force of the light will have its effect upon the egg and make visible everything that it is possible to observe in candling. The egg should be held in the hand in a slanting position, with the large end against the opening in the candle. While being examined it should be turned moderately fast from one side to the other, so that the entire surface of the egg is exposed to view, and so that the size of the air cell and the condition of the inside of the egg can be noted. It is good advice, also, to turn the egg completely from end to end before the candle, so that there is no possible chance of bad eggs, such as those containing mouldy spots, or those with the yolk stuck to the shell, being missed. Expert candlers will not handle the eggs any more than necessary. The hands will come in contact with the eggs to the minimum possible extent, so that blemishes will not be hidden from view.

The reason eggs can be graded through the shell is because the shell itself is partially transparent when held before the light in a dark room; and white eggs are, therefore, more transparent than brown ones. The light shining through a white egg when candling is yellow, with a very slight pinkish tinge. The light from a brown egg is much pinker, while that from a dark brown egg is almost red, and in any case the color deepens toward the yolk. Dirt or stains on the shell will also cast a shadow on the contents, and thus make it more difficult for a beginner to candle. Dirty eggs and cracked eggs can be easily thrown out at the time of candling, and while eggs, with mould growing in the cracks, can be partially detected at candling, this is much more readily seen away from the candle. The following paragraphs describe very clearly the relation of the air space, white and yolk, to the candling process, and are taken from a bulletin entitled, "How to Candle Eggs," published by the United States Department of Agriculture:

The Air Space.

"The air space of a fresh egg is less than three-fourths inch in diameter, as may be seen by tilting an egg with the large end in front of a candle. As the egg ages the air space increases in size, owing to the evaporation of water from the liquid contents. The amount of evaporation depends very largely upon the age of the egg and the temperature at which it has been kept. In winter and spring eggs shrink more slowly than in summer. Therefore, the early spring eggs on the market will have smaller air spaces than the summer eggs. With continued shrinkage the egg membrane pulls away from the shell membrane at the air space, so that when the egg is turned before the candle the lower wall of the air cell changes at the same time. In grading an egg, the size of the air space is useful in determining its freshness. The egg membrane, which forms the lower wall of the air cell, may become broken by jars or jolts during the haul to market, or by severe shaking in the hand or other rough handling. When this membrane is broken the air cell always rises, irrespective of the position in which the egg is held. Small bubbles of air frequently are seen when the egg is turned before the candle. When an egg becomes very stale the air in the air cell may move all the way around the egg between the two membranes. Such an air cell is termed 'movable.'

The White of Eggs.

"The two factors to be considered when studying the white of an egg before the candle are its firmness and its color. A firm, thick white is found in a fresh egg, and a weak, thin white in a stale egg, or in one which has been exposed to warm temperatures, as in summer or by incubation. The condition of the white is indicated on candling by the ease with which the yolk moves when the egg is rotated. For example, in a fresh egg the white is so firm that the yolk sways but little during candling, whereas in an egg with a weak white the yolk moves much more rapidly. A further indication of a thin white is seen on candling by the ease with which the white moves at the air cell, which usually is enlarged. Out of the shell the difference between a firm and a thin white is detected easily by pouring the egg from one dish to another. As an egg becomes stale the amount of thick white decreases, and the amount of thin white increases. "Out of the shell the white of the fresh egg has an opalescent tinge, which characteristic is lost when an

egg become the white encountered when the very water which usually it ammonia thus liquif

"The yolk may relating to changes ta of the yolk determined. When a fro is dimly s slowly in the more o so strong a of the yolk the egg are. Because of of a stale than that sac weaker the same t when the yolks before they are g is observed.

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Candling.

should be dark, so have its effect upon... should be held in the large end against the being examined it from one side to the egg is exposed to cell and the con-

egg becomes stale. Eggs are found sometimes in which the white is as thin as water. Such eggs, however, are encountered rarely in ordinary candling. They are detected by the exceedingly rapid motion of the yolk when the egg is turned before the candle, and by the very watery appearance of the white at the air cell, which usually is broken. The water condition is caused, in most instances, by bacteria which penetrate the shell when it is broken or wet and grow in the egg material, destroying the mechanical structure of the white. When such eggs are opened the white flows out as readily as water and may be colorless, although usually it is a yellowish brown. The odor is bad and ammonia frequently is detected. Eggs with whites thus liquified are inedible.

The Yolk and Its Characteristics.

"The conditions to be noted when studying the yolk may be divided into two classes, namely, those relating to ordinary decay, and those pertaining to changes taking place during hatching. The condition of the yolk is one of the most important factors to be determined when judging the quality of eggs by candling. When a fresh egg is twirled before the candle, the yolk is dimly seen as a dark and shadowy object moving slowly in the white. The more transparent the shell the more distinctly is the yolk seen. The yolk sac is so strong and the white so firm that the spherical form of the yolk is altered very little when the contents of the egg are set in motion by the turning during candling. Because of the thinner condition of the white, the yolk of a stale egg is seen much more plainly on candling than that of a fresh egg. As the egg ages the yolk sac weakens, and since the white becomes thinner at the same time, the outline of the yolk is seen to change when the egg is rotated. If eggs, which have weak yolks before the candle, show whole yolks when opened, they are graded as good if no other cause for rejection is observed.

"When the yolk of an egg is so weak that a shake in the hand causes it to break and mix with the white, the egg should be graded as unmarketable, for during shipment it is very likely to become unfit for food. These eggs are difficult to grade accurately by candling. They are of such inferior quality, however, that in case of doubt they should be classed as inedible. The yolk sac may so weaken that the yolk seeps or strains through into the white. In these eggs the yolk would appear whole before the candle, but it would be weak, and the white would have a cloudy, yellow color. Out of the shell the yolk will be seen to be flattened and sometimes mottled, and the white to be streaked with yolk. Very close candling is required to detect these eggs, and since they are border-line eggs, in which further deterioration is very rapid, they should not be graded as marketable.

"The more common form of disintegration of the yolk takes place through the rupture in one or more places of the yolk sac, and the mingling of the white and yolk. This mixing is commonly known as 'addling.' All degrees of addling may be found, from the egg in which the yolk is just beginning to mix with the white to the egg in which no vestige of white is seen. The eggs representing the early stage of mixing are called 'mixed rots,' and those representing the later stage, 'white rots.' Both are inedible.

"The position of the yolk also must be taken into consideration when grading eggs by candling. In a fresh egg the yolk is slightly above the centre in the large end of the egg. Although lighter than the white, it does not float against the shell, because the chalazae tend to hold it in a central position in the egg. As the egg becomes stale with age, and especially from exposure to heat, the white is weakened, thereby making it possible for the yolk to float near the shell. This condition indicates staleness if the egg shows shrinkage.

"A few hours' incubation under the hen or exposure to warm temperatures, as in summer, is sufficient to start the hatching of a fertile egg. In its early stages this condition can be detected on candling by the reddish glow of the area surrounding the germinal spot, which in this stage of development is termed a 'hatch spot.' This is very plainly seen when the egg is opened. Blood forms if incubation continues. At this stage in the development of the embryo, the egg is considered inedible. If the embryo does not die, and conditions of incubation are favorable, the different stages development from the forming of blood veins to the growing of the mature chick can be followed by observation before the candle. After the embryo chick begins to take form it appears black on candling. An egg containing a large embryo cannot be distinguished from a black rot, except by the absence of motion of the contents when the egg is turned during candling. Practically all incubated fertile eggs found in the candling of eggs for market contain dead embryos. After the embryo has died, the contents of the egg are subject to all the changes making for deterioration, which have been described for the white and yolk. For example, a yolk bearing a blood ring may adhere to the shell or disintegrate and mix with the white. The yolk of a partially hatched egg usually attaches itself to the shell by the hatch spot or blood ring."

Do not yard old hens and pullets together at this season. The old hens will dominate and not allow the pullets to feed comfortably or sufficiently. More than that, if enough feed is given to develop the pullets properly the old hens will become too fat, and if the ration is adjusted to suit the requirements of the hens the pullets will starve.

There is much grain in the fields that the fowls will clean up if given a chance.

FARM BULLETIN.

Live Stock at the Edmonton Exhibition.

It is commonly predicted that Alberta is facing the worst winter that she has experienced for many years. The crop is poor—a failure over a large section of the province, and hay is extremely scarce. Nevertheless, in spite of these ominous prospects, the people of Edmonton and Northern Alberta turned out to give enthusiastic support to this year's exhibition at Edmonton.

Clydesdales.

The Clydesdales did not make an imposing show. Only a few really good horses came before Wm. McKirdy, Napinka Man., who officiated as judge, and there were no exciting classes. Only two aged stallions came out. These were Castor, shown by A. D. McCormack, of Castor, Alta., and Nonpareil Lad, shown by John Prowse, of Cluny, Alta., Castor was victorious. He is not nearly as big a horse as the one he beat, and he is woefully deficient in rib. He had the advantage of the other horse in the set of his hind legs. Nonpareil Lad does not rest so nicely on the ground behind, but that minor fault should not have been sufficient to put him below Castor.

Three stallions filled out the three-year-old class. Ivanhoe, shown by McBain & McCaig, of Carberry, Man., led the trio.

Nonpareil Blend, shown by Prowse, was an easy winner in the two-year-old class, his only competitor being Bonny Jay, shown by G. H. Cresswell, of Edmonton. The yearling stallions made the only class in the Clydesdale section that had more than half a dozen entries. Eight youngsters lined up. Strathcona's Best, shown by McCormick, led the parade. He is a stylish colt of fair size, and he is excellently constructed at the ground, but he could have carried more flesh to advantage. He beat Argyle King, shown by Willis & McLennan, of Airdrie, Alta. This colt is just an ordinary one, with no style to waste, but he is fairly growthy and is clean in the underpinning. The class tapered away sharply from the two top colts.

Castor beat Nonpareil Blend and Ivanhoe for the championship. The last-mentioned horse was made reserve. The Canadian-bred event was won by Nonpareil Lad; Strathcona's Best taking the reserve ribbon.

The female classes were very disappointing. Five dams came out in the brood-mare class. Queen Benedict, shown by Lawrence Rye, Edmonton, topped the line-up. She is a big, roomy dam, but could be a trifle wider in the foot. Willis & McLennan, of Airdrie, stood next with Queen of Argyle. This is a sweet one, with perfect underpinning, but she is light in the breeching. Walnut, a neat, but rather light mare shown by Rye, came third, and the succeeding mares were a plainer lot. Poppy, shown by Cresswell, won the dry mare class. Her only competitor was Dunure Maud, shown by W. C. Short, of Edmonton. Poppy looks as winsome as ever, and easily won the championship.

Percherons.

The Percheron ring displayed the best exhibit of the French breed ever seen in Canada. R. F. Dygert & Co., Ltd., of Edmonton; W. H. Devine, of Calgary; Geo. Lane & Co., of Pekisko; John A. Grant, of Black Diamond, Alta.; Vanstone & Rogers, of North Battleford, Sask.; E. W. Dool, Strathcona, Alta., and E. Sprague, Bruce, Alta., were the exhibitors. The classes, therefore, were filled for the most part with the same horses that were shown the previous week at Calgary. Robt. Graham, of Toronto, placed the awards.

The aged stallions were headed by Devine's Joe Silver, the Calgary winner, and three other useful horses from the same stables took the other prizes.

The three-year-olds were a handsome lot, a dozen of them lining up. Olbert, Lane's slashing big horse, again beat Grant's Private. He has more balance, and he is more springy in his pasterns. Vanstone & Rogers came third with Hudson Super Six. He is a toppy fellow, and is a sprightly mover.

Perfection, from Lane's stud, headed the two-year-olds, which numbered eight. He beat Vanstone & Rogers' Foch. This latter horse is as symmetrical as a Hackney on top, and he moves very nicely on good, serviceable legs and feet. The champion stallion was Lane's Olbert, and Devine's aged horse, Joe Silver, was reserve grand champion.

Jeante, Lane's dry mare, was open champion in the female section, and Pride of Pekisko, her two-year-old stable-mate, was reserve grand champion.

The Shorthorns.

The tricolor breed was well represented by the herds of J.A. Watt, Elora, Ont.; John Barron, Carberry, Man.; L. A. Bowes, Calgary; W. C. Short, Edmonton; Geo. Wren, Bremner, Alta.; John Thompson, Winterburn, Alta., and Chas. Beeching, Dewinton, Alta. As the list of exhibitors indicates, the show was largely a repetition of that held at Calgary, with an infusion of local stock. Frank Brown, of Carlton, Oregon, placed the awards.

Barron again won the aged-bull class with Lancaster Lord, beating Village Marquis, Bowe's herd header. Watt easily won the two-year-old class with Gainford Sultan. Short and Wren took second and third places respectively in this class with commendable bulls. Barron's Star of Hope again triumphed in the senior yearling class. Watt topped the junior yearlings with Gainford Monarch, Beeching playing second fiddle with Tranby Ringleader. In this good class the local exhibitors did not get into the prize money. The senior calf class was a battle royal between Barron and Watt. Barron won first place with Lavender Chief, and fourth

and fifth places with Red Nugget and Thornham, respectively. Watt took second and third place with two good calves by Gainford Marquis.

Bowes won the junior-calf class with Collynie Marquis. He is a sappy, smooth, and thickly-built youngster. Wren was successful in winning second money in this closely-contested class, and the balance of the prize-money was shared by Beeching and Barron.

Barron won the senior and grand championship with Lancaster Lord, and the junior championship and reserve grand championship with Star of Hope. Bowes won the reserve senior championship ribbon with Village Marquis, and Barron won the reserve junior championship with his senior calf, Lavender Chief.

The aged-cow class was watched closely. Twelve big, useful matrons filled out this good class, and after working hard the judge placed Bowes' Collynie Best at the top. The sweetness and quality of this cow minimizes her most serious fault—lack of scale. Watt's bigger Duchess of Gloster stood next, and Barron's good old cow, Fairview Baroness Queen, had to be content with third place. She is showing her age just a little. Short scored a creditable victory by coming in for fourth place in this class. His entry, Bryne Lady 13th, is a deep, broad-backed, breedy dam.

Short beat Beeching in the three-year-old class with Diamond May 29th. This cow is a big one, and she has sweetness along with her scale. Watt and Barron shared the high honors in the two-year-old class, and Barron had an easy win with his beautiful white heifer, Lavender 47th, in the senior-yearling class. Watt and Barron again fought hard with each other in the junior yearling and senior calf classes, Watt taking first in both classes, and Barron taking the second. Bowes triumphed in the junior calf class again with Rosebud Heroine, beating Watt's Gainford Selina. The young classes, therefore, were similar to the Calgary line-ups when Judge Brown had completed his work. Bowes won the senior championship with Collynie Best; the reserve going to Watt on Gainford Belle. Barron won the junior championship with Lavender 47th, Watt taking the reserve ribbon with Diamond Beauty. After quite a little consideration, the judge made Collynie Best grand champion, with Lavender 47th in reserve. In the herd classes, Barron made a wonderful showing, winning every first in five events.

In the Hereford Ring.

All the herds that were at Calgary showed again at Edmonton, and a few local entries added a little variety. The Edmonton exhibitors were: J. H. Chapman, of Hayfield, Man.; A. B. Cook, of Townsend, Montana; Frank Collicutt, of Calgary; O. A. Boggs, & Sons, Daysland, Alta.; The Curtice Cattle Co., of Calgary; Geo. Fuller, of Girvin, Sask.; L. O. Clifford, of Oshawa, Ont., and J. C. Sherry, of Edmonton. Dean Curtiss, of Ames, Iowa, placed the awards.

In the aged-bull class, Collicutt's Gay Lad 16th again led the way. Clifford's Cavalier led the two-year-olds, beating Cook's Montana Fairfax 20th. Sherry came third in this strong class with Lord Fairfax 5th, a very massive, low-set, smoothly-turned bull. Dean Curtiss upheld the Calgary judges judgment by placing Curtice's Beau Donald 215th at the head of the senior yearlings. This bull has lots of character, but he is peaked and small compared to the bulls that stood in second and third places, respectively. Collicutt won the senior championship with Gay Lad 16th, the reserve going to Clifford's Cavalier. Panama 81st, shown by Cook, won the junior championship, Collicutt's Willow Spring Gay Lad winning the reserve ribbon. Gay Lad 16th was made grand champion, with Panama 81st in reserve. The female classes did not differ much from the ones at Calgary when the judging was completed. Boggs won the cow class with Columbus Donea and Clifford won the premier award in the three-year-old cow class, the two-year-old heifer class, and the junior yearling class. The young classes were the best ever seen in this country. All the prize-winners were typey, smooth, sappy, stylish beauties.

The Aberdeen Angus Classes.

Edmonton has never had such a fine exhibit of Angus cattle as the one seen there last week. L. R. Kershaw of Muskogee, Oklahoma; S. C. Pritchard, of Camrose, Alta.; C. H. Richardson, of Vowden, Alta.; Clemens Bros., of Sedgewick, Alta.; E. C. Woods, of Warman, Sask.; and J. D. McGregor, of Brandon, Man., furnished the competition. The judging was done by Professor Dowell, of Alberta University.

Kershaw's aged bull, Plowman, again led the aged class, winning deservedly on his smoothness, lowsetness and style.

Woods won the two-year-old class with his thick, showy bull Muskogee 29th, beating Kershaw and Clemens Bros. McGregor and Woods had the advantage in the bull classes, but Richardson again won the junior calf class with Eric of Willow Park 2nd. This youngster is a hard nut to crack, for he combines great size and smoothness. At that, he was not so pronouncedly superior to Glenrose Prince, the bull that stood next to him. This one is the personification of Angus character, and he is a thick one to boot. He is a credit to Pritchard, his exhibitor. Plowman won the senior championship, for Kershaw; Wood winning reserve with Muskogee 29th. McGregor won the junior championship with Blackmere 4th, and the reserve with Ensign of Glenarneck. Plowman was declared grand champion, with Blackmere 4th in reserve.

The champion senior female was Kershaw's Twinburn Pride 5th, and the reserve was Muskogee May 6th, another representative of the Oklahoma herd. The junior champion was Kershaw's Pride of Muskogee 3rd, and the reserve was McGregor's Pure Pride 3rd. The grand champion female was Twinburn Pride, and the reserve was Pride of Muskogee 3rd.

Table with 2 columns: Total receipts, Net loss or profit. Rows include various numerical values and a total of \$1,272.94 and \$750.89.

Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending July 24.

Receipts and Market Tops.

Dominion Department of Agriculture, Live Stock Branch, Markets Intelligence Division

CATTLE	
Receipts	
Week Ending	Same Week
July 24	1918
Toronto (U. S. Y.)	7,382
Montreal (Pt. St. Charles)	1,061
Montreal (East End)	1,056
Winnipeg	4,100
Calgary	4,692
Edmonton	981

CATTLE		Top Price Good Steers (1,000-1,200)	
Receipts		Top Price Good Steers (1,000-1,200)	
Week Ending	Same Week	Week Ending	Same Week
July 24	1918	July 24	1918
Toronto (U. S. Y.)	5,066	13.25	12.00
Montreal (Pt. St. Charles)	640	13.25	12.00
Montreal (East End)	583	13.00	14.00
Winnipeg	6,738	12.50	12.50
Calgary	3,174	10.00	11.75
Edmonton	1,479	10.00	10.50

CALVES		Top Price Good Calves	
Receipts		Top Price Good Calves	
Week Ending	Same Week	Week Ending	Same Week
July 24	1918	July 24	1918
Toronto (U. S. Y.)	1,121	16.00	15.50
Montreal (Pt. St. Charles)	1,551	16.00	15.50
Montreal (East End)	1,513	16.00	14.00
Winnipeg	2,064	8.50	12.00
Calgary	1,076		
Edmonton	437		

HOGS	
Receipts	
Week Ending	Same Week
July 24	1918
Toronto (U. S. Y.)	6,342
Montreal (Pt. St. Charles)	3,074
Montreal (East End)	3,040
Winnipeg	5,856
Calgary	999
Edmonton	278

HOGS		Top Price Selects	
Receipts		Top Price Selects	
Week Ending	Same Week	Week Ending	Same Week
July 24	1918	July 24	1918
Toronto (U. S. Y.)	4,711	23.25	19.50
Montreal (Pt. St. Charles)	1,776	23.25	19.50
Montreal (East End)	1,095	23.00	24.00
Winnipeg	2,099	23.50	23.00
Calgary	6,683	22.25	18.00
Edmonton	2,546	22.75	17.75

SHEEP		Top Price Good Lambs	
Receipts		Top Price Good Lambs	
Week Ending	Same Week	Week Ending	Same Week
July 24	1918	July 24	1918
Toronto (U. S. Y.)	1,920	21.00	22.00
Montreal (Pt. St. Charles)	2,534	17.00	21.00
Montreal (East End)	1,519	17.00	21.00
Winnipeg	962	16.00	17.00
Calgary	1,398	13.50	13.00
Edmonton	799		

Market Comments.

Toronto (Union Stock Yards).

Heavy cattle receipts were responsible for a further depression of values, the market being affected to the extent of 25 cents on choice weighty kinds, and \$1 per hundred on the medium and common grades. On account of the relatively liberal movement of medium to common grades the spread between choice and medium grades has widened to nearer normal; light cattle at the present range of \$12.50 to \$13.50 per hundred, were badly out of line with the heavier weights at a range of \$14 to \$14.50 per hundred. Heavy cattle are coming forward in limited numbers, as farmers with cattle on grass, which were bought in the spring, paid high prices, and are holding their cattle in the hope of a satisfactory export trade development later on. The few choice heavy cattle offered sold at fairly steady prices. One load of steers, averaging about twelve hundred pounds, was cleared at \$14.40 per hundred, and other loads of about equal weight and quality from \$14 to \$14.25 per hundred. Thirty steers, averaging eleven hundred and fifty pounds, sold at \$14.25 per hundred, twenty head averaging eleven hundred pounds at \$14, and numerous other sales were made from \$13.50 to \$14. The extremely hot weather has dried up the pasture in many sections of the province, resulting in abnormal deliveries of light, unfinished cattle. With a narrow outlet for that class of stock, prices have gone considerably lower, and a range of from \$7 to \$13.50 rules, with only choice quality animals reaching higher levels. Twenty-four heifers, averaging nine hundred and seventy-five pounds, sold at \$13.50, twenty heifers at \$13.25, and a mixed load of steers and heifers at \$13.10. One load of steers, averaging nine hundred and fifty pounds, was weighed up at \$13.25. The preceding prices were, however, only paid in a few instances, as most of the offering of the lighter weights of cattle sold from \$9 to \$11 per hundred. Choice cows changed hands from \$9.75 to \$10.50, while good quality bulls went from \$10.25 to \$11.50, and medium quality in both cows and bulls from \$7 to \$9 per hundred. Stockers and feeders were in slow demand locally, while the weaker feeling on the American markets has caused speculators to suspend operations for the time being. The calf market was considerably easier during the week, and choice calves were quoted from \$18 to \$19 per hundred, a decline of almost \$2, while the common grades declined from \$2 to \$4 per hundred.

Lambs sold at fairly steady prices early in the week, but suffered a decline on the Thursday market when \$19.50 was the top price paid. Earlier in the week, prices ranged from \$19 to \$21.50 per hundred. Sheep were easier, heavy kinds selling from \$8 to \$9 per hundred, light sheep from \$10 to \$11, and common sheep down as low as \$4 per hundred.

Packer buyers endeavored to buy hogs at lower levels, but were unsuccessful in affecting any appreciable decline in the market. On Monday, select hogs sold at \$24.75, fed and watered. On Tuesday no sales were made. The following day the quotations given out was \$24.45, while on Thursday the prevailing price

TORONTO (Union Stock Yards)		MONTREAL (Pt. St. Charles)	
Classification	No.	Avg. Price	Price Range
STEERS			
heavy finished	194	\$13.90	\$13.00-\$14.25
STEERS			
good	809	13.56	12.75-14.00
1,000-1,200 common	137	11.80	10.50-12.50
STEERS			
good	358	12.55	11.75-13.00
700-1,000 common	407	9.87	8.00-10.50
HEIFERS			
good	678	12.57	12.00-13.00
fair	594	10.00	9.50-10.75
common	205	8.75	7.50-9.50
COWS			
good	515	9.82	9.25-10.50
common	1,419	7.40	6.75-8.50
BULLS			
good	74	10.25	9.75-11.00
common	181	8.00	7.50-8.50
CANNERS & CUTTERS	120	5.25	4.75-5.50
OXEN			
CALVES			
veal	785	17.00	15.00-19.00
grass	967		
STOCKERS			
good	541	10.70	10.00-11.50
fair	642	9.25	8.50-10.00
FEEDERS			
good	415	12.25	12.00-12.50
fair	89	11.75	11.50-12.00
HOGS			
selects	5,408	24.30	24.25-24.75
heavies	1		
lights	630	22.67	22.25-22.75
(fed and watered) sows	291	21.64	21.25-23.75
stags	12	19.50	19.25-19.75
LAMBS			
good	2,198	19.10	17.50-21.00
common	180	17.25	16.00-19.00
SHEEP			
heavy	264	9.39	10.00-10.00
light	396	10.78	10.00-12.00
common	411	6.45	5.00-8.00

was \$24.50, and the top price \$24.75. During the week as high as \$24 f.o.b. was paid.

Of the disposition from the Yards for the week ending July 17, Canadian packing houses bought 460 calves, 5,233 butcher cattle, 613 hogs and 1,777 sheep. Local butchers purchased 673 calves, 453 butcher cattle, 304 hogs and 1,108 sheep. Canadian shipments were made up of 33 calves, 98 milch cows, 264 butcher cattle, 277 stockers, 149 feeders, 260 hogs and 100 sheep. Shipments to United States points consisted of 410 calves, 14 bulls, 1,075 butcher cattle, 873 stockers and 224 feeders.

The total receipts from January 1 to July 17, inclusive, were 163,187 cattle, 37,282 calves, 193,155 hogs and 37,116 sheep; compared with 138,240 cattle, 38,278 calves, 206,535 hogs, and 21,051 sheep, received during the corresponding period of 1918.

Montreal.

Live stock offered for sale on the two markets during the week amounted to twenty hundred and seventy-five cattle, forty-six hundred and fifty calves, twenty-four hundred and forty sheep, and sixty-one hundred and fifteen hogs. Cattle moved very slowly at the opening of the market on Monday, but later in the

day there was a fair amount of trading, and all but two loads were sold. The best load offered consisted of twenty-six steers averaging ten hundred and thirty pounds, and were sold for \$13 per hundred. A few odd steers were moved around \$12.50, but most of the steers on sale were light and unfinished, and prices for these did not exceed \$10 per hundred. There were very few good cows, with the exception of one load from the Toronto market. Medium cows of ten hundred pounds weight or more sold around \$9, and lighter cows down to \$6.50. Bulls left the sales at prices ranging from \$7 to \$9, the majority of sales being made at \$8, \$8.25 and \$8.50. A number of thin, young heifers were on the market, and these went from \$7 to \$8 per hundred. Prices for calves remained quite firm, the best veal selling at \$15, and in a few cases at \$16, per hundred. Grass and rail-fed calves sold up to \$10.50, and poor yearlings at \$6.50.

Sheep remained at \$10, but prices for good lambs were off \$1 per hundred.

Select hogs were moved at \$23.50 per hundred, weighed off ears, with offers being made at \$23 for week-end shipments. Owing to the large percentage of sows and roughs in many of the shipments, a lot of the hogs are brought without grading. Sow prices are \$5 per

hundred less than selects, and stag prices \$7 less. Owing to the demand from the local fresh meat trade many young light hogs were sold at select prices.

PT. ST. CHARLES.—Of the disposition from the Yards for the week ending July 17, Canadian packing houses bought 1,972 calves, 41 cannors and cutters, 250 bulls, 747 butcher cattle, 3,038 hogs, and 1,624 sheep and lambs. Canadian shipments were made up of 33 milch cows and 67 butcher cattle. Shipments to United States points consisted of 92 calves.

The total receipts from January 1 to July 17, inclusive, were 17,377 cattle, 45,574 calves, 43,972 hogs, and 11,074 sheep; compared with 18,661 cattle, 46,197 calves, 34,754 hogs and 9,246 sheep, received during the corresponding period of 1918.

EAST END.—Of the disposition from the Yards for the week ending July 17, Canadian packing houses bought 1,112 calves, 1,263 butcher cattle, 2,350 hogs and 1,288 sheep and lambs. Canadian shipments were made up of 110 calves and 269 hogs. Shipments to United States points consisted of 110 sheep and lambs.

The total receipts from January 1 to July 17, inclusive, were 19,646 cattle, 32,536 calves, 25,362 hogs and 11,600 sheep; compared with 17,474 cattle,

35,158 sheep of period of

Follow medium sustained hundred, tions of an incre thousand centage quality, very strength lators be shipment the even at the cle left for t steers of \$12.50. left the so to \$11.50 sold gene although achieved ing found \$10 to \$1 were of a from \$7. feeders n usually l for a dec per hund \$9.50 to to \$9. 1 and tw billing, th and thirt via the p

Cattle. liberal at of which were in th past, the here. V states a rushing a ran to grades. of Canad ping den run here the decli and less grades of steady, b \$14.60 to last wee ruled low was main choice or was slow light. B a quarter Milk cow factory c weak on Offerings as again and' com ponding Shippi heavy, \$ 1,300, \$1 \$15 to \$1 to \$16; go good, 1, plain, \$1 Shippi heavy, \$ \$13.50; l common Butche prime, \$1 \$15.75; b good, \$12 to \$10; Cows a \$13 to \$ \$13; fair light, con fat cows, cows, \$9 \$7.75 to ners, \$5. Bulls— good but \$9 to \$9. Stocker \$10 to \$1 \$9.50; be good, \$8. Milche (small lot \$90 to \$1 \$80 to \$8 loads, \$7 Hogs.—

Markets

Department of Agriculture, Live Stock Intelligence Division

Price Good Calves

Same Week	Ending
1918	July 17
15.50	22.00
15.50	17.00
15.50	17.00
14.00	16.00
	8.50
12.00	.00

Price Good Lambs

Same Week	Ending
1918	July 17
22.00	21.00
21.00	19.00
21.00	19.00
17.00	16.00
	12.50
	13.00

Price Range Top

Price	Price
13.25	

12.50 12.50

10.00 10.75

11.00 11.00

10.00 10.00

8.50 8.50

10.75 10.75

9.00 9.00

8.50 9.00

6.50 6.50

15.00 16.00

10.00 10.00

23.25 23.25

22.25 22.25

18.25 18.25

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up of 110 calves and

nts to United States

110 sheep and lambs.

s from January 1 to

were 19,646 cattle,

82 hogs and 11,600

with 17,474 cattle,

35,158 calves, 21,771 hogs and 8,541 sheep, received during the corresponding period of 1918.

Winnipeg.

Following a heavy run of cattle of medium to common quality, the market sustained a decline in price of fully \$1 per hundred, compared with the closing quotations of the previous week. There was an increase in receipts amounting to two thousand head, and as a very small percentage of the offering was of good quality, bidding by local abattoirs was very light. However, the market strengthened on Thursday, when speculators bought very freely for Southern shipment, sixty cars being billed out in the evening of the day mentioned, while at the close only two thousand head were left for the local trade. The few heavy steers offered were sold from \$11.50 to \$12.50. Medium weights butcher cattle left the scales at prices ranging from \$10.50 to \$11.50, while steers of lighter weights sold generally within a range of \$10 to \$11, although a few really choice animals achieved \$12.50. Heifers of choice grading found a market at prices ranging from \$10 to \$11, but most of the heifers, which were of medium grading, changed hands from \$7.50 to \$9. While stockers and feeders met with a fair inquiry, the unusually heavy receipts were responsible for a decline ranging from 50 cents to \$1 per hundred, choice feeders selling from \$9.50 to \$10.50, and stockers from \$8 to \$9. During the week, three hundred and twenty cattle went out on through billing, this number including two hundred and thirty-eight from Calgary to Belgium, via the port of montreal.

Buffalo.

Cattle.—Cattle receipts were very liberal at Buffalo last week, as the result of which prices were lowered. Canadians were in the largest number for many weeks past, there being better than 125 loads here. Very dry weather, both in the states and Canada had the effect of rushing cattle to market, most of which ran to the common, medium and fair grades. There were around thirty cars of Canadian steers suitable for the shipping demand and considering the liberal run here, these sold to good advantage, the decline being mainly on the medium and less desirable stuff, with the best grades of shipping steers selling about steady, best the past week ranging from \$14.60 to \$15, as against a \$14.50 top last week. Butchering stuff generally ruled lower by a quarter to a half but was mainly grassy and very few of the choice order. Stockers and feeders trade was slow and lower, demand being very light. Bulls of all classes brought within a quarter of the previous week's market. Milk cow and springer market was satisfactory on the best grades but slow and weak on the medium and common kinds. Offerings for the week totaled 7,175 heads, as against 6,575 for the previous week and compared with 6,500 for the corresponding week a year ago. Quotations: Shipping Steers, Natives.—Very choice heavy, \$16.75 to \$17.75; best heavy, over 1,300, \$15.75 to \$16.25; fair, over 1,300, \$15 to \$15.50; best, 1,200 to 1,300, \$15.50 to \$16; good, 1,200 to 1,300, \$15 to \$15.50; good, 1,100 to 1,200, \$14.75 to \$15.50; plain, \$13 to \$14. Shipping Steers—Canadians. — Best heavy, \$14 to \$15; fair to good, \$13 to \$13.50; Medium weight, \$13 to \$13.50; common and plain, \$12 to \$12.50; Butchering Steers.—Yearlings, fair to prime, \$15 to \$16; choice heavy, \$15.25 to \$15.75; best handy, \$14.50 to \$15; fair to good, \$12 to \$13; light and common, \$9.50 to \$10; Cows and Heifers.—Best heavy heifers, \$13 to \$14; good butcher heifers, \$12 to \$13; fair butchering heifers, \$10 to \$11; light, common, \$7.50 to \$8.50; very fancy fat cows, \$11 to \$11.25; best heavy fat cows, \$9.50 to \$10.50; medium to fair, \$7.75 to \$8.50; cutters, \$7 to \$7.50; canners, \$5.50 to \$6.50. Bulls.—Best heavy, \$11.50 to \$12; good butchering, \$10.50 to \$11; sausage, \$9 to \$9.50; light bulls, \$8 to \$8.50. Stockers and Feeders.— Best feeders, \$10 to \$10.50; common to fair, \$8.50 to \$9.50; best stockers, \$9.50 to \$10; fair to good, \$8.50 to \$9; common, \$7.50 to \$8. Milchers and Springers.—Good to best (small lots) \$100 to \$150; in car loads, \$90 to \$100; medium to fair (small lots) \$80 to \$85; common, \$50 to \$55; in car loads, \$70 to \$75. Hogs.—Record breaking prices were

paid for hogs at Buffalo again last week. Receipts were light and as a result prices were on the jump from day to day. Monday good hogs sold at \$23.50, with pigs \$23, Tuesday, best grades were up a quarter, while pigs were steady, Wednesday, better weight grades made \$24.25, with pigs selling from \$23 to \$23.50, Thursday the bulk reached \$24.35, with pigs \$23.50 and Friday the top was \$24.35, bulk sold at \$24.25 and pigs landed at \$23.50. Roughs ranged from \$21 to \$22 and stags sold up to \$19. Buyers are beginning to discriminate against common hogs and some of this order had to sell from a quarter to thirty-five cents under the better quality kinds. Receipts the past week were 11,600 head being against 15,284 head for the week before and 9,200 head for the same week a year ago.

Sheep and Lambs.—Trade on lambs was very dull last week, while sheep were active and strong. Monday, best lambs sold at \$17.50 and \$18, few \$18.50 and culls ranged from \$14 down. Before the week was out, however, prices were from \$1 to \$1.50 per cwt., lower. Friday top lambs were hard to sell above \$16.50, although a few made \$17 and culls ranged from \$13 down. Best yearlings sold at \$13.50 to \$14, wether sheep were quoted up to \$10.50 and ewes ranged from \$9 to \$9.50, few \$9.75. Receipts the past week were 3,200 head, as compared with 2,573 head for the week previous and 2,350 head for the same week a year ago.

Calves.—Last week opened with top veals selling at \$19 and culls ranged from \$17 down. Tuesday and Wednesday the trade was about steady, Thursday tops brought up to \$19.50 and Friday the bulk of the choice grades moved at \$21, with a few up to \$21.50. Canadian calves, of which there were four or five decks, sold fifty cents to a dollar under the natives. Weighty calves were a drug on the market and while the range on these was from \$5 to \$6 lower than two weeks ago they were hard to sell at that. Some pretty decent killing calves that were weighty sold down to \$9.50. Receipts the past week were 4,000 head, being against 4,745 head for the week previous and 3,725 head for the same week a year ago.

Toronto Produce.

Breadstuffs.

Wheat—Ontario (f.o.b. shipping points, according to freights)—No. 1 winter, per car lot, nominal; No. 2 winter, per car lot, nominal; No. 3 winter, per car lot, nominal; No. 1 spring, per car lot, nominal; No. 2 spring, per car lot, nominal; No. 3 spring, per car lot, nominal. Manitoba, No. 1 northern, \$2.24½; No. 2 northern, \$2.21½; No. 3 northern, \$2.17½; No. 4 wheat, \$2.11.

Manitoba Barley.—(In store, Ft. William), No. 3, \$1.20½; No. 4 C. W., \$1.25¾; rejected, \$1.20½; feed, \$1.20½.

Oats.—(In store, Ft. William), No. 2 C. W., 93c.; extra No. 1 feed, 89½c.; No. 1 feed, 87½c.; No. 2 feed, 84½c.

Barley, (according to freights outside), malting, \$1.22 to \$1.26.

Peas.—(According to freights outside) No. 2, nominal.

Buckwheat (according to freights outside), No. 2, nominal.

Rye (according to freights outside), No. 2, nominal.

Flour.—Manitoba, Government standard, \$11, Toronto, Ontario; (in jute bags, prompt shipment), Government standard, \$10.50 to \$10.75, Montreal, Toronto.

Millfeed.—Car lots delivered, Montreal freight, bags included.—Bran, per ton, \$42; shorts, per ton, \$44; good feed flour bag, \$2.90 to \$3.

Hay.—(Track Toronto), No. 1 per ton, \$21 to \$23; mixed, per ton, \$18 to \$19.

Straw.—(Track, Toronto), car lots per ton, \$10 to \$11.

Hides and Wool.

Prices delivered in Toronto: City Hides.—City butcher hides, green, flats, 41c.; calf skins, green, flats, 80c.; veal kip, 52c.; horsehides, city take-off, \$12 to \$13; sheep, \$3 to \$4; lamb skins and shearlings, \$2.00 to \$3.00.

Country Market.—Beef hides, flat, cure, 34c. to 36c.; green, 30c. to 32c.; deacon and bob calf, \$2.50 to \$3; horsehides, country take-off, No. 1, \$11 to \$13; No. 2, \$10 to \$11; No. 1 sheep skins, \$2.50 to \$3.50; horsehair, farmers' stock, 33c. to 35c.

Tallow.—City rendered, solids, in barrels, 9c. to 10c.; country solids, in barrels, No. 1, 11c. to 12c.; cakes, No. 1, 12c. to 13c.

Wool.—Unwashed fleece wool as to quality, fine, 59c. to 60c. Medium coarse, 50c.; coarse, 42c. Wool washed fine, 75c.; medium, 70c.; coarse, 65c.

Country Produce.

Butter was a steady trade during the past week and dealers quoted prices to the retail trade as follows:—

Creamery, fresh made, pound prints, 53c. to 56c. and choice dairy at 48c. to 50c. per lb.

Eggs were a strong trade and prices ranged higher, new laid selling at 53c. to 54c. and selects in cartons at 58c. to 59c. per doz. Cheese was steady and sold at 32c. to 32½c. per lb.

Poultry of all kinds was a fair trade and fat hens alive were especially in demand. The following quotations are for live weight, delivered, Toronto:—

Chickens, good farm stock, 30c.; old hens, over 6 lbs. each 30c.; old hens, over 5 lbs. each, 30c.; old hens, 3½ to 5 lbs. each, 28c.; old roosters, over 5 lbs. each, 23c. Broilers, 2 to 3 lbs. each, 35c.; ducklings, 4 lbs. and over 28c.

Wholesale Fruit and Vegetables.

Receipts have been heavy, trade brisk, and prices averaged lower.

Apples.—The first Canadian apples of the season came in on Tuesday and sold at 50c. to 75c. per basket. They were of the Early Harvest and Astrachan varieties.

Apples—Imported, \$3.25 to \$3.50 per hamper; home grown, 50, to 75c. per basket.

Bananas—7½c. per lb.

Black Currants—\$2.50 to \$2.75 per 11-qt. basket.

Blueberries—\$1.65 to \$2.50 per 11-qt. basket.

Currants, Red—12c. to 15c. per box, 65c. to 85c. per 6-qt. basket, \$1.25 to \$1.75 per 11-qt. basket.

Cherries—Canadian sour, 60c. to 85c. per 6-qt. basket, \$1.50 to \$1.75 per 11-qt. basket.

Cantaloupes—Canadian, \$2 per 16-qt. basket; \$1.25 to \$1.50 per 11-qt. basket.

Imported, \$7.50 to \$8 per case; flats, \$2.75 to \$3.00.

Gooseberries—75c. to \$1 per 6-qt. basket, extra choice, \$2 per 6-qt., \$1.75 to \$2 per 11-qt. basket.

Lemons—\$6.50 to \$7 per case.

Oranges—Late Valencias, \$5.75 to \$6.50 per case.

Peaches—Georgia, \$4.50 per bushel basket.

Pears—California, \$5.50 per large box.

Plums—Canadian Abundance, \$1.50 per 11-qt. basket.

Raspberries—28c. to 30c. per box.

Rhubarb—Outside grown, 20c. to 30c. per dozen bunches.

Tomatoes—Domestic hothouse, No. 1, 25c. per lb. and No. 2, 20c. per lb. Outside grown, \$1.75 to \$2.25 per 11-qt. basket.

Beans—Home grown, 50c. to 75c. per 11-qt. basket.

Beets—New, Canadian, 25c. to 30c. per dozen bunches.

Cabbage—Canadian, \$1.50 per dozen.

Carrots—25c. to 30c. per dozen bunches.

Cucumbers—Outside grown, 65c. to 75c. per 11-qt. basket.

Lettuce—Leaf, 40c. to 50c. per dozen; Canadian head, 75c. to \$1 dozen.

Onions—California, \$8 per bag.

Peppers—Green, 75c. per 6-qt. basket, \$1 to \$1.25 per 11-qt.

Potatoes—Ontarios, old, 75c. to \$1 per bag; imported new, No. 1's, \$7.75; No. 2's \$6 per barrel.

Parsley—Home grown, \$1 to \$1.25 per 11-qt. basket.

Radishes—40c. per dozen bunches.

Turnips—White, 25c. to 30c. per 11-qt. basket.

Vegetable Marrow—50c. to 65c. per 11-qt. basket.

Cheese Markets.

St. Hyacinthe, Que., 25c.; Vankleek Hill, 25c.; Belleville, offered at 25c.—no sales; Cornwall, 25c.; London, 25c.; Montreal, finest easterns, 25c.; New York, flats, specials, 32½c. to 33¼c.; average run, 31½c. to 32¼c.; twins, specials, 32¼c. to 33c.; average run, 31c. to 32c.

Victory Bonds.

Following were the values of Victory Bonds on the Toronto market on July 26: Victory Bonds maturing 1922, *100 to *100; Victory Bonds maturing 1923, *100½ to 100¾; Victory Bonds maturing 1927, *101 to 102; Victory Bonds maturing 1933, 104¼ to 104¾

*Less than \$1,000 lots.

Montreal.

Horses.—Very few horses were received here during the week, and practically no demand is being experienced. Prices showed no change, being as follows: Heavy draft, weighing from 1,500 to 1,700 lbs., \$250 to \$300 each; light draft, weighing from 1,400 to 1,500 lbs., \$200 to \$250 each; light horses, \$125 to \$175 each; culls, \$50 to \$75, and fine carriage and saddle horses, \$150 to \$250 each.

Dressed Hogs and Provisions.—City abattoir dressed hogs were slightly lower last week in sympathy with a decline which took place in live hogs, and business was being done at 33c. to 33½c. per lb. A fairly good trade continues in dressed and cured meats, and prices held steady at the recent advance, with light hams selling at 44c. to 45c. per lb.; mediums, weighing 12 to 15 lbs., 42c. to 43c.; heavies, 40c. to 41c.; picnic hams, 32c. to 34c. Breakfast bacon was steady and in good demand at 46c. to 56c. per lb., according to quality, while Windsor selected bacon was 50c., and Windsor boneless 54c. to 55c. Canadian pure leaf lard was 38½c. to 40c., and American compound, 27½c.

Poultry.—Some fresh killed poultry changed hands, but the volume was very small. Cold storage stock was selling at steady prices, with choice turkeys at 48c. to 50c.; chickens, 36c. to 47c., according to quality; fowls, 30c. to 36c.; ducks, 40c. to 48c., and geese, 30c. to 31c.

Potatoes.—Stocks of old potatoes are practically exhausted, and no new Canadian potatoes of consequence are yet available.

Maple Products.—Supplies of maple products are light, and prices were firm with sugar quoted at 30c. per lb., and syrup at \$2.50 to \$2.60 for 13-lb. tins.

Eggs.—The market for eggs continued strong, and it is unlikely that lower prices will be experienced this season. Strictly new-laid eggs were quoted at 64c. per dozen, selected stock being 58c.; No. 1 are 52c., and No. 2 stock 45c. It is said that prices to country stores in Ontario ranged from 46c. to 48c.

Butter.—There was no evidence of lower prices in the butter market. Provision is fairly large, but there is an active demand for everything available. Pasteurized creamery was steady at 54¼c. to 55c. per lb.; finest creamery was at a range of ½c. below these prices, while fine creamery was 53½c. to 53¾c. Dairies were 49c. to 50c.

Cheese.—A rather unusual situation prevailed in respect to cheese. Some of the country boards appeared not to have been doing business, and merchants were not quoting here.

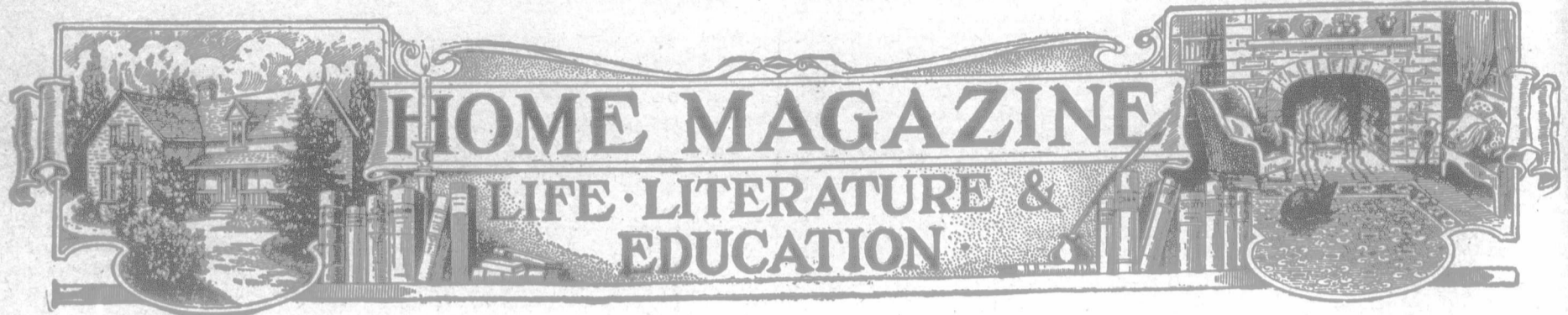
Grain.—No. 3 Canadian Western and extra No. 1 feed oats were quoted in car lots at \$1.01½, ex-store. No. 1 feed was 99½c., and No. 3 Ontario White 97½c. Demand for barley was light, and car lots of No. 3 extra Ontario were \$1.48; No. 3 being \$1.47 per bushel, ex-store.

Flour.—Prices were unchanged and demand was light, with Manitoba Government standard flour quoted at \$11 per barrel in jute bags, ex-track, Montreal freight, and the same to city bakers, with 10c. discount per barrel for spot cash. Ontario winter wheat flour was steady with sales at \$11.40 to \$11.50 in broken lots per barrel in new cotton bags. White corn flour in small lots was \$10.60 to \$10.70 per barrel in jute bags, while rye flour was \$8.50 to \$9.

Millfeed.—Bran was selling in broken lots at \$43 to \$43.50 per ton in bags, with shorts at \$45.50 to \$46. Mixed grain mouille and pure barley meal was \$64; dairy feed, \$50, delivered to the trade.

Hay.—Prices were feeling the influence of the new crop, but held fairly firm. Car lots of good No. 2 timothy were quoted at \$28 per ton, ex-track, No. 3 timothy being \$25, and clover mixture, \$20 to \$23 per ton.

Hides and Skins.—Prices once more advanced, and were 2c. above those of the previous week, which in turn were 8c. above those of the week before. Steer and cow hides were up to 38c.; veal skins were another 5c. up at 95c. per lb., while kips are 45c. to 50c. per lb. Spring lambs advanced to \$3 each; clipped lamb skins being \$1.25. Horse hides were steady at the recent advance, being \$10 to \$11 each.



Shelter.

BY CALE YOUNG-RICE.

I have been out where the winds are,
And tossing tops of trees,
And clouds that sweep from rim to rim
Of blue infinities.
And all was a sound and sway there,
A surging of unrest:
So now I am wanting silence, and the
heart I love best.

Yes, and a quiet book, too,
Of pensive poetry,
In which to let the lines lapse
Away, unlessonedly.
For I shall gather, somehow, from the
soft fire's glow,
And from the eyes I love best, all I need
to know.

And hours shall slip to embers,
And on the hearth lie;
And every wind that blew me,
And every want, die.
Then I shall take the hand I love best, and
turn to sleep;
And, if God wills, at dawn awake, again
to laugh or weep.
—In "Songs to A. H. R."

The Fire-place

E. V. LUCAS has said, "Who could be witty, who could be humane before a gas stove?" But E. V. Lucas is an Englishman. Wonder what he would say if he lived in America and were obliged to spend his winter days in a room heated from a hole in the wall!

Of course, his statement causes a reflex action in our thinking apparatus, and we get the converse which he intended: "If you want to be witty, if you want to be humane equip your rooms with fire-places."—Joking aside, and given normal conditions otherwise, there is nothing so conducive to good cheer and sociability, on a bleak fall or cold winter's day, as a roomy fire-place in which a bright fire is burning. It makes sunshine in the house when there is none without; it induces a pleasant "purring" sensation; it unlooses the tongue, or makes one want to snuggle down beside it for a long evening's read.

To come to the more practical side of the question, a fire-place is a real necessity in the modern home. It is economical because it can be used during those cool spring and fall days when a fire is needed, and yet it would be extravagance to light the furnace. It does more to furnish a room than any other two or three pieces of furniture could possibly do. And, last of all, it is one of the best ventilators that can be put in.

The modern fire-place has, of course, a small fire-box; otherwise it would consume far too much fuel. Also, it is provided with a galvanized-iron chute leading to an ash-box in the cellar through which the ashes may be dumped without trouble and without letting the ashes fly all through the room. . . . Requisites are: A close front or "blower," which may be put on when the fire-place is not in use, and a movable wire net screen to keep sparks from flying out and setting fire to the rug. Also, the fire-place should be equipped with a damper to check off the blaze and keep the heat from all going up the chimney,—a great saving of fuel.

Mantel and Facing.

Materials and designs for mantels and facings are now varied enough to suit any taste. You can have one just as ugly and inartistic as you like, or you can have one just as handsome or artistic as you like. . . . Perhaps the kind of trim most commonly seen is a fancy wooden frame, with or without a mirror above, and with glazed tiles for the facing and hearth. True, a wooden frame may be handsome, especially if it is plain and of rich, mellow old wood. And the tiles

may also be very effective, if of good color, dull finish, and unspoiled by silly little designs. The ordinary fire-place of wood (imitation of golden oak, varnished) and glazed tile in crude green, red, brown or blue, has, however, nothing that is distinctive or artistic about it. Better such a fire-place than none at all, but if one fell heir to it one would want to take off the fancy touches at once, remove the varnish, stain the whole to a rich, dark color, and have the surface rubbed to a soft, dull finish.

When putting in a new fire-place, if one has a fancy for tiles (and, as remarked above, they may be exceedingly good) one will do well to choose a coloring that will harmonize delightfully with the rest of the room; then with a plain, tasteful wooden frame the whole may be a thing of beauty and a joy forever. For instance, in a room in which olive green is the leading color note, a Pompeian facing tile of dull buff might be a good choice, especially if a brass lamp, brass candlesticks, and amber touches in cushions, curtains, etc., are depended upon to give the necessary touch of con-

trast. In an "old blue" and Indian red (or copper) room, a dull Indian red or terra cotta facing might be the right touch. In a gray and pink room with ivory white woodwork, ivory white facing might be a happy choice, with pink fire-brick for the hearth.

—And so on.
If you have a handsome old marble fire-place in your house, rejoice. For a while they went out of favor; it was thought they were too hard and cold. But favor in house-fashions as in other fashions swerves about once in a while, and back it has come to the marble grate. It demands, however, that it be accompanied by quaint, ancient old furniture—black walnut, or mahogany, or rosewood. And so the heirlooms from one's grandmother or great-grandmother are once more enthroned.

Brick fire-places also are desirable, they may be all brick except the slab for the mantel piece, and yet there must not be too much brick. A huge mass of brick running far up on the wall may be in place in a huge room, but in an ordinary room is likely to "fill" the place very

disagreeably. It is safe to say, then, that the brick fire-place should be on the low side. Also the brick for facing should have a fine, smooth, dull finish. It can be got in almost any shade one wants, nowadays,—brown, buff, stone gray, terra cotta, pinkish, Indian red, etc.,—made on purpose for fire-places.

Last of all, there is the stone fire-place, with facing of either cut stone or cobble stone, "hand-picked" for beauty. The mortar should not be too much in evidence, and may be tinted to take off the hard white look.

For the portion between the mantel and ceiling various devices are resorted to. In a Frenchy room with a marble mantel the old-time mirror may fill up the space very acceptably. Sometimes above the tiled or fine brick fire-place a high, narrow window is set, flanked by two narrow built-in cupboards for china, books or curios,—both window and cupboard doors being of diamond-shaped panes of glass, leaded. Or wood panelling may run to the ceiling.

Always, however, a safe finish is a simple, heavy slab of wood for the mantel, with no further adornment, save, perhaps, a second slab upright against the wall. A picture may be hung above, or a tall clock set on the mantel, with a handsome jar, a bit of statuary, or a pair of candle sticks for further adornment.

The inside of the fire-place, it goes without saying, must be absolutely fire-proof. This is usually assured by building it of solid brick, with fire-brick lining throughout. Iron is not a good lining, because it absorbs too much heat instead of radiating it forward into the room.

The Fire-place that Doesn't Smoke.

Perhaps one of the chief reasons why fire-places are not more frequently seen in the modern house is that after stoves came into fashion, builders seemed to lose, to a great extent, the art of building them in such a way that they would not smoke. To obviate the possibility of such an annoyance the great majority of home builders decided not to take the risk. But assuredly a home misses one of its greatest charms by the lack, and so no pains should be spared which can secure not only the putting in of a fire-place, but also the making sure that it shall be a successful one.

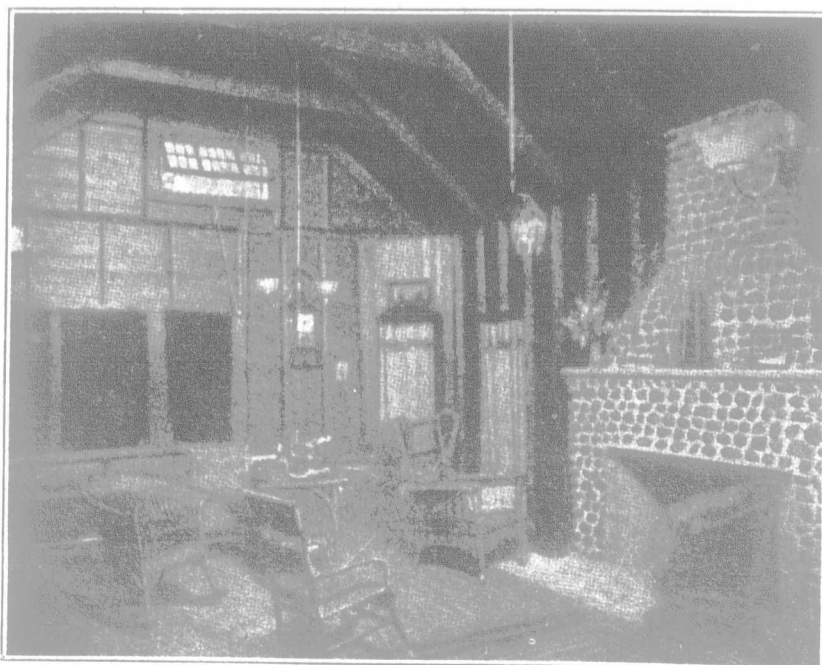
The following article, by E. L. Elliott, gives quite definite directions, and credit is gratefully acknowledged to *Country Life in America*, in which magazine it appeared.

Generally speaking, a fire-place should act on the principle of an aspirator. This is an apparatus very familiar to steam engineers of the present day. It is used for injecting water into boilers by means of a jet of steam, and also for producing suction of air by the flow of water. The diagram of the latter apparatus will make its operation clear. A is the nozzle through which a jet of water flows under pressure. B is an inlet for air, which may be connected for any purpose for which the suction is desired. C is the outlet for the water and air together. In the construction of this apparatus two points must be observed in order to produce suction: the outlet C must be considerably larger than the opening of the nozzle A, and must have an offset or crook in its passage, as shown at D. If the outlet were a straight tube practically no suction would be produced. The constriction in the fire-place flue just above the fire corresponds to the nozzle of the aspirator, and the enlarged opening or flue, above this corresponds to the outlet, C.

In the directions given in the article referred to, there is no mention made of the turn or offset in the flue. This is a little trick in chimney building which will cure many a bad case of smoke. I have been told by a Swedish friend of mine that in the "old country" there are professional chimney doctors, and that putting a



The Chimney May Be Built Outside.



Cobblestone Finish.

Delightful in a large room furnished to suit.

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between the mantel devices are resorted to with a marble mirror may fill up acceptably. Sometimes a brick fire-place a set, flanked by cupboards for china, window and cup of diamond-shaped Or wood paneling

a safe finish is a wood for the mantel, ornament, save, perpendicular against the mantel, with a pair of statuary, or a pair further adornment. fire-place, it goes to be absolutely fire-ly assured by build- with fire-brick lining is not a good lining, too much heat instead into the room.

at Doesn't Smoke. The chief reasons why more frequently seen is that after stoves builders seemed to t, the art of building that they would not the possibility of the great majority of led not to take the a home misses one ms by the lack, and be spared which can putting in of a fire-making sure that it one.

cle, by E. L. Elliott, directions, and credit wledged to Country which magazine it

g, a fire-place should le of an aspirator. us very familiar to e present day. It is ater into boilers by steam, and also for air by the flow of n of the latter ap- its operation clear. ough which a jet of pressure. B is an may be connected which the suction is utlet for the water e construction of o points must be o produce suction: e considerably larger the nozzle A, and crook in its passage, the outlet were a lly no suction would construction in the ove the fire corre- of the aspirator, and or flue, above this tlet, C.

given in the article no mention made of the flue. This is a building which will e of smoke. I have h friend of mine that here are professional nd that putting a

double turn or offset in the flue is one of their principal remedies.

"I cannot agree that the ventilator for admitting outside air into the fire-place is not worth the expense of making it, and I base my opinion on both theory and experience. In the first place, the quantity of air taken up by the flue is a very considerable amount. Now, this supply of air must be constantly supplied, and it must either come from the openings into the room around doors and windows, or it must come down the chimney at the same time that the heated air is rising. In a room closed as tightly as ordinary doors and windows close it, there is no possibility of a sufficient amount of air coming in to supply the upward draft. As a result there is a downward draft through the chimney, which naturally brings with it more or less of the ascending smoke. A very small opening at the back of the fire-place into the open air will entirely remove this condition and produce a perfectly clean flame. As simple and reasonable as this scheme is, it is a wonder that it has not been more often used.

"Now for the verification of this theory by experience. I had the great good fortune a few years ago to come into possession of a real old New England farmhouse, in which there are fire-places in the three principal first floor rooms. One of these is in the room originally used as a kitchen, and served the purpose for cooking until the iron stove supplanted it. This is in the one story addition to the main portion of the house. As the fire-place is well toward one side of the end of this addition, and as the chimney top was put through the ridge-pole, presumably for the sake of architectural symmetry, it follows that there is a very considerable offset in the flue. The same fact also holds true with the other two fire-places in the house. Whether the builders of that day understood the advantage of this offset in the matter of draft I cannot say; it is possible that they builded better than they knew. The sides of the fire-place are of single slabs of granite, and the back is of common brick, curving toward the front at the top. The flue is simply a rectangular opening formed by the brick of the chimney.

"I found that this old kitchen fire-place had a magnificent draft so long as the door or windows were kept slightly open; but immediately they were wholly closed the room would be filled with smoke. After having accepted this as a necessary evil for a couple of years I discovered one particularly cold winter day that the fire-place had suddenly reformed in this respect. I was unable to account for this quite unexpected exhibition of virtue unless, in imitation of its human companions, it had sworn off smoking on the preceding New Year's day. I soon noticed, however, that the fire burned with a peculiar roar, as if it were being blown with a bellows, and that there was a streak of blue flame from the log at the back. Both of these I at first attributed to a steam jet issuing from the green wood, but this I realized could not account for the continuation of the phenomenon. This led me to an investigation which resulted in the discovery that the mortar had become loosened at the joints of one of the lower courses of brick in the back wall, and this afforded a small opening to the outer air through a passage underneath. Thus, the rise of warm air through the larger flue above produced a powerful suction through this small opening which blew the fire like a bellows. This forced draft was sufficient to fan into flame even a green log, and made the whole fire burn with an unusually clean, smokeless flame.

"Here, then, was the simple solution of the whole mysterious problem of the smoky fire-place. This set me to contemplating the behavior of the other two fire-places. One of these still acts exactly as did the kitchen fire-place at the beginning—that is, it will burn even green wood with perfect draft and without smoke so long as there is a door or window partly open, but as soon as the room is shut tight it begins to fill with smoke. The other fire-place is in a large room in which there are more windows, and consequently a greater opportunity for the influx of air around the joints. This is apparently sufficient to supply the necessary air to prevent smoke.

"I made another interesting discovery in this room. Those of us who can remember the old days of the fire-place, or even the big wood stove in the country house, will never forget the peculiar

moaning and howling of the wind on bleak and bitter nights. The very sound is still sufficient to send a shiver up the back, even if heard on a midsummer's night. I found that on lighting a fire in the fire-place in the larger room and shutting all doors and windows, this howling of the winds at once began, even though it might be as warm as summer

sashes, which set the glass vibrating, thus producing the peculiar sound.

"As simple as is the remedy for both the sound and the smoke, I confess to not yet having applied it. Like a hundred other things in a country place, it is one of the little matters put off for a leisure time that never comes. But some time this winter I am going to have my farmer



Sample of What Can Be Done with Cement—if You Can Find the Artist.

Simplicity, proportion and fineness of finish are essential.

with only a mild breeze blowing outside. Opening the door a crack into an adjoining room would at once stop this moaning. Evidently the sound was produced by the rapid influx of air between the window

take an inch rock drill and bore a hole through the back wall of the two fire-places, about two inches from the hearth, and see that he gets an opening through into the outer air. Then I can have a fire of any kind of wood and in any weather without the faintest trace of smoke in the room.

"To all lovers of the fire-place who are afflicted with the smoke nuisance I recommend a trial of this extremely simple remedy."

Another item that will help to prevent smoking is to have the proportions of front opening and chimney right. A rule is: "For every square foot (144 inches) of front opening allow 13 square inches, at least, in the flue."

Mottoes for the Fire-place.

A QUAIN old custom that many are adopting to-day, was to have a motto carved above the fire-place, or down the sides of it, a custom that can be followed when the frame and mantel are of wood or hewn stone—and one knows an artistic wood or stone carver.

The following are some suitable inscriptions. Just reading them makes one want to have a fire-place doesn't it?

"East, west, hame's best."

"Old wood to burn: Old books to read: Old friends to trust."

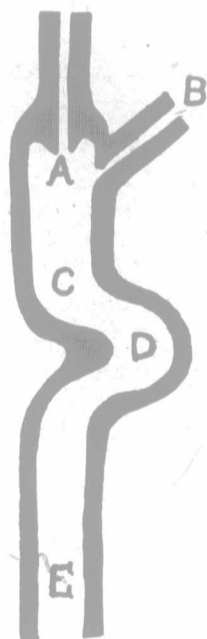


Diagram of an Aspirator.

Turn the diagram upside down, and you will get the idea as applied to a fire-place. The diagram will then compare with side view of fire-place (at A), flue (C D) and chimney at E. B would be the small tube leading from outside through the back of fire-place, 2 inches above hearth. Disregard tube at bottom, which, if you wish to carry out the similarity, might correspond to the chute for carrying the ashes down to ash-pan in cellar.

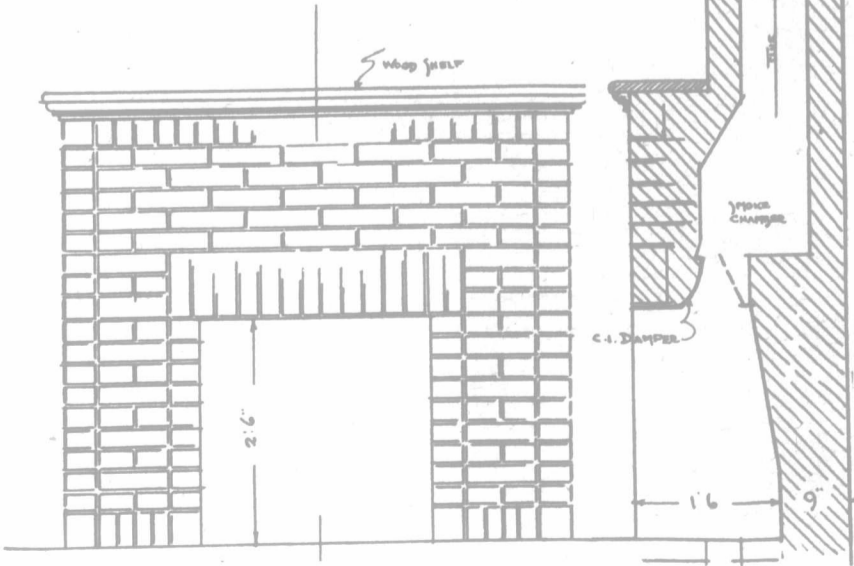


Diagram of Fire-place. Front and End Elevations.

Front view—Opening, 2 ft. 6 in.; sides, 1 ft. 6 in.; sides, 1 ft. in. each. Note—Flue must be at least one-tenth of the area of fire-place opening.

"Let no one bear beyond this threshold hence

Words spoken here in friendly confidence."

"Home is where the hearth is."

"My fire is my friend."

"There is no place like a chimney-corner for confidences."

"All care abandon
Ye who gather here."

"Old wood to burn,
Old books to read,
Old songs to sing,
Old friends to greet."

"When the logs are burning free,
Then the fire is full of glee;
When the heart gives out its best,
Then the talk is full of zest:
Light your fire and never fear,
Life was made for love and cheer."

—Dan Dyke.

Question Re Fire-place.

In reply to "J. P.," Waterloo Co., Ont., we may say that solid brick makes, perhaps, the safest fire-place. It should be well lined with firebrick for the fire cavity and some distance above, the chimney being either lined throughout with firebrick (the best plan) or plastered with fireclay above the firebrick. Often stone is used, with firebrick lining. Cement might give good satisfaction, but one would be afraid it might, in time, crack. For the facing, or front, any material liked may be used. "J. P." will probably find all the hints he needs in the foregoing article.

The one chimney may be used for both fire-place and furnace pipe, but the chimney will need a divided flue for the whole length, a separate flue for each.

Among the Books

"Joan and Peter."

[Joan and Peter, by H. G. Wells. The Macmillan Pub. Co., Toronto. Price, \$1.75.

For the past six months the people who have not been reading *The Four Horsemen of the Apocalypse* have been reading *Joan and Peter*.—people, we mean, who make a point of keeping up with the most outstanding of the new books, especially fiction. When through with one of these books such readers invariably have begun the other. Passing that there is no resemblance or connection otherwise between these two volumes—other than their great length. *The Four Horsemen* is almost purely descriptive; if the reader gains a few flashes of psychology in reading it, that comes of his own insight rather than from any inherent tendency in the author to write a psychological novel. *Joan and Peter*, on the other hand, is intensely psychological—as we have learned to expect of H. G. Wells' writings. Moreover, it is a book with a purpose—a modern *Nicholas Nickleby* that goes as far beyond the original *Nicholas Nickleby* in many respects, as the year 1919, with all its after-war aliveness, is beyond the days in which Dickens was at his prime. The advance, however, is not so much as a novel as in its powers of interpretation and prophecy—for H. G. Wells does prophesy, notwithstanding his frank confessions of "muddledom," and his prophecies are unfailingly optimistic—for the long run.

The story begins with the days when Peter lies "very puckered and ugly and red and pitiful" in a blanket in the nurse's arms. Anon comes Joan, a "by-blow" cousin adopted into the family. The time is somewhat past mid-Victorian—"in the days when Queen Victoria seemed immortal and the world settled forever."

Given a home and family connection filled with new and rather erratic ideas, at a time when it was considered almost highly improper to think out of the beaten track, and the setting for "Joan" and "Peter" immediately becomes interesting. But a more interesting situation still—so far as the reader, at least, is concerned—is in store for the children. Peter's father and mother are drowned accidentally off the coast of Italy, and Joan and Peter fall to the joint guardianship of four relatives. Of these two, on the father's side, are somewhat

erratic and feebly "advanced" aunts; a third hurls a mountainous blond personality and a little tuft of red whisker into the pages as "Lady Charlotte;" and a fourth is—"Nobby," in other words, Cousin Oswald, who has been always in love with Peter's mother, and who lost her, presumably, because he had spent the time for the winning of young ladies in Africa among the blacks and rhinoceri. Aunts Phoebe and Phyllis immediately proceed to have the children educated according to the rather "loose" Bohemian ideals which appeal to them. Lady Charlotte, who is wholly mid-Victorian—orthodox, conservative, Anglican and proper—whisks them off to schools of her own choosing. Then, quite unexpectedly, "Nobby" comes on the scene—Nobby who away out there in Africa has had his brain swept clear of fetishes and cramping-irons,—Nobby with his big heart and his disfigured face and his V. C. that might have been worn on his bosom had he chosen to so display it,—Nobby all aglow for the uplift of the world, and, as he at first sees it, the spreading of a great Imperialism which differs materially in essence from the Imperialism of Joseph Chamberlain. How he comes to spell it finally "humanitarianism," with the English-speaking peoples—such individuals of them, at least, as have learned how to "speak fairly and act fairly"—in the forefront among the propagandists of a new internationalism, may be left for the story to unfold.

Nobby does not like Aunt Charlotte very well; neither does he believe in her nor in her views, so there is clash at the first encounter, notwithstanding the fact that she has hurried to bed, boots and all, to escape this queer man from Africa whom she really fears. But fortunately a second will, and a technicality of the law turn up to give Oswald the full guardianship over the little wards.

Henceforth there are happy days for Joan and Peter, but strenuous ones for Oswald. He has determined that these two children, thrown into his keeping, shall be truly educated, truly developed, and so, in searching for the best school for them he sets out to quiz the schoolmasters, a rather unpleasant proceeding for—most of the schoolmasters.

An arraignment of the whole educational system of England, and a setting forth of what real education should aim for, has been Wells' object in writing the book. As that system is at present—or was up to the time when he stopped writing—he punctures it with holes; not a weak spot in its armor has he left undetected. . . . He finds that many of the children have been left to "totally illiterate governesses." . . . Miss Murgatroyd's school gives a chance to ridicule the showy, faddy, but wholly ineffective type of private school. "Miss Murgatroyd," he says, "had the temperament of a sensational editor. Her school was a vehicle for Booms." . . . Peter's experience at High Cross gives the opportunity to expose a boys' school of positively vicious nature, where the boys learn much evil among themselves, and where the class-work is chiefly marked by "lack of intellectual interest, of any spontaneous activities of the mind." Here Peter, homesick, unhappy and rebellious, is made to write out "I must not sulk," five hundred times, and runs away, as he should quite properly do when subjected to such brainless punishment. . . . After that comes the school that Oswald chooses, "Caxton," not perfect but at least vastly better than others; and at last, through the medium of Oswald and Peter, Wells manages to slash the universities and set forth his ideas of what the education of the youth of to-day, who are to build up the world of to-morrow, should be.

All this does not, perhaps, sound very interesting as set forth here, but really it is so interwoven with a fascinating human story that the book holds from start to finish.

Oswald himself is a most fascinating character, and his development is most skilfully portrayed. Indeed, though he has long left school, we see his education continuing, as surely, and even more rapidly than that of the children. At the beginning he is puzzled about life—as the most of us are. He looks at this and that and wonders "what the whole beastly game is about." Of one thing he is sure—he must not waste his own life. And when he comes back to England, with those keen-seeing eyes of his, he perceives

all her faults, but it is as one sees the faults of a child one loves—with the deep desire to remove them because the result will be good for the child. He is worried over the general drifting and shiftlessness of things, he sees the German menace, he is disgusted over the too-evident selfishness and spirit of grasping everywhere evident, and he detests Chamberlain's high protectionist scheme for "taxing the foreigner." . . . At last he reaches what he thinks the sole way out of the hopeless maze. "Education," he says, while chatting to Darton in the Plantain Club, "is at the heart of the whole business," and he knows that education is not truly Education unless it achieves vision. "Have you any idea," he asks the Bishop of Pinner, "what the empire might be? Have you thought of

And then he sees how a deadening "system" has tied the hands of even the enthusiastic teachers. As he talks to Mackinder he is realizing for the first time "the eternal tragedy of the teacher, that sower of unseen harvests . . . persistent antagonist of the triumphant things that rule him."—"I thought I could make a school different from all other schools," Mackinder says to him, "and I found I had to make a school like most other fairly good schools. I had to work for what the parents required of me, and the ideas of the parents had been shaped by their schools. I had never dreamt of the immensity of the resistance these would offer to constructive change . . . I had to take what came. I had to be what was required of me."

present he is not satisfied with the way the world is drifting. As he sits beside Peter in the Moscow Art Theatre, he wonders if all the "youngsters" are to spend all of their "clean fire" in such trivialities as love-making and pleasure-seeking and play.

After that the War comes with a crash and "finishes and crowns the education of these three people with whom we are concerned." Peter goes into the Air Force; Joan drives a car for the Munitions Department; Oswald gets something to do near the front lines, and another wound comes to him.—But we must not tell the story. Leave that for the reading of the book itself.

Here again Wells finds chance to express his opinions,—on the causes of the war, its early mismanagement, the fallacy and foolishness of all war, the real greatness of the Eastern nations, democracy, religion. . . . The world is wrong.—"Then change it," says the Great Experimenter to Peter in his dream. . . . And while still on his back in the hospital the young aviator sees "how the walls and divisions of mankind, which look so high and invincible upon the ground, and so trivial from twelve thousand feet above, were to be subdued to greater ends." . . . "There's no sense in it at all," he exclaims, mentally, from the heart of an observation balloon, again once more in the midst of things out near the front line, and then says to the Deity he is beginning to know, "But the curious thing about you is that somehow . . . you yet manage to convey in an almost irresistible manner that there is going to be sense in it"—So shines forth Peter's optimism—and the optimism of H. G. Wells. The Great War has made Peter, like most other young soldiers, think of serious things, and, for him as for some of them, his vision has been broadened and clarified.

One does not know where to stop in writing of this truly interesting book—here, perhaps, as well as anywhere else. Suffice it to say that in none of his other books has H. G. Wells been more worth while than in this. For his great worth is in making his readers think. One cannot read him without thinking, whether to agree or disagree. Perhaps his forcefulness, when at his best, comes from the evident fact that he writes under the compulsion of feeling that he has a mission to perform in this world. He must needs teach through his novels. Perhaps he is not always right, but his vision is far-seeing, and it is safe to say that he is right more often than wrong. There are people, it is true, who whack Wells, and whack him hard,—but usually they are people who are afraid of him. He is amazingly outspoken. No wonder he makes some enemies.

As a novel *Joan and Peter* is much more interesting than *Mr. Briling*. Its human interest, its understanding of children and of young people, its delightful humor, its quite carrying plot all combine to give it no insignificant place in the realms of pure fiction. Its psychological and philosophical qualities assure it a position of graver importance. Upon the whole it is a book that can be unhesitatingly recommended for any library. If, here and there, there is something which shocks the reader or with which he cannot agree, that is neither here nor there. One is not required to endorse every atom one reads, nor is it wise to waste a whole fruit because there may be a spot or two on it that looks unsightly.

A. N.

Camping

BY CLARE SHIPMAN.

Snakes and bugs, tents and rugs,
Nothing to eat, nothing neat,
Mosquitoes roar inside the door,
A hard bed when all's said:
But then—you hear
The water near.

Small black flies in your eyes,
Nothing to wear if you care,
Watery lanes when it rains,
An awful mess and nothing less:
But then—you see
The skies and trees.

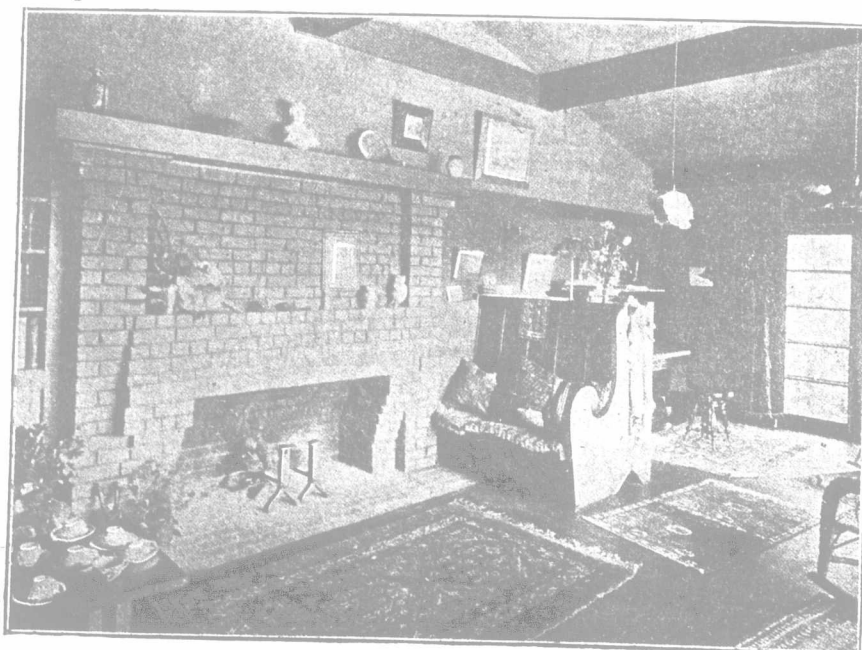
In the treaty signed by Poland complete liberty and equality in political and religious matters is granted to Jews.



Brick, with Wood or Marble.

Modelled upon eighteenth century style. . . . The old clock is an excellent mantel adornment.

the hundreds of millions to whom we might give light—had we light? Are we to be a possessing and profit-hunting people because we have not the education to be a leaderly people? Are we to do no better than Rome and Carthage—and loot the provinces of the world? Loot or education, that is the choice of every imperial opportunity. All England, I find, is echoing with screams for loot. Have none of us vision? None?"—And so, in the hopelessness of fostering vision—and so hope for England and the world—in the young people, he turns to the schools, and takes, as his own particular "bit," the up-bringing of Joan and Peter. "What are you trying to do?" he cries to all the schoolmasters, and so awakens, it is to be hoped, that great question in the minds of all schoolmasters throughout the world. . . . "Education," he says, "is building up the imagination. . . . Foresight dies when imagination slumbers,"—for only imagination, rightly directed, can picture better things to be.



Brick Fireplace, Suitable for a Large Room.

Hope's Quiet Hour.

Remember the Harvest.

God is not mocked: for whatsoever a man soweth, that shall he also reap.—Gal. 6:7.

"We scatter seeds with careless hand,
And dream we ne'er shall see them more.
But for a thousand years
Their fruit appears
In weeds that mar the land, or healthful store."

It is a revelation of self-deception to see how amazed and indignant Germany has shown herself at the stern conditions she has been forced to accept. In the Book of Proverbs we read: "He deviseth mischief continually; he soweth discord. Therefore shall his calamity come suddenly; suddenly shall he be broken without remedy." A nation that has for years been sowing discord, deliberately and continuously, can hardly expect to reap a harvest of goodwill. God is not mocked. If we sow wild oats of reckless sin, the harvest will not be a pleasant one. If you sow thistles broadcast you will not reap wheat.

We live in a wonderful world, and God expects us to take heed of the mystery of reproduction and sow good seed. A wise farmer knows that it pays to get good seed and good stock. If you take no trouble about your fields they will not remain empty. Thistles and other weeds will spring up with marvellous rapidity. If you want a good harvest you must go the right way to get it. So it is with the spiritual harvest. If you are content to drift lazily along through life, leaving your character to grow as it will, the weeds of selfishness, idleness, vanity, or even worse vices, will quickly spring up. Our Lord said that when an evil spirit was cast out of a man, and the cleansed soul was left empty, the unclean tenant would return, with seven other spirits more wicked than himself, and take up his abode in that unhappy soul, "and the last state of that man is worse than the first." It is not an easy matter to get rid of troublesome weeds, when they have once gained a foothold; and character-weeds usually have deep roots. There is only one way of choking them out, and that is to occupy the space with a better crop. Kill out selfishness by cultivating the good plant of love. Pride and vanity will die if you keep your eyes on the perfect life of Christ. Instead of comparing your life with that of your neighbor, and thinking: "I am at least as good as he is, and perhaps a little better," compare your words, acts and thoughts with that beautiful Life of selfless holiness. Then you will take your place beside the kneeling publican and say humbly: "God be merciful to me a sinner."

Don't waste your time in blaming other people if you don't like the harvest which you are reaping. Have you sown selfishness? Then it is your own fault if neighbors seem unfriendly and cold. If your days of youth—the springtime of life—have been wasted in pleasure-seeking, or poisoned by ugly thoughts, it is folly to expect a harvest of strength, courage and joy. Many have opened the door of their hearts to an unclean spirit which has poisoned the springs of life, and wrecked health of body and happiness of spirit. God is not mocked. If we sow seeds of impurity it cannot be that a harvest of peace and childlike gladness will spring up. God's law of righteousness cannot be broken with impunity. As it was in the beginning, so it is still—the herb yields seed and the tree yields fruit "after his kind." Men don't gather grapes of thorns, nor figs of thistles, as our Lord has reminded us, "even so every good tree bringeth forth good fruit; but a corrupt tree bringeth forth evil fruit."

There is inspiration as well as warning in the remembrance that whatsoever a man soweth, that shall he also reap. If you persistently scatter seeds of kindness, day after day; though they may seem to fall unnoticed they will take root and bring forth good fruit in due season. We shall reap, if we never grow weary in well doing. Is not that an inspiring thought? Good seed sown in your fields may be destroyed by blight or drought, without any fault of yours; but good seed sown in the heart cannot be choked by

cares or pleasures, except through our own simple neglect and prayerlessness.

Some seeds spring up quickly—weeds generally do so—while others may be so slow in appearing on the surface that we grow despondent about them. Never fear! No loving prayer for others is ever unheeded by Him Who is the quickening Sun of spiritual graces. No loving act or word that is planted in His Name can possibly be wasted. Only the Searcher of hearts Himself knows how many good seeds, planted by parents and teachers in boyish hearts, years ago, sprang up and brought forth fruit during those long weeks and months in the trenches, or in weary imprisonment. Scientists tell us that we don't really forget anything, though many things—good and evil—may seem to have dropped quite out of memory.

It isn't what you dreamed and planned—
Such hopes are but a phantom band—
The day's work counts."

A few days ago I ran into a neighbor's house to ask a small favor. I was given a hearty welcome, and the favor was granted so delightedly that it seemed as if I had brought a gift to my neighbor. Then a glass of delicious lemonade was offered, and after a little chat I departed carrying a handful of roses from the garden. My neighbor never imagined that her bright kindness would go out like living seed to spring up in thousands of homes in Canada. You never know how far the influence of one little act or word may reach.

The Church of Christ is a missionary Church. If we are doing nothing in the

taining a letter from a worker in a city tenement district. She says that the boys of the neighborhood show their friendliness by filling her coal box, chopping her wood, or sweeping her back yard. She goes on to say: "Catholic and Protestant, we explain each other's points of view when it comes to ethics, and the deepest joy I know is that all these neighbors of mine talk about our Blessed Lord as though He were a real person and our dearest guest." It is her deepest joy to bring other souls nearer to her Lord. That is the sowing. Think of the joy of harvest! "A Christian who is not really in Heart and Will a missionary, is not a Christian at all," wrote Canon Gore. "In Heart and Will"—prayer is a living seed. Sow it!

DORA FARNCOMB.

The Windrow.

John Fox, Jun., author of the Trail of the Lonesome Pine and other novels, died at Big Stone Gap, Va., recently.

A Forestry Department has been organized in Great Britain, and the work of re-forestation will be undertaken on a large scale.

Guelph, Ont., says prohibition has been "a money-maker and money saver" for that city.

A number of American prohibition workers, headed by Wm. E. Johnson, who "first made Oklahoma dry, then Kansas, and afterwards largely the United States" are now in London, beginning a prohibition campaign in Great Britain. They went on the invitation of the British prohibition workers.

The new Bavarian Government is negotiating with King Ludwig for legal settlement of his landed property in Bavaria. He may be permitted to retain one castle.

Several of the chief American universities are taking steps to secure a number of British professors. It is expected Britain will reciprocate by inviting American professors. The two countries will also exchange preachers.—So the Anglo-American Entente grows.

Startling developments of the airship in the near future are predicted by Brig-Gen. E. M. Maitland, head of Great Britain's airship service, and one of the official passengers of the R-34 in her flight across the Atlantic. He says: "The commercial airship of the not-far-distant future will have a disposable lift, available for crew, fuel, merchandise and passengers, of 100 tons or more (that of the R-34 is 30 tons). It will have a speed of 100 miles an hour, will have saloon, drawing-room, smoking-room, state-rooms and roof-garden, and will be able to remain in the air for 2 or 3 weeks at a time. A problem to be solved is that of mooring the airship. This will be attempted by mooring-towers, to which the nose of the airship can be fastened in such a manner that the revolving top of the tower will always allow the nose to be pointed into the wind."—Already airships are being built that are twice as big as the R-34, and will go 25 miles an hour faster.

The Dollar Chain

For blind and maimed Canadian soldiers, unless otherwise requested.

Contributions from July 12 to July 25:
Mrs. G. D. Minor, R.4, St. Thomas, \$1.00.

Previously acknowledged.....\$6,047.50

Total to July 25th.....\$6,048.50

Kindly address contributions to The Farmer's Advocate and Home Magazine, London, Ont.

The dealer in antiques was showing an old violin to a probable buyer.

"Yes," he said, "that is of historical interest; that is the i-dentical fiddle Nero played while Rome was burning!"

"Oh, that is a myth."

The dealer agreed, saying:

"Yes, it is; and Myth's name was on it, but it has got worn off."—Answers.



A Neat Brick Fireplace.
A living-room with unique built-in features.

That is what makes each day important. The words and deeds—yes, and the thoughts—of to-day may drop out of our hands and out of our sight. We forget all about them and they seem to be trivial, yet their fruit will appear (and will scatter seeds after their kind) "for a thousand years"—yes, and in eternity. We can't help influencing others, for good or for evil. There is a story of S. Francis of Assisi, who said to his followers: "Let us go out and preach." They walked along silently, and when one asked: "When shall we begin to preach?" he answered: "We are preaching." By our presence in the world we draw others nearer to God or help to hinder them in their upward climb. Actions speak louder than words, and your cheerful patience and honorable behavior may influence for good many people who turn a deaf ear to sermons from the pulpit and who always skip the Quiet Hour in the "Advocate."

"It isn't what you mean to do a week ahead,
It isn't what you know you'll gain
When all annoyances have fled;



If You Have an Old Marble Fireplace Rejoice, but Do not Use Mission Furniture with It as in this Picture.

The Fashions.

How to Order Patterns.

Order by number, giving age or measurement as required, and allowing at least ten days to receive pattern. Also state in which issue pattern appeared. Address Fashion Department, "The Farmer's Advocate and Home Magazine," London, Ont. Be sure to sign your name when ordering patterns. Many forget to do this.

When ordering, please use this form:—
Send the following pattern to:

Name.....
Post Office.....
County.....
Province.....
Number of Pattern.....
Age (if child or misses' pattern).....
Measurement—Waist..... Bust.....
Date of issue in which pattern appeared.....

2873. Girl's Dress.
Cut in 4 Sizes: 8, 10, 12 and 14 years. Size 12 will require 5 1/4 yards of 27-inch material. Price, 10 cents.

2892. Misses' Dress.
Cut in 3 Sizes: 16, 18 and 20 years. Size 18 requires 6 1/4 yards of 44 inch material. The skirt measures about 1 1/2 yards at its lower edge. Price, 10 cents.

2880. Child's Set.
Cut in 4 Sizes: 6 mos.; 1, 2, and 3 years. Size 2 will require of 36-inch material, 2 yards for the dress, 1/2 yard for the sack, and 1/2 yard for the bonnet, with 1/4 yard of lining. Price, 10 cents.

2878. Ladies' House Dress.
Cut in 7 Sizes: 36, 38, 40, 42, 44, 46 and 48 inches bust measure. Size 38 will require 6 yards of 36-inch material. Width of dress at lower edge is about 2 1/4 yards. Price, 10 cents.

2888. Girl's Dress.
Cut in 5 Sizes: 6, 8, 10, 12 and 14 years. Size 12 will require 4 3/4 yards of 44-inch material. Price, 10 cents.

2876. Ladies' Dress.
Cut in 6 Sizes: 34, 36, 38, 40, 42 and 44 inches bust measure. Size 38 requires 6 3/4 yards of 36-inch material. Width of skirt at lower edge, is about 1 3/4 yards. Price, 10 cents.

2877. Girl's Dress and Hat.
Cut in 5 Sizes: 2, 3, 4, 5 and 6 years. Size 4 will require 3/4 yard of 27-inch material for the hat, and 2 3/4 yards for the dress. Price, 10 cents.

2884. Ladies' Apron Dress.
Cut in 4 Sizes: Small, 32-34; Medium, 36-38; Large, 40-42, and Extra Large, 44-46 inches bust measure. A Medium size will require 4 1/2 yards of 36-inch material. Width at lower edge is 2 1/2 yards. Price, 10 cents.

2887. Ladies' Dress.
Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. Size 38

requires 5 yards of 42 inch material. Width of skirt at lower edge is 1 3/4 yard. Price 10 cents.

2886. Junior's Dress.
Cut in 3 Sizes: 12, 14 and 16 years. Size 14 will require 4 3/4 yards of 44-inch material. Price, 10 cents.

2569. Ladies' House Dress.
Cut in 7 sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure. It requires for a 38-inch size, 6 1/8 yards of 36-inch material. The dress measures about 2 1/2 yards at the foot. Price, 10 cents.

2872. Men's Shirt.
Cut in 8 sizes: 15, 15 1/2, 16, 16 1/2, 17, 17 1/2, 18 and 18 1/2 inches neck measure. Size 16 requires 3 3/4 yards of 36-inch material. Price, 10 cents.

2885-2865. Ladies' Costume.
Waist 2885 cut in 7 Sizes: 34, 36, 38, 40, 42, 44 and 46 inches bust measure, and requires 2 3/4 yards of 36-inch material for the 38-inch size. Skirt 2865 cut in 7 Sizes: 22, 24, 26, 28, 30, 32 and 34 inches waist measure. Size 26 requires 4 3/4 yards of 44-inch material. Width of skirt a t lower edge with plaits extended is about 2 3/4 yards. TWO separate patterns, 10 cents FOR EACH pattern.

2893. Girl's Dress.
Cut in 3 Sizes: 12, 14 and 16 years. Size 14 requires 4 1/2 yards of 36-inch material. Price, 10 cents.

233. Ladies' Apron.
Cut in 4 Sizes: Small, 32-34; Medium, 36-38; Large, 40-42, and Extra Large, 44-46 inches bust measure. Size Medium requires 3 1/4 yards of 36-inch material. Price 10 cents.

2460. Child's Dress.
Cut in 4 Sizes: 2, 4, 6 and 8 years. Size 4 requires 2 1/4 yards of 36-inch material. Price, 10 cents.



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 a stamped envelope ready to be sent on. (4) Allow one month in this Department for answers to questions to appear.]

Extending Our Interests.

PERHAPS it is true that the happiest person in this world is the one who has the most absorbing interests. The specialist who is working towards some great end may find fascination enough in just one subject, but the most of us, tied to an occupation that does not demand all our powers of mind, will do well to extend our range. If we do we shall find that we can keep on "opening eye after eye," seeing things to which, formerly, we had been absolutely blind.

As an illustration: I have been interested, of late, in some renovation processes, with an especial emphasis on porches, and, a few evenings ago, had occasion to take a long walk down several streets. I had gone along the same streets a score of time before, and had not noticed a single verandah post; this time I don't think I missed a post or railing along the whole line of march. It is true that we become awake only as we seek.

I have a friend who has become tremendously interested in furniture. She has made a study of it. She recognizes woods as the lapidary recognizes precious stones. She enjoys beautiful graining as another may enjoy music or pictures. She knows the chairs that have good lines and those that have not. She can tell you which is a "Sheraton," and which a "Hepplewhite," or any of the other makes designed by those famous old workers who loved their work, and found it possible to express Art in chairs and tables, and did all the making themselves, painstakingly, instead of having the pieces wrenched out by machinery and slammed together with glue and screw-nail in the cheap modern fashion. No nails or screws were there in those fine old pieces of furniture. Lovingly the pieces were dowelled and dove-tailed together, and the seams rubbed and polished until they seemed to melt into the wood itself. And the result was excellent and satisfying work that, with half care, defied Time itself, and even became more beautiful as the years went on.

But to return to my friend,—besides collecting for herself furniture that will be a pleasure to her as long as she lives, she has derived a great deal of interest in the study and the chase. A new second-hand shop is always a "find" to her. Who knows but that in it she will discover some exquisite old type for which she has been long looking?

There is another friend who teaches school all day, but who, being endowed with a splendid physical frame, finds she has always plenty of energy to spare after hours, and especially during holidays. She says that, after spending so many hours every day with little immature minds, no matter how sweet and full of possibilities they may be, she feels that to avoid narrowness of mentality she simply must branch out into other things on off-hours. Last winter she took up literature. This summer she became interested in plants, and, besides handling a big garden, has let her interest run far afield among the wild things. Out came the old "Botany." Saturdays brought opportunity for long plant-hunts. "I can't tell you," she said the other day, "the pleasure the fad has brought to me. It has cured me of nerves, too. Yes, don't look surprised. I really was threatened with nerves a while ago. Teachers are rather good marks for them, I think."

Sometimes she asks me to go with her on her plant-hunts, and the quests have all the excitement of starting out for a new country. . . . Sometimes, too, when not actually seeking for new specimens, we tumble upon them,—the eyes are open, you see. For instance, about the 21st of June we were at Port Stanley, known to everyone in the extreme southern portion of Ontario, and there half way down a hill and right below a row of cottages, in a tangle of wild growth shaded by trees, we saw a glorious outburst of rosy purple flowers. There

Current Events

In the P. E. I. provincial elections on July 24, 20 Liberals were elected and 5 Conservatives. Mr. J. H. Bell succeeds Mr. Arsenault as Premier.

Canada's mail service with Germany has been resumed.

England's big coal strike ended amicably on July 25, when 250,000 miners went back to work.

Eight hundred natives were killed and 1,600 wounded during recent disturbances in Egypt, where Gen. Allenby is in command of the British forces.

A large measure of home rule will be granted to India in recognition of her great services to the war.

Captain Morchal, a French airman, on July 19 flew from Var across the Mediterranean to Tunis, 450 miles, in 5 hours, 40 minutes.

By a vote of nearly 3 to 1, the House of Representatives at Washington on July 22 passed a bill for enforcement of prohibition in the United States. The bill then went to the Senate.

Spartan mobs in Berlin have been again quelled by Noske's men.

The Entente Powers are working to affect a compromise between China and Japan in regard to Shantung, so that China may be induced to sign the Peace Treaty. In the meantime Japanese goods are being boycotted in many parts of China.

Bill Smith, a country storekeeper, went to the city to buy goods. They were sent immediately and reached home before he did. When the boxes were delivered Mrs. Smith, who was keeping the store, uttered a scream, seized a hatchet and began frantically to open the largest one. "What's the matter, Mandy?" said one of the bystanders who had watched her in amazement.

Pale and faint, Mrs. Smith pointed to an inscription on the box. It read: "Bill inside."

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Kindly write on one side of the paper and address to the Editor, The Farmer's Advocate, Ottawa, Ontario, Canada. If pen name is also given, please state it. When forwarded to anyone, please place "The Farmer's Advocate" on the envelope. It is the Department for the Editor to appear.]

Our Interests.

It is true that the happiest world is the one who is absorbing interests, who is working towards a subject, but the most occupation that does our powers of mind, will our range. If we do we can keep on "opening" things to which, we are absolutely blind. I have been in some renovation of an especial emphasis on new evenings ago, had long walk down several along the same streets before, and had not grandah post; this time missed a post or railing line of march. It is me awake only as we

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was a scramble down the bank, and then the bush stood revealed, a mass of huge rather sticky leaves and beautiful clusters of flowers that resembled wild roses but had a tinge of purple in them. Subsequent investigation proved the discovery to be the purple-flowered raspberry, which has berries that might be made into jam. And now "the wonder grows" that every-one with a shady lawn border has not masses of these shrubs among the trees. The books give the range as "Nova Scotia to Georgia, west to Michigan," but do not state how far north the shrubs will grow without winter-killing.

On the first of July we set out again, and on a weedy hill found a few plants of the brilliant "butterfly weed," or orange flowered milkweed, than which no flower that grows in gardens is more beautiful. We knew it for a milkweed by the form of its blossoms, although the stem, when broken, showed little or no milk; but it took reference to the "botany" to find out that another name of the plant is "pleurisy root," because of an old belief that the root is good for pleurisy. . . . In a near-by woods, on that same jaunt, we found masses of the pretty little pink "spreading dog-bane," daintiness itself notwithstanding its repellent name.

Now, one is not advising that every-one take up furniture or botany, or both. Perhaps one could not possibly interest oneself in either. The point is that if one has time to spare it is wise to have a fad, if it brings pleasure and interest.—Or even to have a whole succession of fads, since they mean the opening of a succession of eyes.

Some farm women have not time to take up any extra from the usual work of the "day-by-day;" yet there are some who have margins of time—or can make them—in which some pleasant and profitable study, or work, or relaxation can be taken up. There are the women, too, whose families are grown, and to whom the long days come again with many hours. There may not be opportunity for "slum" work, and little inclination or appetite for societies' work. Why not, then, indulge in something one has always wanted but never could find time for? It may be cultivating a flower, fruit, or vegetable garden. Or perhaps one would like to read many books, or take up music again, or India ink drawing, or water-color work, or anything else for which has liking or talent.

Too old?—One is never too old. Not long ago a friend in California wrote me about a woman "eighty years young" who is going through a university there. One of the most expert botanists I ever knew could not tell one plant from another before he was fifty-three. A very bright little woman in Toronto began with sculpture at fifty-two, and has taken first prize at the big Toronto Exhibition for the past two or three years. . . . —One is never too old.

JUNIA.

Fads or Comfort.

A few weeks ago, when the shoe manufacturers were up before the High Cost of Living Commission, one of their representatives laid the whole blame of the high cost of shoes upon the women, stating that "fads" in shoes were really at the back of the trouble, and that women "do not want to buy shoes at a low price!"—Probably they do not. Get cheap shoes now and you may bank upon getting bad workmanship, discomfort, ugliness and poor wearing qualities, so that the fairly expensive shoe is the cheapest one in the end, and the women know it. Years ago—what an age of years it is beginning to seem!—one could get a well-made, neat, splendidly wearing pair for \$5. For the same quality now one must pay anywhere from \$9 to \$11.

Coming to the question of "fads," there really is something in the accusation, so far, at least, as the city trade is concerned. The young girls, who are not old enough to have their commonsense developed, and numbers of silly women who should know better, have during the past few years, run to Louis heels and other such vanities, and have refused to look at anything else.—On the other hand, there is some excuse even for these women. Not one of them invented the high Louis heel. Some shoe man, knowing how gullible women are, and how ready they are to fly to any

fashion as soon as the slogan is raised "The Latest Fashion!" must have chuckled in his sleeve when it dawned upon him that fashions in shoes could be switched about just as are fashions in clothes.—Result—rich grabs for the shoe men!

Of course it's silly for us women to be led about by the nose by the insidious whisper "They're wearing" this or that. Not one of us stops to think just who "they" are, or to reflect that every time a style changes some manufacturer or style-setter somewhere, or a combination of them probably, must have decided—in the cause of rapid business turnovers, that a change in fashion is about due, and so have brought forth the new "style" and set going the very effective old trade-booster "They're wearing." Henceforth it is almost impossible to find anything else to buy.

And so it is little wonder that about the end of June a number of women from whose eyes the dust has been washed away decided to do their bit towards bringing about a more reasonable frame of mind, on the part of women, in general, at least. These active women, to be more definite, were "the Cobourg branch of the Ontario Woman Citizen's Association," and they passed the following resolution: "Whereas, we have noticed in recent newspaper reports, the complaint of the shoe manufacturers that the high cost of shoes is due in part to the frequent changes of fashion or fads in women's shoes:

"Therefore, be it resolved, (1) That we suggest to the various women's organizations the desirability of an educational campaign in regard to fashions in shoes, partly in order to lessen the cost of production, but chiefly because of the injury to health resulting from the present anomalies in footwear.

"(2) That we bring to the attention of the manufacturers the fact that during the last few years there has been an increasing demand for a moderate, sensible shoe, conforming to the lines of the foot, but of good quality in material and workmanship, and that this demand has not been satisfactorily supplied.

"Furthermore, we consider that while the prices of adults' shoes are exorbitant, the prices of children's shoes, which do not change in fashion, are even more unreasonable in proportion to their value, and

"(3) We wish to state to anyone interested that it is an open question whether the frequent changes of fashion in either women's or men's apparel are due to the demands of the wearers or to the deliberate plans of the manufacturers for increasing sales."

Personally I think such a campaign very advisable. I have very personal reasons for knowing its desirability. Some years ago, like other silly girls, I took to Louis heels. By and by when I found them making my feet ache I tried to get low heels, but found it impossible to get them except in very ugly, poorly made shoes, or in shoes made especially for old women. So I contented myself with Cuban heels, also high because there were no other, and the destruction of my poor inoffensive feet went on. The worst of it was that I did not understand just how much harm was being done. Finally, one day, a conscientious shoe man, who had attended a school that teaches about feet, told me my front arches had given way, and that I must wear instep supports and adopt lower heels else the main center arches might go also and flat foot be the result. Of course, I had to do as he said,—but the shoes were sloppy and hideous. . . . Then after a while light came into my pedal "sky." Somewhere a man—Dr. Somebody—was taking pity on wretched-footed women and was manufacturing a really neat shoe with arch-support sole. I bought a pair, and now, once more, am quite unconscious that I have feet. The pain is gone and I can walk as many miles as ever. Now I realize that had I never worn unnatural, high-heeled shoes the arch-support shoe never would have been necessary; my feet would never have ached;—they would have been the beautifully efficient things they were meant to be.

Perhaps it is an indication of how many thousands upon thousands of sore and ruined feet there must be, that a manufacturer is at last daring to come forth

with a sole (no pun intended!) manufacture of "natural tread" shoes. All success to him! The statements he makes are perfectly true:

(1) that the natural shape of the foot is beautiful. (2) that most foot troubles are due to wrong footwear that cramp the feet, throw the body out of poise, weaken the arches, and impair the whole bodily health and comfort. (3) that we only tolerate high-heeled, narrow-toed shoes because custom has made us think them attractive. . . . Custom will do anything.—Henry VIII had gouty feet and wore very wide boots, and the custom, or "fashion," grew into such proportions that in Queen Mary's reign Parliament had to limit the width of toes to not over 6 inches.

Surely our brain should be developed enough by this time to keep us from being carried away by fads,—and the high Louis heel is just as much a fad as the 8-inch toes of Queen Mary's reign. We should support this new manufacturer of natural shoes by buying them, both for children and for grown-ups,—and so help him in his good work, but ourselves most of all. . . . I am quite aware that this manufacturer is very hard on the arch-support shoes I have referred to above.—Yet, I give my experience for the sake of women who suffer as I suffered. I am quite willing to concede the point that if, from childhood up, one wears natural shoes one will never need arch supports. At the same time, now that my arches have given way, I do know that these arch-support shoes have given me back both comfort and efficiency.

Stockings that are too short are almost as bad as badly fitting shoes, and great care should be taken to see that those for children are long enough. In his advertisement book this "natural tread" shoe man shows a photograph of the feet of a little 2½ year-old child, which are absolutely deformed from wearing short shoes and stockings. It is very pathetic. Think of the pain the poor little thing must have suffered—and was probably scolded or slapped for being "cross" besides!

Bad feet are not only a source of pain and discomfort, they also lower vitality and come between one and one's work,—for who can work well when bothered with sore feet? They are a distinct menace to good health. They are also a menace to good looks, for nothing will more surely bring an irritable, scowling expression to the face.

Wear natural shoes steadily and save your feet; they have low heels (no doubt the perfect shoe should have no heel at all), and curves that follow the line of the foot.

If you have corns and in-growing toenails your shoes are too tight, or have wrong curves. If you have corns at the tips of your toes, close to the edge of the nail, your heels are too high, driving the foot forward on to the toes as you walk. If there are callouses in the center of the front part of the sole the front arches are breaking; if you have "flat-foot" the center arch has broken.—Be wise in time and correct all these mistakes.

Quite likely you can't go from high heels to very low heels all at once without feeling strain and discomfort. A new set of muscles has to be broken in, therefore it may be necessary to wear moderate heels for a time, working gradually down to the lowest kind found comfortable. It may even be advisable to wear the lower heels for only 2 hours at a time, for a while, until the new muscles are trained.

In closing—it is now possible to get neat, well-made, comfortable hygienic shoes. Ask for them in any good modern shoe-store. Create a steady demand and the supply will soon follow.

JUNIA.

Worth Thinking About.

Everything here is so expensive that the men are kept too busy paying the bills to take any real interest in life. —Aunt Adelaide, in "The New Statesman."

"The farmer is neither a radical nor a revolutionist. He is a progressive." —Senator Arthur Capper, of Kansas.

Tomatoes in Variation.

Tomato Butter.—Dip ripe tomatoes in a wire basket into scalding water remove skins, and stew the tomatoes. To each 4 quarts allow 7 cups brown sugar and a tablespoon each of ground cloves and cinnamon, and a teaspoon allspice. Stew very slowly until thick and store in stone crocks.

Canned Tomatoes.—Fill the cans with whole, peeled tomatoes. Have ready some more tomatoes cooked in an open kettle, and use the liquid from these to fill the spaces in the jars. Cook the jars as usual, in a boiler, for about half an hour. Fill to overflowing with the hot tomato juice, adjust rubbers and covers and cook about 10 minutes longer. Tighten tops, take jars out, let stand inverted to discover leaks, then finally tighten down again and store in a cold, dark place.—Boston Cooking School.

Tomato Salad.—Peel tomatoes carefully, cut off tops and scoop out. Fill with any vegetable mixture, such as cold chopped green beans or cooked corn, or a mixture such as "Waldorf" (tart apples, nuts and celery). Place on lettuce leaves, put thick mayonnaise dressing on top, and serve.

Tomato Aspic.—One quart stewed tomatoes, ½ cup boiling water, onion juice, salt and red pepper, 1 large tablespoon gelatine. Dissolve gelatine in a little cold water and add the boiling water to it. Stir into the hot, strained tomato juice. Let harden in a mould set in a cold place, and serve on lettuce with salad dressing.

Stuffed Tomatoes.—Select smooth, round tomatoes. Do not peel, but cut a slice from stem end of each. Scoop out pulp. Make a stuffing as follows: Chop fine 1 slice onion and ¼ green pepper pod. Cook these in 1 or 2 tablespoonfuls melted butter. Add ½ cup each of chopped cooked ham or chicken and soft bread-crumbs, 2 tablespoonfuls melted butter and ¼ teaspoon salt. Fill the tomatoes and bake in oven about 20 minutes, basting 2 or 3 times with melted butter.

Preserved Tomatoes (Use pear tomatoes, if possible).—Turn boiling water over the ripe tomatoes and remove the skin without breaking the pulp. To each pound of tomatoes allow a lemon, an ounce of ginger root and three-fourths a pound of sugar. Cut the lemon in thin slices, discarding the seeds. Cover with cold water and let simmer until very tender. When convenient, it is well before cooking to let the lemon soak overnight in the cold water. Slice the ginger root and cook in cold water to cover. For each pound of sugar take one cup of the lemon and ginger water mixed. When dissolved add the tomatoes, ginger and lemon, and let cook very slowly about ten minutes. Store as canned fruit.

Green Corn Recipes.

Canned Corn.—In canning corn the time may be shortened somewhat if only the pulp is taken, the hull being more difficult to sterilize. Score the kernels lengthwise with a sharp knife, then with the back of knife press out the pulp, leaving the hulls on the cob. As the pulp expands in cooking the jars must be filled only to within one-third of top. Cook in boiler as usual for 1 hour, then stir the corn down. Use one can to fill 2 or 3 others; adjust rubbers, put on covers loosely and let cook another hour. The covers of any cans that do not need further attention may now be tightened. If covers are displaced or jars need attention, cook 15 minutes after adjustment.

Green Corn Fritters.—One cup of corn pulp is needed. To get the pulp slice off the tips of kernels with a sharp knife, then to this add the pulp pressed out with back of knife. When there is enough add beaten yolks of 2 eggs, ½ teaspoon salt, ¼ teaspoon pepper, about 1 cup pastry flour sifted with 1 level teaspoon baking-powder. Add whites of the 2 eggs, beaten dry. Drop by the tablespoon into deep fat and fry to a golden color. The fat should be smoking hot. Will make 8 large fritters.

Seasonable Cookery.

Canning Huckleberries (Grapes may be canned the same way).—Clean the fruit and place in an enamelled kettle. Heat until it boils. A little water may be used, just enough to prevent the fruit from sticking to the bottom. When it begins

to boil add sugar to flavor and boil together for 15 minutes. Fill the sterilized jars to overflowing, and seal. Store, when cool, in a cool, dry, dark place. Huckleberries and grapes may also be canned by the boiler or oven methods given some weeks ago. When done according to this recipe they will be as thick, almost, as jam.

Canned Corn With Tomatoes.—Boil the corn until tender, then while hot cut from the cob with a sharp knife. To every dozen ears of corn allow 1 dozen tomatoes, peeled and chopped. Mix with the corn, salt to taste, and turn into a kettle. Boil hard for 2 minutes, then pour into heated quart jars and seal at once.

Fish Salad.—Pronounced by many epicures quite equal to chicken salad. Remove bones from cold fish. Break the meat fine and pour over it a little vinegar, pepper and salt. Let stand an hour, then add an equal amount of chopped celery. Arrange on lettuce and pour salad dressing (preferably mayonnaise) over.

Watermelon and Ice-Cream.—Choose a long, slender melon. Remove all the green rind, then cut into thin slices and remove seeds. Serve on individual plates, each slice heaped with ice-cream.

Huntingdon Mint Sauce.—Separate two-thirds tumblerful of currant jelly into pieces, but do not beat it. Add 1½ tablespoons finely-chopped fresh mint leaves, and thin shavings of orange if you have it. Serve with meat.

Graham Muffins.—One cup Graham flour, 1 cup white flour, ¼ cup sugar, 1 teaspoon salt, 4 teaspoons baking-powder, 1 cup milk, 1 egg, 1 tablespoon melted butter. Mix and sift dry ingredients. Add milk gradually, also well-beaten egg and lastly the melted butter. Put in hot buttered gem pans and bake in a hot oven about 25 minutes.

String Bean Salad.—Rub a salad bowl with a slice of raw onion, or add a little chopped onion to the salad if you prefer. Fill the bowl with cooked beans. For 1 pint mix ½ teaspoon salt, ¼ teaspoon paprika, 5 tablespoons oil, 2 tablespoons vinegar. Pour over and decorate with bits of pickled beet or slices of hard-boiled egg. Any other favorite salad dressing can be used.

The Competition Essays.

[As there is now more space to spare for a few weeks, the opportunity to publish some more of the "best" essays submitted in our last competition is gladly welcomed. So many of these were, in editorial-room language, "good stuff," that we have kept them, waiting for the opportune moment.—Ed.]

My Experiences as a Farmerette.

BY "A FARMER'S WIFE," ESSEX CO., ONT.
AM I a farmerette? I do not know, but if a farmerette is one who takes the place of a man on the farm, then I should think that I might be.

"I wonder where I can get a man?" My husband came into the house after the chores were done and sat down to think the question over. "I think I'll ask Jim Whaley. He's got two boys, but I hate to ask anyone. Everyone is so busy."

"Well daddy," I laughed, "you'll have to get a farmerette. Say!" as a sudden thought struck me, "what's the matter with your old woman? Why, I'd be as good as any other girl. What is it you want done?"

"I guess you've got more than enough to do now with your housework and the two babies," he replied. "It's the tomato plants. I can plant them by hand but it would take so long and the ground is so dry that they've got to be watered in, and with the machine it would only take half a day. Don said he would help me if I would help him back, but that only makes one man and I need two," and he slid his shoes off his feet and clumped them down impatiently.

"When did you intend planting?" I asked.

"Tomorrow morning," he replied.

"Well," said I, "it's rather short notice. It's ten o'clock," then more briskly, "all right. It will only take an hour, at the most, for extra baking. That will make eleven o'clock for bed for mine. In the morning I'll call Don's wife and she can come too and keep the kiddies and get dinner. I can drop tomato plants as well as you. I did it when I was a youngster, and I can do it again."

"But you've so much to do mother, I hate to ask you."

"You're not," I broke in; "women are preverse critters, and if you were I'd probably find some excuse, but seeing you're not asking but I'm offering, why I will," and he laughed, and so it was settled.

THE morning dawned clear and bright and I received my first lesson in pulling plants, twenty-five to a bunch and a counter laid aside.

When the time came for planting, I slid into one of the seats and Don adjusted the foot pedals and the back. Then my husband placed a pan of the plants on my lap and we were ready to start.

"Click-click-click!" said the machine, and we were off. I had several loose tomato plants in my hands for quick feeding, but the clicks, which told that the water was gushing into the trench and that the plant must be set, came so rapidly that I became a little excited at first and now and again I dropped a plant, now and then I held it too low and it broke off, and more often than not I contrived to get my hand in the way so that it was impossible for my husband to take his turn.

At the end of the row I saw Don rise in his seat and take a look back over the way we had come. At the end of the second row he did the same. "Ever plant before, Carrie?" said he, and I knew what he was thinking.

"When I was a youngster," I replied laconically, and bending my head, I bit my lips in vexation. I simply would not be a failure, and with both eyes open and resolution in my mind, our next row was quite presentable, marking the first for a steady improvement until our rows finally became practically perfect.

Having succeeded with the tomatoes, I was called on to help plant the tobacco, while the re-planting fell almost entirely to my share, leaving my husband free for other work.

Then when hay-time came I drove the team, raked the hay, and helped load, succeeding once in becoming seasick which was decidedly unpleasant while it lasted, but as I kept quite still on the hay in bringing it to the barn, I felt so much better by the time the load was inside that I was quite equal to driving the team on the hay-fork.

HAVING demonstrated that I could do farm work, I was called on again and again. At first the children were quite a problem. Most days I took them to the field with me, taking care to have lots of milk and plenty of sandwiches for them, but one being barely a year old and the other two, sometimes it was either too cold or too damp for them to be out, so I contrived the plan of pulling the baby's crib out of the bed-room into the kitchen. Here I pushed it into the middle of the room, and seeing that no chairs, by which the eldest might manage to climb out, stood anywhere near, I placed both children in the crib, and with heaps of playthings they were generally safe for as long as I wished to be absent, although I always carried my watch with me, and if I was out for the day made a point of running in every half hour to see that all was well. They soon got used to this, and were nearly always quite good-natured about it.

Then came the grain. Here my help was solicited again, and I had the keen satisfaction of watching the golden sheaves falling behind me while the plot to do kept getting smaller and smaller. Ten acres out of the fifteen I cut, while my husband gathered the sheaves behind, and it was while on the grain binder that I almost came to the conclusion that it was perfectly right for a man to swear, for it seems to me that if one horse is fast and the other a little slow, and if when starting up the fast one starts first, finds he can't pull the whole thing and backs up while the slow one is just starting—well, it does seem as if forcible words might be the only way to express oneself; and let me whisper in confidence, for I would not wish everyone to know, that by the time this had occurred some half dozen times and no whip to remedy the fault, I was at white heat.

"Why don't you try swearing and ease your mind a bit?" taunted my husband.

"Well," said I hesitatingly and a trifle shamefacedly, "I did say damn back there a bit, but it didn't make me feel a bit better. It only made me feel ashamed of myself, and I don't believe it did any good anyway, so I'm not going to do

such a thing again," and I started my horses on again and very nearly forgot my resolution, but not quite, thank goodness.

"Keep it up. You're doing fine Susie," he called on the next round, and I grinned back exultantly. One field cut and another half done, and I gazed over the grain that had fallen with honest pride in my heart. But alas! pride always goes before a fall. While I was gazing about instead of attending to business the table canvas had taken a notion to stop work and there I was halfway down the field before I noticed it and the grain piled up on the table a couple of feet high. I do not know how long I should have gone on if the grain had not clogged the knife so it refused to cut, and the first I noticed was when we had slid over several feet of wheat, flattening it to the ground but not cutting it.

I stopped my horses, jumped to the ground, and seizing big armfuls of the loose grain carried it off to one side.

I was about halfway down the pile when my husband seeing the horses stopped, came across to see what the trouble was.

"Why Carrie! however did you get it in such a mess as this? You ought to watch your binder better."

"Now daddy," I coaxed, "don't scold."

"Well I know girlie, but we want to finish this piece to-night, and look what a mess I'll have to clean up by hand."

"I don't care," I said half sulkily, "it was your own fault anyway. If you'd minded your own business and not told me how well I was doing, I wouldn't have got conceited and been star gazing instead of attending to the binder."

"Well anyway, get busy and help me clear it away."

"I won't do it if you're going to be cranky."

Then he looked up and laughed. "O you woman," he said softly, and it ended by our making up as the "kids" do, but I didn't tell him of the pile of grain to be tied, which I had carried away myself. "Time enough for him to learn that when he comes to it," thought I, and my trouble readjusted, I drove on feeling as guilty as I used to in the old jam-stealing days.

THE silo fillers will be in this neighborhood in a few days," said my husband about a week and a half ago. I don't know how I'm going to get my corn cut in time. You don't suppose you could help me?"

"Why, sure I can, as long as I don't need to help the day before they come here so I can't get my house straightened and the baking done." And so it was I for the corn binder, and I cut practically the whole field myself, which greatly amused the neighbors, one of the men, so I am told, even standing up on the fence to see if I could turn the corners myself. Finding that I did he told his wife I did pretty well, which later, when I heard it, added greatly to my satisfaction. I was not nearly so excited in starting the corn binder either, after having ridden the grain binder, and then, too, I knew my horses better, knew them and loved them too. When one of them acted a little stubborn, or stopped to swipe a bite of corn, I could seem to understand every bit of his reasoning and whether harsh or gentle words were needed, and better than all was the feeling that I was of some use in this world, that I am able to help, that through me the work of one man was not needed, and he could be doing other necessary work either here or "over there."

I THINK the hardest work I did was help to put a cement floor in the granary, the cement was so heavy, but my husband is considerate and always contrived to give me the lighter end of the stick. I learned to milk last summer, too, and do the chores, even to cleaning the stable, when my husband would be away from home or late in getting up from his work; but this was for myself as well as for him, as it gave us the evening together, which is so much pleasanter than being alone. When I look back over the year's work, I know I have taken a man's place, and it thrills me to think that I have helped our country as well as ourselves.

DRIVING the team, hoeing, picking and loading tomatoes, suckering, cutting, stringing and hanging tobacco, stripping, cutting and loading sugar cane, I have taken a hand at them all, and I can honestly say I really like the

work, the fresh, clean air and the splendid exercise which it gives.

True, I had more than enough other work to do, with my two babies and all the washing and ironing and canning of fruit. Besides this I hatched three hundred and fourteen chicks with the incubator. Some of these I sold as baby chicks, but over two hundred of them I raised myself. Out of one batch of one hundred and twenty-seven, I gave the twenty-seven to an old hen and raised the hundred by hand and lost but three. My bread I sometimes bought, but more often baked, while my cream I sold, having come to the conclusion that even if I lost money by so doing, which I am sure I did not do, still it would more than make up in the extra time allowed me for work on the farm.

This meant work from daylight till dark and dead tired at night, and some days so tired I couldn't sleep, for the work was new and besides a bodily strain was a nervous one, but whenever I was dreadfully tired or cold or wet or hungry and still forced to work on to accomplish a task, there was always one recipe which did not fail to cheer and make me feel fresher. "Grit your teeth together when you feel the grumbling coming and think of our soldiers, our husbands, brothers and sons 'over there.' Think of the hardships they are enduring so much worse than anything we have here, and hum under your breath a bit of any old tune at all."

When the rain dashed in my face and it was soggy and cozy under foot, I tried this and I never had it fail.

And now that you have heard my story of some of the year's experiences, "Tell me one thing, tell me truly,"—am I a farmerette? My husband says I am a "farmeress."

Training Little Children.

BY MRS. BERTHA LEWIS.

No matter what the child's after-life is to be, he should have the opportunity at least once in his life to experiment with plants. The plant, which sets its feet in the earth, lifts its head toward the sky, extends its arms to the air and sunshine and gives lodging to the creatures of earth and air, is a powerful factor in the life of man. Our whole aim in encouraging gardening must be to help the child realize that at his feet Mother Nature has set a prize, which rightly appreciated, will answer all his needs and afford him the purest pleasures of life.

God gives to plants their life, their laws of form, color and number of parts. The child creates his garden; it is the work of his hands, the expression of his mind. He arranges it according to his fancy in regard to color and position. He chooses this or that for reasons which appeal to him. The child may be taught in a simple way that as God observed order in the universe at His first law, giving to each form of life its place in the world, so order in the garden is the first necessary step to secure growth and development of life within it.

The child likes a comfortable bed to sleep in, a clean house to live in, a comfortable meal when hungry, a drink of clean water when thirsty. In the same way, the little seed likes a soft, comfortable bed in which to lie. Therefore, the earth must be well cultivated, sifted and raked. The bed must be nicely made, with edges smooth and even. Then the seeds must be placed in even rows, not too close together, or they will crowd each other out. After the seeds are well up the garden, which is their home, must be kept clean, all weeds, sticks and loose stones being removed. The earth must be rich enough to supply food to the growing plants and plenty of clean water given early every morning and, if the day is hot, in the evening also.

If the child's garden is made and tended with care and love, the plants will repay him by blooming and growing. No little child can be comfortable and healthy if given water and washed and cared for only once in a while. So it is with the child's plants; to be healthy and happy they must receive daily attention for a few minutes at least, for plants, like children, respond to love and care.

One reason why gardening makes a good beginning for nature-study is that natural instinct usually points the way to garden-making in the spring. Another reason is that so many forms of life are manifest the garden and that occupation out of doors is very essential to the building up

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of a sound body, mind and spirit, to the exercise of all the senses, the quickening of the emotions and all around helathy development.

Forebel the founder of the kindergarten, adds that children learn through gardening much that helps to develop character and the contact with the power that is greater than man.

"Oh, Painter of the fruits and flowers,
We thank Thee for Thy wise design;
Whereby those human hands of ours
In nature's garden work with Thine.

"Give fowls their gold, give knaves their power,
Let fortune's bubbles rise and fall;
Who sows a field or trains a flower
Or plants a tree is more than all.

"For he who blesses, most is blessed,
And God and man shall own his worth
Who toils to leave as his bequest
An added beauty to the earth.

"Gifts that grow are best;
Hands that bless are best;
Plant; Life does the rest."—Issued by the U. S. Bureau of Education.

Literature for Children.

BY MRS. ONA KRITTER.

Kindergarten methods, whether begun by the mother in her own home, as should be the case in the home of the right kind, or by the trained teacher in school, are of inestimable value to the child, for character building is always made their principal aim and object.

Perhaps mothers may not have been trained in kindergarten methods, but at least they can learn how to tell a story. Anyone can read a story, but telling one is much more effective and much more enjoyable to the child. Every mother should learn how to tell a story. Use your own words and choose simple and forceful ones. A bare plot is interesting to the tiny child, but many details should be supplied for the older boy and girl; they love them. Use direct discourse when possible. Be enthusiastic. Be dramatic. After the story is finished, talk it over freely with the children. Choose some stories which teach kindness to animals and some which give training in morals or good habits, but never point the moral. Let the story bear its own message.

A taste for the best literature is often formed in early childhood through a wise choice of stories. This is also true of music. The songs and music used in the kindergarten are always carefully selected by the kindergartner, and should be just as carefully selected for the home by mothers. Allow your children to hear only the best. There is plenty of good, simple music now published, simple enough for children to enjoy, and good enough to lead into a love of true music.

Besides story-telling and music, there are also pictures. Those which interest the child most show action and movement. Pictures are helpful because they develop the imagination and arouse creative faculties. Care should be taken as to the subject matter of the pictures. They are teachers and comrades when rightly understood.

Although my son is only fourteen months old, he enjoys his picture-book much more if a little story is told about the pictures.

Games also aid in the great work of character-building. They help to develop self-expression and originality and can also be used to teach helpfulness toward others. Through games children may be led to discover the evil effects of self-will and the good resulting from self-control.

But again we say, "Do not moralize. Let the game make its own impression." Play a story with your child. See how attentive he will be and what powers of self-expression he possesses.

Childhood is the time of "make believe and let's pretend," and play means more than anything else to a child. If only more mothers would learn this!

Some mothers can, in a degree, give the training that is necessary for little children. But how much better it is, if possible, to have the help of a trained kindergartner. She has the proper materials to work with. Then, too, in a kindergarten, the child mingles with other children of his own age. These experiences with his equals are of special benefit to him. A child will not learn many needed lessons by merely being told to, but he soon learns them through

contact with others, who have the same needs and wants as himself.

Mme. Montessori says, "In every child, I see a possible Christ." No person, besides a mother, realizes this as much as the good kindergartner.—Issued by the U. S. Bureau of Education.

Keeping the Children Happily Busy.

Simple, Homemade, Indestructible Scrap-Books are the Most Satisfactory for the Little Folk.

BY MRS. J. S. S.

We have been intensely interested in watching our little daughter with her first books. In addition to their educational value, they are a source of great pleasure and have grown to be her daily companions. When she was about fourteen months old she was given her first book, a small linen one containing pictures of animals. These she would call by name as we pointed them out to her, and as they became familiar she would point them out herself. After she had learned to talk, she could say the names also. Linen books containing pictures of objects in colors were next given the child, and when she had become acquainted with these group pictures were added to the collection.

By counting the objects in the various groups—not over five at first—and by calling attention to their color, the child learned both number and color. Emilie Poulsson's book on "Finger Plays" is an enjoyable supplement to pictures of this kind.

We found simple, homemade, indestructible scrap-books most satisfactory and attractive. Anticipating the book stage, we had collected a number of colored pictures from magazines. For the leaves of these books we used brown paper-muslin, cutting a number of pieces twelve by twenty-four inches and, after laying them one on top of another, stitching them through the centre, thus making a book twelve by twelve inches when closed. On the pages we mounted the pictures with paste.

One book contained pictures of fowls, turkeys, chickens, ducks, geese, guinea fowls, and some pigeon and crow pictures also. In another book we pasted pictures of four-legged domestic animals. Many of the pictures showed the family life of these in their natural surroundings. They proved most interesting as the child's experience is confined almost exclusively to the family of which she is a member, and animal families naturally appeal to every child.

Our little girl is now nearly two and a half years old, and she has never tired of her scrap-books. Through them she has become acquainted with the different animals and the sound made by each, and is able to connect the animals and their calls.

The number of books of this kind which would be of great educational value to the child is almost limitless. Birds, flowers, vegetables, trades, farming and history might all be presented to the child in this form. As our little girl grows older we have planned books of harvesting pictures showing the various stages in the growth of wheat from the preparation of the soil, planting of the seed and so on, until it passes through the hands of the miller and baker and finally reaches the child in the form of her daily bread.

Another interesting process is the building of the home from the trees to the finished product. This book will contain pictures of the forest, where the trees grow, the man felling the great trees, the horses and wagons which haul the trees to the saw mill, the cutting and planing of the boards, the train which transports them to the lumber yard, the boards piled high in the lumber yard, the carpenter at work putting the boards together, the house in the process of construction, and lastly the finished home and the family who lives in it. From these process books the child can be led to realize that it takes rain, sunshine and warmth to make the trees and the grains grow, and that there are many people to thank for providing our simplest food and that, above all, God is the great source of everything.

"Mother Goose Rhymes" and the child's favorite, "The Night before Christmas," are always welcome diversions, and after repeated readings the child is able to supply words, lines, and later

whole verses, thus incidentally developing the memory.

With the exception of a few simple books which are really story-telling pictures, I would advocate the telling of stories rather than the reading of them to small children. The primary object of story telling is to stimulate the imagination of the children, cultivate a taste for good literature, and guide them to the best books.—National Kindergarten Association, N. Y.

Childish Questions.

BY F. W. I., AXLMER, ONT.

O little star just kindly say
What folk inhabit you to-day;
Are they good or are they bad?
Do they like folk on earth go mad?
O little star, do kindly say
What ails the folk on earth to-day?
Do folk there work, and pray, and sigh
For something better, and then die?
Or do they live, and love, and play?
Is life with them one summer day?
Is gold the coin up there above?
Or do folk pay their debts with love?
You twinkle, twinkle, but do not tell
If life with you is heaven or hell.
Then, little star, just kindly say
Where do you go at neep of day?

Questions and Answers.

Miscellaneous.

Alsike Hay.

Is there anything injurious to cattle in alsike? Does it pay to have it threshed?
R. W. M.

Ans.—Alsike is considered a good feed and the majority of farmers plan on sowing a little with their clover and timothy. We have not heard of it being injurious to cattle. When well cured, alsike hay ranks among the best. If seed has set well, it may be threshed, as there is usually a good market for alsike.

Man Fails to Keep Contract.

A hires B, who is an inexperienced man, for eight months at \$200 for the term. B worked for two months and quit, saying he could get \$3 a day. Does A have to pay him full wages for the time he worked, and will he have to pay him before the eight months are up?
D. M.

Ans.—Even an inexperienced man should be worth the small wages paid, especially for the summer months, and while B is not legally entitled to receive his wages until the end of the term, unless otherwise stated in the agreement, A might do well to pay him in full now for the time he worked.

Lathing a House.

A house was lathed several years ago but not plastered. The lath has dried out so that there are spaces about half an inch wide between them. What can be done to make the plaster stick, without removing the lath and putting them on again?
G. S.

Ans.—It is possible that plaster might be made to stick on the lath spaced as you say. Metal lath might be tacked over these, but of course this would come rather expensive. If it is found that the spaces are too wide for the plaster, we do not know of any other means of remedying it without removing the lath and putting them on again, unless metal lath were used.

Root Cellar.

I want to build a root cellar, and have a lot of large stones on the place. Can I make it frost-proof above ground? Would it be cheaper to build of cement?
2. I have a horse suffering from kidney trouble and have given him saltpetre. I do not think it is good for him. Is there anything else I can give?
W. M.

Ans.—1. The root cellar could be built of stone, and, having them on the place, it might be cheaper than building of concrete, especially if the gravel had to be drawn any great distance. It will take a little longer to build a stone wall than a concrete wall. You could not make it frost-proof very well unless you banked up around it. There are quite a number of root cellars in the country built on the surface and then banked with earth; these give satisfaction. A concrete roof might be put on this root cellar.

2. It is not advisable to continue feeding saltpetre for any great length of time. It would be well to have a veterinarian examine the horse and prescribe treatment. There may be other

complications of which we know nothing about, and we therefore cannot advise definitely.

Goslings Dying.

I had a nice flock of goslings but four of them have died this week. They run in the hay field and orchard and have water in the trough. There does not appear to be anything wrong with them before they drop dead. I have always had good success with goslings and cannot account for the present occurrence.
J. M. R.

Ans.—We are at a loss to know what would cause death in this way. Is it possible that they have got poison in any way? In order to definitely diagnose the trouble, it would be advisable to send one of the dead birds to the Bacteriological Department, O. A. C., Guelph. They may be able to ascertain the cause of death.

Gossip.

An eminent evangelist was asked one day to conduct a meeting at a chapel in South Wales. A woman arose and bore witness to the preciousness of her religion as light bringer and comfort giver. "That's good, sister!" commented the visitor. "But now about the practical side. Does your religion make you strive to prepare your husband a good dinner? Does it make you look after him in every way?" Just then he felt a vigorous pull at his coat tails by the local preacher, who whispered ardently: "Press those questions, sir; press those questions. That's my wife."

Great preparation is being made for the National Dairy Show, to be held in Chicago from October 6 to 12. It will be an opportunity for all interested in the various phases of dairying to see the best representatives of the breeds, and also to see the very latest in dairy utensils and equipment. It is well worth anyone's while to attend. The show is held at the time of year when work on the farm is not so pressing. Canadians have won laurels with their stock at the National in past years. This year Canadian herds should be well represented. Then there is the milk and cream contest, in which there should be entries from Canada. The National is a show of great magnitude and worthy of the patronage of all dairy-men.

A Canadian Ocean Raft.

Now it is announced that Sir James Ball, British Timber Controller, has given an order for 2,000,000 feet of cut lumber to be shipped from British Columbia to the United Kingdom in the form of a demountable ship propelled by its own steam. *Industrial Progress*, Vancouver, gives the following description of this lumber ship:—

"The scheme is to build the cut lumber into a ship and after arrival at destination to remove therefrom the machinery, which can be sent back for use over again. If the scheme works out as expected by its promoters, it is likely to revolutionize the whole system of off-shore lumber trade, and will greatly increase the lumber possibilities for British Columbia timber in foreign countries by reducing considerably transportation cost and by automatically solving the tonnage problem. The method of construction is very simple. Blocks are first laid for the keel and fore-and-aft and across timbers are then placed in position. When sufficient material has been thus put together to ensure buoyancy enough to keep the bottom high out of the water, the vessel will be launched with donkey engines on board. These are to be used to lift the lumber out of the water and to place in the ship. The lumber will be clamped down securely with bolts and nuts for every eight feet of depth. On arrival at destination, the fastenings can be readily taken off so as to leave the lumber and timber composing the ship immediately ready for distribution. The vessel will be fitted with schooner rig and auxiliary engines, which would be taken out on arrival at destination and either sold, or shipped, back for further use. The promoters confidently believe they will be able to put British Columbia lumber into the European markets at prices that will beat the Norwegian and Swedish competition."—From Weekly Bulletin of Commercial Intelligence Branch, Ottawa.

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Farmer's Advocate, London, Ont.

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A RELIABLE, TRUSTWORTHY WOMAN AS cook in a residence for college women; pleasant surroundings; wages \$45 per month and room; two kitchen maids kept; country woman preferred. Previous experience in institutional work not necessary, but applicant must be good plain cook and good manager. Duties to commence Sept. 1st. Apply Box 37, Farmer's Advocate, London, Ont.

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FOR SALE FOUR FARMS IN FAMOUS Annapolis Valley, Nova Scotia, comprising about thousand acres and including two hundred acres of apple orchards. Excellent shipping facilities via water and rail. Apply Box 30 "Farmer's Advocate" London, Ont.

FOR SALE—ONE-HUNDRED-ACRE FARM. good barn, silo, well fenced and drained; never-failing spring water; ten minutes' walk from church, school and general store. Elgin County. Apply Box No. 32, Farmer's Advocate, London.

FOR RENT BRICK TENEMENT HOUSE. Three apartments. Central. Particulars apply S. Kaufman, 16 Maynard Ave., Kitchener, Ont.

To Bright Memorial Fund Contributors.

The following letter has been received from Mrs. John Bright, Oshawa, thanking contributors to the Bright Memorial Fund: "Mrs. John Bright and family wish to express their deep gratitude to the members of the different stock associations and friends, for the kindly tribute paid to the memory of the late Mr. Bright, and also for the beautiful monument erected to the same."
(Signed) MRS. JOHN BRIGHT.

A National Food-Selling Organization.

In a recent address, Hon. Charles Dunning, Minister of Agriculture for Saskatchewan, declared that if the democratic program of an equal right to live and equality of opportunity is carried out in Canada. A National Food-Selling organization must be formed to ensure the farmer fair prices for his produce and eliminate the gambling risk in the prices of all farm commodities. While Mr. Dunning, naturally, referred to the wheat market, his argument holds good in practically all lines of farm produce. An elaborate system of price fixing for farm-grown commodities would not, in our opinion, be desirable but, a national food-selling organization might help to stabilize markets and give the farmer some opportunity to set a reasonable price on the article he has to sell.

"Since the war ended, many sober men and women realize that it is not sufficient to make the world safe for democracy, democracy must be made safe for the world," said Mr. Dunning.

"Government by the people is not perfect. It has manifest disadvantages. During the past war it was plainly shown that autocracy was more efficient in the carrying on of war than democracy, and democracy had temporarily to abandon many of its rights before it could win the war.

"None of us, for all that, would want to go back to autocracy. No human being can be a just, benevolent autocrat. The diffused responsibility called democratic government confers powers and obligations which many of us do not appreciate.

"We are too ready to pass the buck, to blame our federal, our provincial, our school or municipal government without realizing that as citizens responsible for these governments we bear a part in each one of them and must bear part of the blame.

"What does democracy ask, what does it stand for? A democratic citizenship demands an equal right to live for all and equal opportunities to all.

"Of all the people on the world the agriculturist is the only individual who lacks this equal opportunity. He has to pay what the other fellow asks for what he buys, and he has to take what the other fellow will pay for his products.

"It is not in any spirit of antagonism that we must deal with this wrong. We recognize the other man's right to organize industry, but we must organize our own industry, so as to have the same control over what we sell to other s as others have over what they sell to us.

"Just consider the present situation of the wheat market. The people of Europe need our wheat, they want it very badly, and we are equally anxious to sell our wheat to them but they do not have the money to pay for it.

"During the war Governments did the buying and selling of the food supplies for their countries. From an economic point of view the advantages of this method are very great.

"At the present time the farmer is engaged in an eternal gamble with nature. If the grasshoppers do not get his crop, winds, frost, hail, rust or drought may take it. In addition, if nature should prove kind to all the farmers in the world the same year, they would all go broke. We are all competing against each other.

"Proof of the advantage of a national administration of the selling of our food products by the best business methods are shown by the United States, which woke up a year ago and is selling the biggest wheat crop they ever had at the highest price the United States farmers ever received.

"The fixed price is not the biggest end of this question. In one powerful national organization handling the crop selling through one channel, it is possible to handle the crop much cheaper, to finance more economically, and is thus securing for its farmers a greater measure of equality of opportunity.

"The farmer is then in a position more like the manufacturer, who has a contract in his pocket before he starts to make his goods. The farmer has enough of gambling chances to take with nature without having to go up against all the gamblers in the world when he markets his crop."

Draw on Your Customers



21

through the Merchants Bank. With Branches in all parts of Canada, and correspondents abroad, this Bank is in a position to present Drafts promptly, have them accepted, and collect payment, with the least possible trouble and cost to you.

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OMAS, ONTARIO 34

Victory Year Show Season Starts in England.

The English county show season started on June 4 and 5, at Ipswich, where the Suffolk Agricultural Society held its exhibition, and a remarkably fine display it was, particularly of those three breeds indigenous to the district—the Suffolk horse, the black-faced breed of sheep called Suffolks, and the Large Black pigs.

Beginning my story with the Suffolk horses, Arthur T. Pratt led in yearling fillies with Morston Denise, a daughter of Morston Gold Guard, siring some remarkable stock just now. In two-year-old fillies, Sir Cuthbert Quilter led with Bawdsey Maid Marion, and Lord Stradbroke's Henham Caroline stood second. Winner in the three-year-old fillies was Captain Raymond Catchpole's big, upstanding and free-moving Darsham Duchess, that stood over Sir Cuthbert Quilter's short-legged Bawdsey Juno. Best of the barren mares was Sudbourne Armada, which cost her owner, Joseph Watson, 1,000 guineas. The brood mare class, however, made one of the finest displays ever seen in a Suffolk show-ring. The 2,000-guineas filly, Sudbourne Moonlight, which Joseph Watson bought from K. M. Clark, when he broke up his stud in 1918, won and with her Sudbourne Peter colt at foot made a real picture. Watson was also second on the six-year-old mare, Sudbourne Model, by Arabi.

The champion Shire stallion was W. M. Lawson's four-year-old Eaton Headlight, bred by the Duke of Westminster, in Cheshire, and Foster's Lincoln Duchess was premier Shire mare.

In Shorthorns, S. R. Sherwood's Countess of Hagle 2nd., and W. M. Cazalet's Garbity Princess Royal 4th well represented milk and beef, respectively, while Sherwood's milking Shorthorn bull, Thornley Don, won a storming class. Mrs. Rudd and W. M. Cazalet took the pick of the prizes in Jerseys.

In Red Poll cattle, Lord and Lady Graham's old cow, Charming Lass, won her class and the championship. Best of the three-year-old heifers was their exhibit giving four gallons of milk per day. T. Brown & Son's Marham Amethyst B. 12 led in two-year-olds. Premier senior bull was Marham Dauntless, and Lord and Lady Graham led in yearling bulls with one by Lysander.

H. E. Smith, Walton Grange, took the ram championship in Suffolk sheep, and other prize winners were provided by S. R. Sherwood, W. F. Paul, J. Chivers, and E. Giles. Championship ram in Southdowns was provided by E. C. Fairweather. Captain Hicks scored a meritorious win in three yearling ewes.

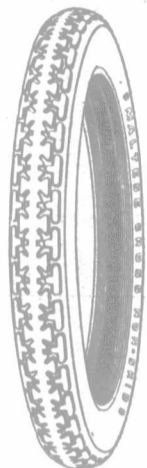
ALBION.

Canadian Stores for Britain.

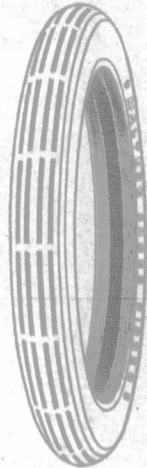
Messrs. Alfred Mansell, (Shrewsbury), C. W. Tindall, (Lincolnshire), and Lord Northbrook, (Hampshire), at a meeting of the Royal Agricultural Society, spoke strongly against the admission of Canadian store cattle into England, an idea mooted in several parts of England and being very cleverly engineered from the Canadian side of the Atlantic. British farmers fear the importation of disease among Canadian stores. "To do anything that would endanger the herds and flocks of the country would be a retrograde step," said Alfred Mansell, and Tindall added "it was not a question of meat; it was wholly a question of whether the herds and flocks of Britain were to be guarded against the terrible diseases of other days." Lord Northbrook said it was for breeders to combine and present a firm front to oppose this proposal. A gigantic demonstration of protest will be held by all the breed societies at the Cardiff Royal Show-ground. By serious-minded men, it is not thought that the present Government will revoke the rulings of others and admit these cattle. Freightage is a big matter to take into consideration, and it is surely far cheaper for Canadians to send the frozen or chilled carcasses than it is to dispatch over boat-loads of stores, gathered from all the corners of the Dominion!

Remarkable prices are being paid in England for Large Black gilts. At a sale in Norfolk, 95 head fetched £3,356, or 37 2s. each, and one litter of seven

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January 1918 gilts averaged £83 9s. each. Lady Graham paid 155 guineas for a March 1918 gilt. ALBION.

Questions and Answers. Miscellaneous.

Rules of the Road.

Is a man with a horse and buggy compelled to turn out and give an auto the whole road? A. R.

Ans.—No, he is not compelled to, but must give half the road either when meeting an auto or other rig; or if the auto or rig wishes to pass him. Some autoists act as if they owned the road, especially when meeting a horse and rig. There are instances, however, where the man with the horse can turn off the road much easier than can the man with a car.

Borrowing Money for an Education.

Would it be advisable for a young farmer to borrow money to take a course at an agricultural college? A. S.

Ans.—Many a young man has commenced his studies at college with practically no finances in view. By working through the term and in holidays he has met his obligations. While, personally, we would prefer having a fair proportion of the necessary funds on hand when commencing to take the course, a young man desirous of securing a better education might be justified in borrowing the money.

Miscellaneous.

1. Is the world round?
2. If A hires with B for a term of five months, and, after he has worked two months and did the best he could, B tells him to go can A claim five months' pay?
3. Is King George a Catholic? What is the family name?
4. Is it against the Catholic religion to obtain a divorce?
5. In what year was "The Farmer's Advocate" first published?
6. What do these names mean: Margaret, Doris; Rose, Kathaleen, George, Roy, David, etc.

M. P.

Ans.—1. We were taught in our first geography lesson that the world is shaped somewhat like an orange, that is, not absolutely round, but slightly flattened at each end.

2. A is not in a position to collect five months' pay, having only worked two months.

3. The King of England is a Protestant and comes from the House of Guelph.

4. It is understood that it is.

5. In 1866.

6. The meaning of proper names is given in the back of some dictionaries and sometimes in almanacs. These might be looked up at your leisure.

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Few people have any conception of the gigantic proportions of the three Sister Ships—the Noronic, the Hamonic, and the Huronic, of the Northern Navigation Company's inland ocean line between Sarnia, Sault Ste. Marie, Port Arthur, Fort William and Duluth.

Think of the largest hotel you know—how many rooms has it? The Noronic, Flagship of this mighty fleet, has stateroom accommodation for 588 people, while its beautiful dining room on the Observation Deck has seating capacity for 278.

This mighty steel liner is 385 feet long and has a beam of 58 feet. Her gross tonnage is 6,905. Did you ever sail on a ship with six decks? The Noronic has first a Main, then a Spar, a Promenade, an Observation, a Boat and a Hurricane Deck—all of steel. Six times round the Promenade Deck is equal to one mile.

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One way fares on application.

For full information, ask any Grand Trunk Ticket Agent, the Company at Sarnia, or your local ticket or tourist agent.

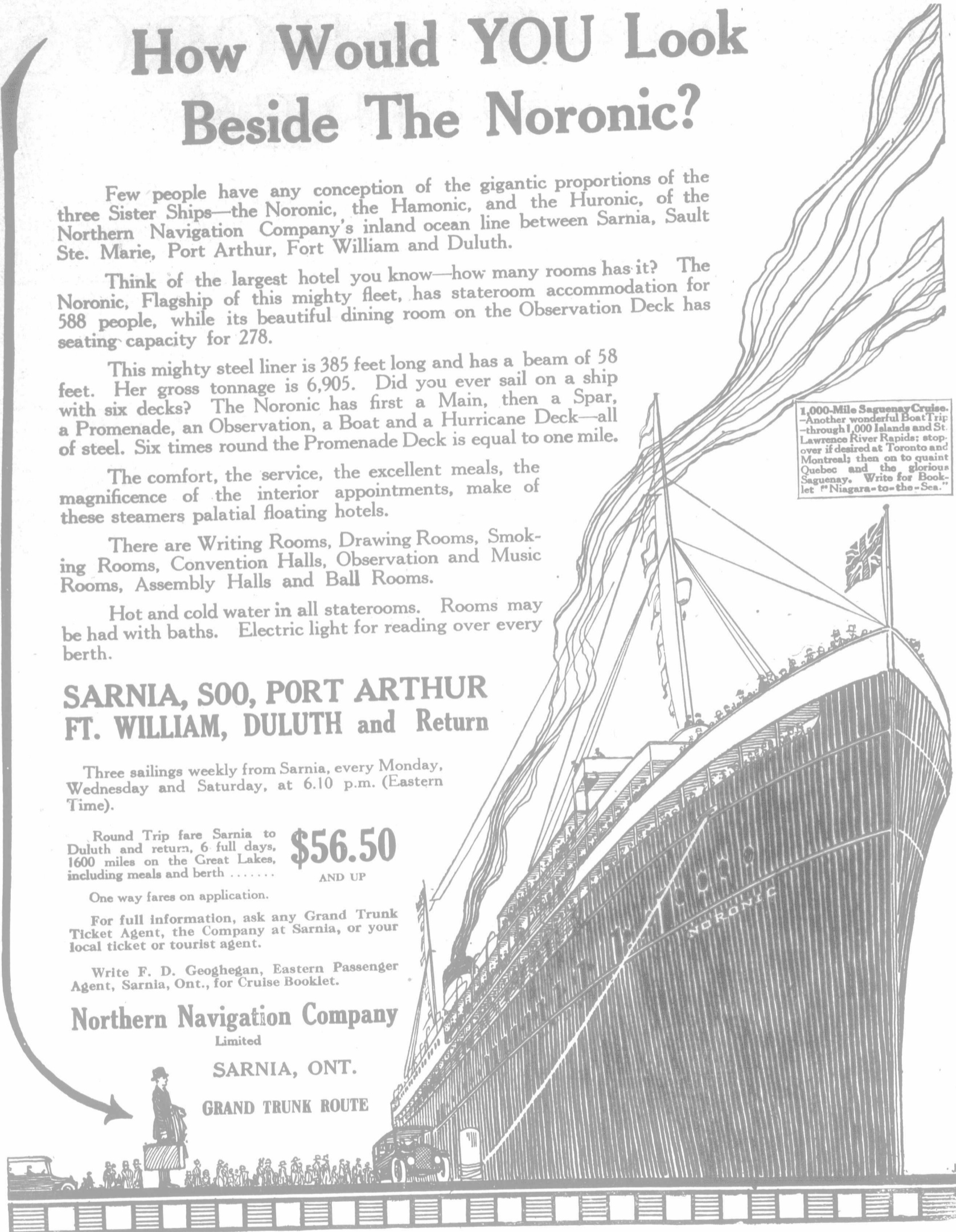
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Questions and Answers. Miscellaneous.

Storage Charges.

A sold his farm to B and received permission from B to leave several implements and some grain on the place for a time. Nothing was said about paying for storage. Can B collect storage from A?
G. A. M.

Ans.—If B gave his permission to have the stuff left on his place for a time and did not bargain for any remuneration, he would have difficulty in collecting. Of course, if A imposed on good nature and allowed the material to remain for an indefinite period, possibly on B's road, then B would be justified in charging for storage.

Absence of Oestrus.

Are there any means of inducing cows and heifers to come in heat?
G. B.

Ans.—It might be good practice to tie the cow in a stall adjoining the bull, or turn her loose with him in paddock for a while each day. Two drams of nuxvomica three times daily has sometimes apparently had the desired effect by stimulating the nervous system.

Abortion.

A neighbor has contagious abortion in his herd. His herd sire runs loose in the fields. He broke our line fence and bred one of my cows. What redress have I?
O. S.

Ans.—You can take action against the neighbor for the extent of damage done. This may be rather difficult to ascertain,

as the herd sire may be the means of spreading the disease to your herd. In this case, the loss to you would be particularly high. It is well to talk the matter over with your neighbor, and, if possible, come to some satisfactory agreement.

Tuberculosis.

When dressing a hen yesterday I found the liver had a number of white spots on it, from the size of a pinhead to a walnut. The hen was fat. What was the cause of the disease?
M. E. R.

Ans.—The white spots on the liver indicate tuberculosis. With this disease it is customary for the bird to show a naked condition, lameness, and the loss of flesh. However, birds that are fat are oftentimes affected. Any birds in the flock showing symptoms of this disease

should be isolated in order to aid in preventing the disease from spreading to healthy birds. This insidious disease causes a heavy loss in the flocks every year. Using every means to keep the flock healthy, cleanliness and regular disinfecting of the yards and pens are preventive measures.

Planting Trees.

When is the best time to plant maple, elm and poplar trees? Can they be obtained from the Government? Where should one apply?
H. K.

Ans.—Spring is the best time for planting trees. The Forestry Department, Parliament Buildings, Toronto, supplies certain varieties of trees for reforesting work. By writing the Department, full information regarding the kind of trees obtainable could be secured.

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A choice lot of Angus cows in calf to Queen's Edward. Collie puppies—A litter now ready. ROBT. McEWEN, R. 4, London, Ont.

Aberdeen-Angus—Several young bulls and heifers for sale. Sired by "Middlebrook Abbot 2nd" (1st prize in class at Toronto and Ottawa, 1915). Apply to A. DINSMORE, Manager, "Grape Grange" Farm, Clarksburg, Ont. 1 1/4 miles from Thornbury, G.T.T.

Balmedie Aberdeen-Angus Nine extra good young bulls for sale. Also females all ages. Show-ring quality. THOS. B. BROADFOOT - FERGUSON, ONT.

Kennelworth Farm Angus Bulls—The strongest offering we ever had, all are sired by Victor of Glencairn and a number are ready for service. Prices reasonable. PETER A. THOMPSON, Hillsburg, Ontario.

Questions and Answers. Miscellaneous.

Geese—Asparagus.

1. Are geese profitable birds to keep? Do they need grain when grass is plentiful? Have they to be plucked alive? How is it done, and how often during the year?

2. How is asparagus handled from seed until time to cut? I. L. W.

Ans.—Geese are profitable, especially where there is good pasture and running water. Running water is not absolutely necessary, but it saves a lot of trouble. Up to the time of fattening, geese require practically no grain if they have an abundance of fresh grass. It is not customary to pluck the geese alive, although it is done in some cases. The birds are usually fattened for the Christmas market, and then killed and plucked.

2. For information regarding the culture of asparagus, write the Central Experimental Farm, Ottawa, for pamphlet No. 24 on "Asparagus Culture." This goes into the handling of the crop quite fully, and explains the method of planting and cultivation.

Time of Freshening.

1. We purchased a Jersey heifer a year ago. She was in fair condition when we turned her on grass, but seems to have gone to pieces. She is languid and lies down quite a bit of the time. She is just now beginning to lose her old hair. A veterinary surgeon has pronounced the trouble tuberculosis. How shall we proceed to find out definitely?

2. Is it liable to injure a young cow to drop a calf in less than a year from previous freshening?

3. What is the age limit for baby beef? W. H.

Ans.—1. It would be advisable to have the heifer tested with tuberculin, in order to ascertain whether or not she is affected with tuberculosis. Your local veterinarian could do this.

2. It is not good practice with a young cow, as it shortens the lactation period. A cow should be dry from six weeks to two months before freshening again.

3. We do not know that there is any age limit for baby beef. Calves are kept going ahead from the time they are dropped, and are often ready for the market when from twelve to fifteen months of age.

Black Bass.

I have a small lake of about four acres on my own farm. It has no visible inlet or outlet, but the water is always clear. It has no steep rocks up to the shore, but has some small stones around the edge, also plenty of bushes and water lilies. About seven years ago I put forty small black bass in it. I can see different sizes of fish but no little ones. I have tried to fish several times with hook and line, but have only caught two weighing from 3 1/2 to 4 pounds.

- 1. Do you think this would be a likely place for them to increase?
2. How many years does it take a bass to get its growth?
3. What do you think would be the cause for not seeing any little ones?
4. Where would the bass lay their spawn in a lake like this?
5. What time of year do they spawn?
6. What kind of food does bass like the best? E. B.

Ans.—1. It strikes me as being extremely doubtful if this small lake is a suitable habitat for the black bass. This, however, depends much on its depth, (which you do not give), as if shallow the water would become too warm for this species.

2. I have no exact data on rate of growth, but it is probable that it takes five years to reach a weight of 3 pounds.

3. I should think the probability is that they have not spawned, and the present inhabitants are some of the original forty you put in.

4. The black bass spawns on gravel in shallow water, the male excavating a nest 15 to 20 inches in diameter. If there are any such areas in your lake look for nests there in June.

5. They spawn from the end of May to the middle of July.

6. The black bass prefers crayfish as food, but also eats minnows and aquatic insects. A. B. K.



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The cost is small, and the labor-saving qualities are unequalled. THE COOKE METAL WHEEL COMPANY 19 West St., Orillia, Ont.

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On wash day add one teaspoonful of PURA-LIME to a tub of water. It takes the stains and dirt out of the clothes, and will not injure them. No bleaching is required for Pura-lime makes everything white. Ask your dealer, or send 25c. in money or stamps and a sample package will be mailed you. ACCO CHEMICAL CO. Limited, 23 River St. Toronto

Advertisement for Samuel Trees & Co. featuring a 'FREE' catalog and 'IMPERIAL BRAND HARNESS'. Includes text: 'This is the most complete Auto Accessory Book that has yet been published exclusively for farmers. We will send it with our compliments if you will ask for it. Farmers need tires that are tough enough to withstand the rough country roads. There are too many breakdowns along the highways, due to poor tires. Sensible farmers will get the best all-round tire made—the Partridge Tire. Partridge Tires reduce those exasperating road troubles to a minimum. Standard prices and super-standard quality. Ask your dealer. Write for Catalog.'

Ontario Hereford Breeders' Association

- List of Members: E. J. Hooper, St. Mary's, Ont. J. E. Harris, Kingsville, Ont. A. E. Perry, Appin, Ont. J. T. Harrison, Mt. Albert, Ont. Geo. P. Moore, Galt, Ont. J. Hooper & Son, St. Mary's, Ont. T. B. Aitkin, Teeswater, Ont. Wm. Mitchell, Norham, Ont. E. E. Nokes, Manilla, Ont. L. Christie, Ft. Francis, Ont. B. Jasperson, Kingsville, Ont. W. Page & Son, Wallacetown, Ont. O. C. Wagle, Kingsville, Ont. A. L. Currah, Bright, Ont. D. Grainger, Creemore, Ont. Boyd Porteous, Owen Sound, Wilmot Bell, Staples, Ont. H. Howick, Harrington W., Ont. L. O. Clifford, Oshawa, Ont.
Young stock of best breeding always ready for sale. For information write any of the members or the Secretary. On the 12th day of Dec. these members will sell at Guelph the greatest bunch of Herefords ever put through an auction ring in Ontario. JAMES PAGE, Secretary Wallacetown, Ontario

Spring Valley Shorthorns

—Herd headed by Sea Gem Pride —96365— Present offering includes two real herd headers. One imported in dam, the other by Sea Gem's Pride and from a show cow. A number of other good bulls and a few females. Write for particulars. Telephone and telegraph by Ayr. KYLE BROS., R. 1, Drumbo, Ont.

Shorthorn Bulls and Females

—Herd headed by Ruby Marquis, a son of the great Gainford Marquis (imp.) our calves now coming are all by this sire. We are also offering a few females in calf to him. Get our prices before buying elsewhere. PRITCHARD BROS., R. R. No. 1, Elora, Ont.

Shorthorns Landed Home

—My last importation of 60 head landed at my farm on June the 20th, and includes representatives of the most popular families of the breed. There are 12 yearling bulls, 7 cows with calves at foot, 24 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhocks, Augusta, Miss Ramsden, Whimble, etc. Make your selection early. (All railroads, Bell 'phone) Cobourg, Ontario GEO. ISAAC.

Walnut Grove Scotch Shorthorns

Established 1840. Gainford Eclipse and Trout Creek Wonder 2nd in service. We are in a position to supply bulls and females of the best Scotch breeding fit for either show or foundation stock. We invite inspection of cattle. Write your wants. D. BROWN & SONS, Shedden, Ont. Long Distance 'phone. Twelve miles west of St. Thomas, P.M., M. C. R.

SPRUCE GLEN FARM SHORTHORNS

Four bulls (thick mellow fellows) from 9 to 13 months—Reds and Roans. Also a few choice heifers and two grade yearling heifers from heavy milkers. Priced to sell. JAMES MCPHERSON & SONS DUNDALK, ONTARIO

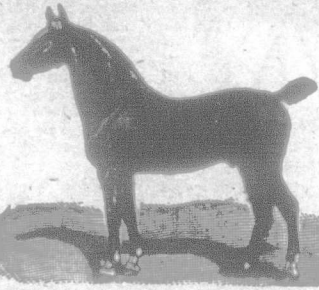
SOUTHVIEW FARM SHORTHORNS

Bulls all sold, but can spare a carload of females, mostly heifers. Yorkshire pigs, either sex; true to type and breeding. C. J. STOCK (R.R. Station, Tavistock, one mile) R.R. 6, Woodstock, Ontario

Pure Scotch and Scotch-Topped Shorthorns

—We have several choice young bulls of the best of breeding and ready for service. Two are by Rapheal (imp.), one by Right Sort (imp.), one by Sittyton Selection, and several by our present herd sire, Newton Cedric (imp.). Prices right. R. M. MITCHELL R. R. No. 1, Freeman, Ontario

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Has Imitators But No Competitors.
A Safe, Speedy and Positive Cure for
 Cuts, Splints, Swings, Capped Hocks,
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 Puffs, and all lameness from Spavin,
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 Cures all skin diseases or Parasites,
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 Bunches from Horses or Cattle.

**As a Human Remedy for Rheumatism,
 Sprains, Sore Throat, etc., it is invaluable.**
 Every bottle of Caustic Balsam sold is
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 per bottle. Sold by druggists, or sent by ex-
 press, charges paid, with full directions for
 its use. Send for descriptive circulars,
 testimonials, etc. Address
The Lawrence-Williams Co., Toronto, Ont.

ANTICIPATION
 will be greater than
REALIZATION
 if you are not using a
Good Shorthorn Bull

I have a few imported ones ready
 for service, as well as several
 of my own breeding. The
 price is not high.

WILL A. DRYDEN
 Maple Shade Farm Brooklin, Ont.

English Dual-Purpose
Shorthorns

For sale: Bull calves and young bulls.
 English bred for milk and beef. The
 right kind to head Canadian herds to in-
 crease profits. From very moderate
 prices and up. **English Large, Black
 Pigs.** A great bacon type, long and
 deep, thrifty. Come or write.

LYNNORE STOCK FARM
 F. Wallace Cockshutt
 Brantford - Ontario

Mardella Dual-purpose Shorthorns
 8 choice young bulls; 30 females, cows and heifers.
 All of good size type and breeding. Herd headed
 by The Duke; dam gave 13,500 lbs. milk, 474 lbs.
 butter-fat. He is one of the greatest living
 combinations of beef, milk, and Shorthorn
 character. All priced to sell. Write, call or phone.
THOMAS GRAHAM, PORT PERRY, R. 3 ONT.

I HAVE FOUR CHOICE
SHORTHORN BULLS
 All are of serviceable age and from good milking
 dams. They are sired by my former Wedding
 Gift herd sire which was a son of Broadhooks
 Prince. Also have younger calves by present herd
 sire Primrose Duke as well as females bred to
 him. Inquiry invited. Write me also for any-
 thing in Tamworths.
**A. A. COLWILL (Farm adjoining Village, Bell
 phone.) Newcastle, Ont.**

Shorthorns For Sale
 Two young Bulls fit for service, 1 roan, 1 red sired
 by King Dora (imp.) also some heifers in calf to
 King Dora (imp.) Their dams are good milkers.

SOCKETT BROS.
 R.R. No. 5 - Rockwood, Ont
 Phone No. 22, R. 3

Maple Leaf Farm Shorthorns—Headed by a
 son of Master Ruby. Young
 cows in calf and choice bull calves. Berkshires—
 boars and sows ready for service.
JOHN BAKER, Hampton, Ont.
 Bowmanville, all railroads.

Guaranteed Shorthorns—If you want a good
 few females (bred), get my sales list. Satisfac-
 tion guaranteed and prices right.
CHAS. GRAHAM, Port Perry, Ont.

Dates of Fall Fairs 1919.
 Issued by the Agricultural Societies
 Branch of the Ontario Department of
 Agriculture, Toronto. J. Lockie Wilson,
 Superintendent.

- Aberfoyle.....Oct. 7
- Abingdon.....Oct. 3 and 4
- Acton.....Sept. 23 and 24
- Agincourt (Scarboro).....Sept. 23 and 24
- Ailsa Craig.....Sept. 23 and 24
- Alexandria.....Sept. 10 and 11
- Alfred.....Sept. 23
- Alliston.....Oct. 2 and 3
- Almonte.....Sept. 23 and 25
- Alvinston.....Oct. 7 and 8
- Amherstburg.....Sept. 29 and 30
- Ancaster.....Sept. 23 and 24
- Arden.....Oct. 7
- Arnprior.....Sept. 16-18
- Arthur.....Oct. 7 and 8
- Ashworth.....Sept. 26
- Atwood.....Sept. 22 and 23
- Avonmore.....Sept. 16 and 17
- Aylmer.....Sept. 25 and 26
- Ayton.....Sept. 16 and 17
- Bancroft.....Oct. 2 and 3
- Barrie.....Sept. 22-24
- Baysville.....Oct. 3
- Beachburg.....Sept. 22-24
- Beamsville.....Sept. 19 and 20
- Beaverton.....Sept. 22-24
- Beeton.....Oct. 7 and 8
- Belleville.....Sept. 1 and 2
- Berwick.....Sept. 4 and 5
- Binbrook.....Oct. 6 and 7
- Blackstock.....Sept. 23 and 24
- Blenheim.....Oct. 2 and 3
- Blyth.....Sept. 22 and 23
- Bobcaygeon.....Sept. 26 and 27
- Bolton.....Oct. 3 and 4
- Bonfield.....Sept. 30
- Bothwell's Corners.....Sept. 30 and Oct. 1
- Bowmanville.....Sept. 16 and 17
- Bradford.....Oct. 14 and 15
- Bracebridge.....Sept. 25 and 26
- Brampton.....Sept. 19 and 20
- Brigden.....Sept. 30
- Brighton.....Sept. 11 and 12
- Brockville.....Aug. 25-28
- Bruce Mines.....Sept. 24
- Brussels.....Sept. 16 and 17
- Burk's Falls.....Sept. 25 and 26
- Burford.....Sept. 30 and Oct. 1
- Burlington.....Sept. 30 and Oct. 1
- Caledon.....Sept. 23 and 24
- Caledonia.....Oct. 9 and 10
- Campbellford.....Sept. 23 and 24
- Carp.....Sept. 30 and Oct. 1
- Castleton.....Sept. 30 and Oct. 1
- Cayuga.....Sept. 25 and 26
- Centreville.....Sept. 20
- Charlton.....Sept. 17
- Chatham.....Sept. 16-18
- Chatsworth.....Oct. 9 and 10
- Chelmsford.....Oct. 1 and 2
- Chesley.....Oct. 8 and 9
- Clarence Creek.....Sept. 23
- Clarksburg.....Sept. 16 and 17
- Cobden.....Sept. 25 and 26
- Cobourg.....Sept. 17 and 18
- Cochrane.....Sept. 25 and 26
- Colborne.....Sept. 25 and 26
- Coldwater.....Sept. 25 and 26
- Collingwood.....Sept. 16-19
- Comber.....Sept. 26 and 27
- Cookstown.....Sept. 30 and Oct. 1
- Cookville.....Oct. 1
- Cornwall.....Sept. 3-6
- Delaware.....Oct. 8
- Delta.....Sept. 15-17
- Demorestville.....Sept. 27
- Desboro.....Sept. 18 and 19
- Dorchester Station.....Oct. 1
- Drayton.....Sept. 30 and Oct. 1
- Dresden.....Oct. 2 and 3
- Drumbo.....Sept. 23 and 24
- Dryden.....Sept. 25 and 26
- Dunchurch.....Oct. 2 and 3
- Dundalk.....Oct. 1 and 2
- Dungannon.....Oct. 2 and 3
- Dunnville.....Sept. 18 and 19
- Durham.....Sept. 30 and Oct. 1
- Elmira.....Sept. 19 and 20
- Elmvale.....Oct. 1-3
- Embro.....Oct. 2
- Emo.....Sept. 16 and 17

TIRE BARGAINS
BY MAIL ON APPROVAL



The savings represented in each tire you purchase from us amounts anywhere from \$10.00 to \$30.00. You cannot afford to neglect this opportunity of buying brand new tires.

Note the difference in what you would pay if you purchased them elsewhere. Besides, you get brand new tires, made by a reputable Canadian manufacturer—tires that combine quality of material with the highest standard of workmanship.

Order the size you require. They will be shipped, express paid, C.O.D., on approval to any address in Ontario, Quebec or the Maritime Provinces. If you are not satisfied with the genuine bargains you receive, ship the tires back at our expense. In ordering please state whether "Clincher" or "Straight Wall," Plain or Non-skid.

Size	Plain	Non-Skid	Size	Plain	Non-Skid
30 x 3 1/2	\$13.45	.....	33 x 4 1/2	\$26.50	27.50
32 x 3 1/2	13.00	16.70	34 x 4 1/2	25.00	35.00
31 x 4	18.00	24.90	35 x 4 1/2	28.00	38.00
32 x 4	19.00	22.00	36 x 4 1/2	29.00	39.00
33 x 4	22.60	27.85	35 x 5	.....	42.50
34 x 4	23.40	28.85			

30x3 1/2 Premiers, guaranteed 3,500 miles, \$17.80.
 30x3 1/2 Tubes, Fully Guaranteed, \$2.25

EXTRA SPECIAL
 100 32x3 1/2 Dominion Royal Cord Casings, Class "A," seconds, \$34.00 each. 32x3 1/2 Cords are the same size as 33x4 Fabric Covers, and will fit this size rim.

Security Tire Sales Co.
 516 1/2 Yonge St. TORONTO

Imported Shorthorns
 SIRE IN SERVICE;

Imp. Collynie Ringleader (Bred by Wm. Duthie)
Imp. Clipper Prince (Bred by Geo. Campbell)
Imp. Orange Lord (Bred by Geo. Anderson)

We are offering a large selection in imported females with calves at foot or in calf. A few home-bred females, 19 imported bulls and 8 home-bred bulls, all of serviceable age. If interested, write us, or come and see the herd.

J. A. & H. M. PETTIT - Freeman, Ontario
 Burlington Jct., G.T.R., half mile from farm. Phone Burlington.

The Salem Herd of Scotch Shorthorns
 HERD HEADED BY GAINFORD MARQUIS, CANADA'S PREMIER SIRE

Write us about the get of Gainford Marquis. They have won more at Toronto and other large exhibitions than those of any other sire. We still have a few sons to offer, as well as females bred to Canada's greatest sire.

J. A. WATT - Elora, Ontario

R.O.P. Dual-Purpose Shorthorns—Herd headed by "Burnfoot Champion" = 106945 =, whose two nearest dams average over 13,700 lbs. of milk, with an average test over 4%. He is one of the best dual-purpose bulls in the Dominion, he now weighs over 2,300 lbs. at 3 1/2 years old. We have in the herd "Buttercup" = 111906 =, with a three-year-old R.O.P. record of 12,691 lbs. of milk and 482 lbs. of fat, and a four-year-old record of 16,596 lbs. of milk and 653 lbs. of fat in one year. We have only one bull calf, 9 months of age, a good dark red, for sale. Visitors welcome to the farm at any time.
G. W. CARTER (Pinehurst Farm) Ilderton, Ont.

Beach Ridge Shorthorns and Yorkshires—Shorthorn herd headed by Sylvan Power 95871, a junior champion on Canadian circuit in 1915, and sire of the G. Champion bullock at Guelph Winter Fair, 1918. Young stock of all ages, both sex, for sale; also young cows with calf at foot or in calf to Sylvan Power. We can supply any want in Yorkshires.
R. D. HUNTER, EXETER, ONTARIO

ROBERT MILLER, Stouffville, Ont., Has EIGHT of the best young bulls that he has owned at one time, good ages and beautifully bred. Also several cows and heifers, some of them with calves at foot, others in calf to Rosemary Sultan, the Grand Champion bull at head of the herd. Everything of Scotch breeding. The prices are very reasonable, and though the freight is high, it will be paid.

GRAND VIEW FARM SHORTHORNS
 Herd headed by Lord Rosewood = 121676 = and by Proud Lancer (Imp.). Have a few choice bull calves and heifers left, sired by Escanna Favorites, a son of the famous Right Sort (Imp.).
W. G. GERRIE - C.P.R. Station on farm, Bell Phone. BELLWOOD, ONTARIO

GLENGOW SHORTHORNS AND COTSWOLDS
 Six-year-old Cotswold rams. These are big, lusty fellows and in good condition. I also have four Shorthorn bulls of serviceable age. Write for prices and particulars.
 Stations: Brooklin, G.T.R.; Oshawa, C.N.R.; Myrtle, C.P.R. **WM. SMITH, Columbus, Ont.**

SHORTHORNS, CLYDES
 Have a few choice bull calves left. See these before buying elsewhere. Also six Clyde Mares and fillies rising on to 6 years of age. Each by imported sire and dam. **WM. D. DYER, R. No. 3 Oshawa.** 2 1/2 miles from Brooklin, G.T.R., 4 miles from Brooklin, C.N.R., or Myrtle, C.P.R.

WILLOW BANK STOCK FARM
SHORTHORN CATTLE and LEICESTER SHEEP. HERD ESTABLISHED 1855—FLOCK 1848
 The great show and breeding bull, Brown Dale = 80112 =, by Avondale, heads the herd. Extra choice bulls and heifers to offer. Also a particularly good lot of rams and ewes all ages. Imported and home bred. **JAMES DOUGLAS, CALEDONIA, ONTARIO.**

Dual-Purpose Shorthorns—Herd headed by Dominator 106224, whose two nearest dams average 12,112 pounds of milk in a year. One dark red bull eleven months old, and several from six to seven months old, priced for quick sale. Inspection of herd solicited.
WELLDWOOD FARM, Farmer's Advocate, London, Ont.

AINS

VAL

ch tire you pur- ere from \$10.00 to neglect this oppor- es.

ay if you purchased them res, made by a reputable bline quality of material

Table with 3 columns: size, Plain, Non-Skid. Rows include x 4 1/2, x 4 3/4, x 4 1/4, x 4 1/2, x 4 3/4, x 5.

ed 3,500 miles, \$17.80. aranteed. \$2.25

PECIAL

l Cord Casings, Class 32x3 1/2 Cords are the e Covers, and will fit

Sales Co.

TORONTO

orns

Imp. Orange Lord (Bred by Geo. Anderson)

females with females, 19 serviceable ce the herd.

man, Ontario

e Burlington.

Shorthorns

S PREMIER SIRE ave won more any other well

Elora, Ontario

Champion" = 106945 =, whose r 13,700 lbs. of milk, with an Dominion, he now weighs over 1906 =, with a three-year-old ar-old record of 16,596 lbs. of onths of age, a good dark red.

t Farm) Iderton, Ont.

erd headed by Sylvan Power or champion on Canadian cir- r, 1918. Young stock of all to Sylvan Power. We can

R. EXETER, ONTARIO

Young bulls that he has owned d beautifully bred. Also sev- o Rosemary Sultan, the Grand The prices are very reason-

ORTHORNS

). Have a few choice bull mous Right Sort (Imp.) BELLWOOD, ONTARIO

OTSWOLDS

d condition. I also have four d particulars.

YDES

Also six Clyde Mares and WM. D. DYER, R. No. 3 R., or Myrtle, C.P.R.

ARM

ISHED 1855—FLOCK 1848 heads the herd. Extra choice wes all ages. Imported and

minator 106224, whose two 12,112 pounds of milk in a seven months old, priced for

ovocate, London, Ont.



Carhartt's Allovers

I FIGURE] that when a man wears overalls he wants to be able to bend, twist and stoop freely without being conscious of them. So I purposely made my Carhartt's extra roomy, and double stitched every seam. The suspender buttons stick as if they were embedded in concrete. Interlacing suspenders give you shoulder ease you never knew before—and they stay together in the wash, while the first-grade denim cloth I use has a staunch durability that ensures a surprising length of service.

Hamilton Carhartt

President

Hamilton Carhartt Cotton Mills, Limited

Toronto Montreal Winnipeg Vancouver



Three Requirements for Good Butter Good Cows A Clean Churn & Reliable

Windsor Dairy Salt THE CANADIAN SALT CO. LIMITED

FEEDS

We Sell Linseed Oil Cake Meal, Cotton Seed Meal, Gluten Feed (23% protein), Bran, Shorts, Feeding Corn Meal, Feeding Molasses (in barrels), Dairy Feeds, Hog Feeds, Cracked Corn, etc. Car lots or less. Our poultry feeds are the best on the market, and the prices are just right. Ask for quotations.

We Buy Hay, Straw, Oats, Buckwheat, Mixed Grain, etc.

Crampsey & Kelley Dovercourt Road, Toronto

Please mention Advocate

- Emsdale... Sept. 23 and 24
Englehart... Sept. 18 and 19
Erin... Oct. 8 and 9
Essex... Oct. 9 and 10
Exeter... Sept. 15 and 16
Fairground... Oct. 7
Fenelon Falls... Sept. 12 and 13
Fenwick... Sept. 23 and 24
Fergus... Sept. 25 and 26
Feverham... Sept. 30 and Oct. 1
Flesherton... Sept. 25 and 26
Florence... Oct. 2 and 3
Forest... Oct. 1 and 2
Fort Erie... Sept. 24 and 25
Fort William... Sept. 9-11
Frankford... Sept. 18 and 19
Frankville... Sept. 25 and 26
Freeton... Oct. 4
Galetta... Sept. 24 and 25
Galt... Sept. 18 and 19
Georgetown... Oct. 1 and 2
Glencoe... Sept. 30 and Oct. 1
Goderich... Sept. 15-17
Gooderham... Oct. 2
Gordon Lake... Sept. 26
Gore Bay... Sept. 30 and Oct. 1
Gorrie... Oct. 4
Grand Valley... Sept. 18 and 19
Gravenhurst... Oct. 2 and 3
Haliburton... Sept. 25
Hanover... Sept. 25 and 26
Harriston... Sept. 25 and 26
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Harrowsmith... Sept. 18 and 19
Hepworth... Sept. 16 and 17
Highgate... Oct. 13 and 14
Holstein... Sept. 23 and 24
Huntsville... Sept. 23 and 24
Hymers... Sept. 23
Ingersoll... Sept. 29 and 30
Iron Bridge... Oct. 7
Jarvis... Oct. 2
Kagawong... Oct. 2 and 3
Keene... Oct. 7 and 8
Kemble... Sept. 25 and 26
Kemptville... Sept. 4 and 5
Kenora... Aug. 28 and 29
Kilsyth... Oct. 2 and 3
Kincardine... Sept. 18 and 19
Kingston... Sept. 23-27
Kirkton... Oct. 2 and 3
Lakefield... Sept. 23 and 24
Lakeside... Sept. 25
Lambeth... Sept. 24
Langton... Oct. 11
Lansdowne... Sept. 18 and 19
Leamington... Oct. 1-3
Lindsay... Sept. 18-20
Lion's Head... Oct. 6 and 7
Listowel... Sept. 18 and 19
Lombardy... Sept. 13
Loring... Sept. 27
London (Western Fair)... Sept. 6-13
Lucknow... Sept. 25 and 26
Maberly... Sept. 25 and 26
Madoc... Oct. 7 and 8
Magnetawan... Sept. 24 and 25
Manitowaning... Sept. 25 and 26
Markdale... Oct. 7 and 8
Markham... Oct.
Marmora... Sept. 30
Massey... Oct. 1 and 2
Matheson... Sept. 23 and 24
Mattawa... Sept. 24 and 25
Maxville... Sept. 18 and 19
Maynooth... Sept. 25
McDonald's Corners... Sept. 26
McKellar... Sept. 18 and 19
Meaford... Sept. 25 and 26
Merlin... Sept. 22 and 23
Merrickville... Sept. 16 and 17
Metcalfe... Sept. 23 and 24
Middleville... Oct. 3
Midland... Sept. 29-Oct. 1
Mildmay... Sept. 15 and 16
Millbrook... Oct. 2 and 3
Milton... Oct. 7 and 8
Milverton... Sept. 25 and 26
Minden... Sept. 30
Mitchell... Sept. 23 and 24
Morrisburg... Aug. 12-14
Mount Brydges... Oct. 3
Mount Forest... Sept. 17 and 18
Muncey (United Indian)... Oct. 1
Murillo... Sept. 30 and Oct. 1
Napanee... Sept. 9 and 10
New Hamburg... Sept. 11 and 12
Newington... Sept. 23 and 24
New Liskeard... Sept. 11 and 12
Newmarket... Sept. 24-26
Niagara-on-the-Lake... Sept. 25 and 26
Noelville... Sept. 17
North Bay... Sept. 16 and 17
Norwich... Sept. 23 and 24
Norwood... Oct. 14 and 15
Oakville... Sept. 18-20
Odessa... Oct. 3
Oshwekin... Oct. 1-3
Onondaga... Sept. 29 and 30
Orangeville... Sept. 16 and 17
Orillia... Sept. 16 and 17
Oro... Sept. 19

Raymondale Holstein-Friesians

A herd sire of our breeding will improve your herd. We have sons of our present sire, Pontiac Korndyke of Het Loo (sire of \$12,750 Het Loo Pietertje) and also sons of our former sire, Avondale Pontiac Echo. Several of these are of serviceable age, and all are from good record dams. Quality considered, our prices are lower than anywhere else on the continent. These youngsters should not remain long. Write to-day.

RAYMONDALE FARM

Vaudreuil, Que.

D. RAYMOND, Owner

Queen's Hotel, Montreal.

Manor Farm Holstein-Friesians

If it's a herd sire you want, write me. I have sons of both my senior and junior sires, King Segis Pontiac Posch and King Korndyke Sadie Keyes. All from good record dams. Choice bull calves at present to offer—average for two nearest dams, up to 34.71 lbs. butter to seven days. Correspondence solicited. Visitors welcome.

GORDON S. GOODERHAM, Clarkson, Ont.

Stations: Clarkson and Oakville.

Farm on Toronto and Hamilton Highway

ORCHARD LEIGH HOLSTEINS

3 young bulls—5 months old—well marked—good individuals. Dam of No. 1. 29.20 lbs. butter in 7 days, 100 lbs. milk in one day. Dam of No. 2. 22.08 lbs. butter in 7 days. Sire's dam 34.98 lbs. butter in 7 days at 4 years old. Write for pedigrees or better come and see them and their dams.

JAS. G. CURRIE & SON

(Oxford County)

Ingersoll, Ont.

WE WILL NOT EXHIBIT at London or Ottawa this year. If you wish something to complete a show herd for either of these exhibitions we have it for sale.

Our new importation sailed from Bristol on June 25th. To make room for it we are offering special bargains in cows and young bulls.

B. H. BULL & SON, BRAMPTON, ONT.

Montrose Holstein - Friesian Farms

THE HOME OF 20,000-LB. COWS

Write us about our herd of 20,000-lb. R.O.P. producers. Every one is a choice individual—the breeding is choice, and they are rearing their offspring under choice, but normal, conditions. We have young bulls for sale. VISITORS WELCOME.

R. J. GRAHAM, Montrose House Farms - BELLEVILLE, ONTARIO

Hospital For Insane, Hamilton, Ontario

We have yearling grandson of King Segis Alcartra Spofford—a splendid individual. Also fine bulls of younger age, prices reasonable Apply to Superintendent.

29 Pounds Butter—103 Pounds Milk

This is the seven day butter record and the one day milk record of the dam of my last bull of serviceable age—an exceptional bred youngster and a choice individual. Also have a month old bull whose dam and sire's dam average 34.36 lbs. of butter in 7 days, 135.07 lbs. of butter in 30 days and 111 lbs. of milk in 1 day. If you want bulls of this breeding I can save you money.

D. B. TRACY

HAMILTON HOUSE HOLSTEINS OF QUALITY

Cobourg, Ontario.

Silver Stream Holsteins—Choice Bulls—We have six from 7 to 14 months old, sired by King Lyons Colantha, the records of his six nearest dams average 30.10 lbs. butter in 7 days, and by King Lyons Hengerveld, 5 nearest dams average 31.31, and from R.O.P. tested dams. Individually as good as their breeding. If interested, write for particulars and prices, or better come and see them.

JACOB MOGK & SON, R.R. 1, Tavistock, Ont.

Holstein Bulls

15 ready for service, 1 younger. From dams with 32.7 lbs. butter in 7 days to those priced for the most conservative buyer. Females also.

R. M. HOLTBY

R. R. NO. 4, PORT PERRY, ONT.

PIONEER FARM HOLSTEINS

My present sales' list includes only bull calves born after Jan. 1st, 1919. These are priced right. WALBURN RIVERS & SONS R.R. No. 2, Ingersoll, Ontario

A Bull Calf

born January 14th, sired by Hillcrest Rawwerd Vale and by the same dam as Lulu Pauline, the 23-lb. jr. 4 year old. A beauty. Will sell cheap for the next 30 days. W. FRED FALLIS, MILLBROOK, ONTARIO.

Cedar Dale Farm —The Home of \$15,000 Sire—Lakeview Johanna Lestrangle, the \$15,000 son of the 38.06-lb. Lakeview Lestrangle, is our present herd sire. We have young bulls sired by him and females bred to him—at right prices. Also have bulls of serviceable age by our former herd sire, Prince Segis Walker Korndyke, son of King Segis Walker. A. J. TAMBLYN, Cedar Dale Holstein Farms, one mile from C.N.R. Station, ORONO, ONT

RIVERSIDE HOLSTEINS—CHOICE BULLS

We have several 10 months old, from dams with official records up to 100 lbs. of milk per day and 32.32 lbs. of butter in 7 days. These are well marked and straight individuals. Inspection invited. J. W. Richardson, Caledonia, Ontario

I Have Holstein Bulls and Females at right prices. The bulls are from good record daughters of Louis Prilly Roubie Hartog, and sired by Baron Colantha Fayne, a son of Canada's first 33-lb. cow. The females are of much the same breeding. If you want Holsteins, get my prices. T. W. McQueen, Oxford County, Bell 'phone, Tillsonburg Ont.

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"Received your churn safely and gave it a fair test; I am perfectly delighted with it," writes one recent purchaser of a "Reliable" Churn—and there is a reason.

You get your butter the easiest, quickest and most profitable way, when you use

THE FAMOUS RELIABLE CHURN

Its clever mechanism gives that efficient perpendicular stroke, but with a high-g geared rotary drive, and it is easier to keep clean, too, just lift out the smooth, white, double glazed jar and rinse.

You can get a book which illustrates every part, gives you full information of hand drive (which can be operated by a child of six,) belt drive and electric drive Reliable Churns.

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We have bred over one-half the world's Jersey champions for large yearly production at the stall. We bred, and have in service, the two grand champion Berkshire boars. If you need a sire for improvement, write us for literature, description and prices.

HOOD FARM, Lowell, Mass.

Westside Ayrshire Herd

The first cheque for \$100 takes the month-old son of Lady May 2nd—42485—, a cow weighing over 1,300 lbs., with a record of 12,107 lbs. milk; his sire is St. Nicholas of Orkney—57087—, whose dam gave 11,140 lbs. milk as a 3-year-old. You can't afford to miss him for your next herd sire. Write:

DAVID A. ASHWORTH, Denfield, R. 2, Middlesex Co., Ont.

City View Ayrshires

Write or come and see. We have them milkers, heifers, and young bulls; all tracing to the best Canadian records. James Begg & Son, ST. Thomas, Ont.

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Choice Offerings in Ayrshires AT SPECIAL PRICES. Several young bulls of serviceable ages. All from R.O.P. sires and dams. Come and see them. JOHN A. MORRISON, Mount Elgin, Ontario.

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Table listing various locations and dates for public sales, including Orono, Orrville, Oshawa, Ottawa (Central), etc.

Important Public Sale FORTY-FIVE STRICTLY HIGH-PRODUCING R.O.P. Ayrshires The entire herd of WILSON McPHERSON & SONS, ST. ANNS, ONT., selling at their farm Wednesday, August 20th, 1919

BOYS AND GIRLS Have you got any spare time that you would like to turn into money? The Farmer's Advocate and Home Magazine

PROSPECT FARM JERSEYS The daughters of our senior herd sire, Brampton Bright Togo 5760, are just coming into milk, and they are a very promising bunch, with udders, teats and milk production away above the average.

Vertical advertisement on the right edge of the page, partially cut off, mentioning 'BOYS AND GIRLS' and 'Champion'.



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SHIRTS & GLOVES
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Summer Hill Stock Farm
Teeswater, Ontario

If you want a Breeding ram buy early. Forty head of Stud rams to select from, they are strictly first class. Ewes of same quality for sale. Write for prices.

Peter Arkell & Sons R.R. 1 Teeswater, Ont.

Shropshire Sheep—A choice lot of shearing ewes and rams, ewe and ram lambs from Campbell and Kellock foundation. Also aged ewes and rams. A few show flocks. C. H. SCOTT, Hampton P. O. (Oshawa, all railroads.) Long-distance 'phone.

BIG TYPE CHESTER WHITES
We are now offering Boars farrowed in March and April. Pigs of both sex ready to wean. Also a few bred sows.
John G. Annesser, Tilbury, Ontario.

Meadow Brook Yorkshires
Sows bred, others ready to breed. Six large litters ready to wean. All choicely bred and excellent type.
G. W. MINERS, R. R. No. 3, Exeter, Ont.

INVERGIE TAMWORTHS
Boars ready for service; young sows bred for fall farrow; extra fine lot of little stuff just ready to wean.
Leslie Hadden, Pefferlaw, Ont. R. R. No. 2

TAMWORTHS
Boars ready for service—a choice lot to select from; also young sows bred for spring farrow. Write:
JOHN W. TODD, R. R. No. 1, Corinth, Ont.

Sunnyside Chester Whites and Dorsets. In Chester whites both sexes, any age, bred from our champions. In Dorsets ram and ewe lambs by our Toronto and Ottawa champions, and out of Toronto, London and Guelph winners.
W. E. Wright & Son, Glanworth, Ont.

Lakeview Yorkshires
If you want a brood sow or a stock boar of the greatest strain of the breed (Cinderella), bred from prize-winners for generations back, write me.
JOHN DUCK - PORT CREDIT, ONT.

Prospect Hill Berkshires
Young stock, either sex, for sale, from our imported sows and boars; also some from our show herd, headed by our stock boar, Ringleader. Terms and prices right.
JOHN WEIR & SON - Paris, Ont. R. R. 1

Champion Duroc Jerseys—Herd headed by two champion boars: Campbell 46, 3931, Toronto and London champion, 1916, 1917; Brookwater Ontario Principal 9735 (imported), champion Toronto and London, 1918. Write, or come and see my herd. Satisfaction guaranteed.
CLBERT MALOTT, R.R. 3, Wheatley, Ont.

Some British Live Stock Shows.

We are well on with our agricultural shows in England and Ireland, and it only requires a little imagination to believe we were back to the old regime. Entries are not so big these days as they were, and the trend is to make our shows more practical and less ornamental. We have erred and strayed too long in "side shows" and brass bands, and such like, but now that we have to pay a tax on entertainments, such things are being cut out of our shows.

I will open the ball with Dublin Show, at which the Shorthorn made a fine display. The best senior bull was A. J. Marshall's Edgcote Hero, bought as a calf for 2,000 guineas, and quite worth it. He is of the Eliza family, and he won at Belfast ere he came on to Dublin. It is said that 7,000 guineas have been refused for him. The Hon. F. Wrench was second, with Albert Luxury. Two-year-old bulls were led by A. J. Marshall's Pellipar Ins, also first at Belfast, and in yearlings Marshall won once more with Lothian Marksman, a Perth winner, where he cost his owner 3,100 guineas. Lord Rosebery being his breeder. Second was G. Moore's Albert Bean, the best bull in the show, bred in Ireland. Edgcote Hero took the actual male championship, and Iris was his reserve. In senior yearling heifers, the Hon. Fred Wrench led with Collen Lavender, by the Goldie bull, Red Viscount. This short-legged heifer has rare quarters and width and a very level top line. She won the open female championship and the Irish title as well.

In Aberdeen-Angus, the cup for the best bull fell to Captain Greer's Legion of Curragh, and the same gentleman won in pairs of heifers and took the cup for the best trio. Among the Herefords, T. R. Dames-Longworth won the supreme championship with Gay Lad.

Hereford cattle were the chief feature of the Hereford and Worcester Show, held in Hereford, on June 12. In the group of three, Mrs. Medicott won with a trio of fine, level bulls, all by Eaton Gambler. Lord Cawley was second. The January and February yearling class was a very striking one, Harry Evans deserving premier honors with Happy Morn, a bull of tremendous length and greath growth. Lord Cawley's Berrington Boy was second, and F. Bibby's Clive Enterprise 2nd, third. In a nice March class Messrs. Weston's Bounds Improver, one of outstanding merit, was first. Mrs. Medicott's Bodenham Grove was second, and Messrs. Newman's President third. Two-year-old bulls attracted much attention, and, as was generally expected, Sir John Cotterell won with his magnificent Sovereign, for which he some time ago refused £10,000. Captain Hinckes had a good second in Mansell Rightful.

The quality seen out in the female classes was rather disappointing, judged by the present-day standard of cows and the requirements of buyers. F. Bibby won the yearling heifer class with Clive Succour, who is, however, full of quality. Craig Tanner was first in the two-year-old class with Sunbeam 2nd. For three heifers shown in breeding condition, with calves, John Tudge was first, and for three cows exhibited under similar conditions Kenneth Milnes was first. Captain Hinckes showed the only steer. The championship of the section and the Salvey Cup went to Sovereign, and his reserve was Happy Morn.

Edward Smith won the Shorthorn championship with Dandy Clipper, shown for the first time. Mr. Smith bought him twelve months ago last February. He is now sold for Chili at £2,000. Mr. Bibby and Craig Tanner led in Shropshire sheep, and Mrs. Herbert and F. T. Gough in Ryeland sheep, while J. Hamar, Earl Powis and Captain Murray won in Kerry Hill sheep.

At Northampton Shire Show, H. Atherton Brown, W. G. Millar and R. L. Moud did best in Milking Shorthorns, and Lord Penrhyn in Angus.

The Prince of Wales won a number of prizes at the Royal Cornwall Show with Shorthorns and Devon cattle. His best exhibit was Christian King, a son of Butterfly Knight, going back to King Christian of Denmark on his dam's side.
ALBION.

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To raise hogs from birth to finished pork in the least possible time at the least possible expense, this is the aim of the farmer who would make the most money from his hogs.

Bran and shorts are expensive feeds, they contain too great a percentage of hulls and other fibre.

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STAMINAX Milk Hog Feed

It is guaranteed to contain Canadian Peas, No. 1 Argentine Maize, No. 2 American Corn, Fine Thirds, fifteen per cent. Powdered Milk, and an imported high protein food that is superior to tankage.

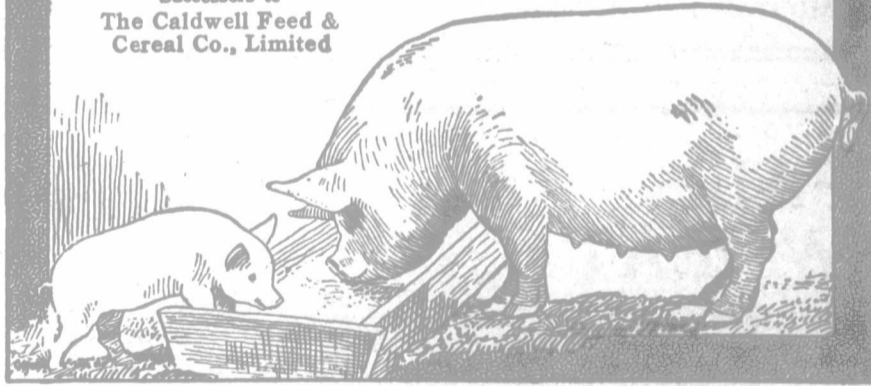
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Present offering is between ninety and a hundred shearing and two shear rams. Flock headers a specialty. Also a number of shearing and two shear ewes of the best breeding, and ram and ewe lambs. All registered. Prices reasonable. **HENRY ARKELL & SON, 70 Beatty Ave., Toronto, Can**

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—We have one of the strongest selections of young sows and boars we ever had in the herd. Write us also regarding your next herd sire. We have them from great milking dams—all good families.
J. E. BRETHOUR & NEPHEWS, Burford, Ontario

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



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The DE LAVAL Cream Separator is remarkably simple. Thousands of DE LAVALS are run and cleaned by children every day.

This simplicity means long life and freedom from repairs, and is the outcome of

over forty years of unquestioned leadership in cream separator inventing, developing and perfecting.

Every part has been developed to its highest degree of simplicity coupled with efficiency, and the DE LAVAL has earned for itself the name of being "the world's standard separator."

More DE LAVALS are in use than of all other makes combined.

See the local De Laval agent, or, if you don't know him, write to the nearest De Laval office as below.

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can be your most profitable crop—just add the "life-blood" of good fertilizing when seeding.



"Making two blades grow where only one grew before."

How would you like another 20 bus. per acre?

Go after big yields. That's what your successful neighbor is doing. Thirty-bushel wheat means that each hour of man power employed yields 1 3/4 bushels of wheat. It costs no more to handle a fat crop than a lean one.

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Seed down your Fall Wheat with "SHUR-GAIN" Fertilizer. There's the key to success. Strengthen the growth against winter killing and the Hessian fly. "SHUR-GAIN" has a record of 40 years of success. Compounded by experts who KNOW what Ontario farms need.

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Our School Department.

Table Talk.

If, at table, you should cough
Till your head comes almost off,
I have sometimes heard it said,
You might turn away your head
Without being thought ill-bred.

"Please" is not considered rude
When you pass your plate for food,
And it very seldom ranks
With the most ill-mannered pranks
If you take it back with "Thanks."

You are not compelled to take
Over half the jelly-cake,
And because the pie's refused
Do not fear to be abused;
Force is very seldom used.

Should your father or your mother
Venture to address each other,
Though you feel you might complain
It will not be thought profane
If you manage to refrain.

If you've work or play to do,
You might leave when you are through.
But "Excuse me," when one rises
Seldom shocks or scandalizes
Or occasions pained surprises.

Manners are of no avail
To keep any one in jail.
True politeness, calm and quiet,
Very rarely causes riot.
If you doubt me, children, try it.
EDMUND VANCE COOK.

The Romance of Work.

Do you boys and girls know anything about the ancient guilds which at one time controlled the various crafts and industries? They flourished in what was a comparatively enlightened and progressive day, and some of their ideas are well worth copying in our modern world. One of their wise provisions was that a youth, having completed his time as apprentice, should spend a year wandering from one master to another before settling to steady work at his craft. The object of this "wander year" was to broaden his knowledge, by giving him a wider contact with life, and to impress upon him the dignity of his craft.

Of all industry, agriculture has changed least in its essentials during the ages of progress, though there have been tremendous changes in farm processes, especially since the invention of modern machinery. Away back in the dim ages of history women began to cultivate grains that had previously grown wild, and while the men were away hunting and fighting, the women gradually established tiny fields, where very primitive culture gave some little help and improvement to the quality and quantity of the harvest. Then gradually as they became more domesticated, they depended less on hunting and fishing, and more on the field of grain, until finally, the men began to take an interest in this tamer way of getting food—and both men and women worked with their primitive plows.

Agriculture is a basis industry because it provides the world with food, and there would be very few people left to tell the tale if the farming industry stopped for one year. Farming has a very especial appeal to very many people, because in this work we are dealing directly with the forces of Nature. And we have a sort of inherited instinct for work on the soil because it was the first, and for a long time the almost universal employment of our ancestors.

We have no idea how long or how short a time it was from the tilling of the first field, until mankind began to domesticate animals for his use and service, and to confine his interests largely to the fields and flocks of his homestead. But at any rate the time came when some industrious ancestor of ours found that he could raise more food in a year than he needed for the support of his family. He had a fund in reserve, and that was the beginning of wealth. Then he began to trade his surplus grains for the surplus animals of a neighbor and so barter and trade commenced. In the beginning each family supplied all its own needs, but when wealth began to accumulate and almost every family had some little surplus

every year, they began to look for ways to spend it in increasing their comfort—just as we do to-day. Perhaps there was one man who had great skill in the hunting of wild game, and the rest said to him, "You go off and hunt the delicious wild game and bring us meat, and we will till your field or else share our grain with you." And so there was the beginning of the great meat industry which to-day has thousands of men employed in butcher shops and packing plants and abattoirs.

Then when the hunter brought in his spoils and they took the skins to fashion their rude clothes and their tents, they discovered that some men and women had greater skill in creating comfortable garments and they bargained with them to do this part of the work, promising to pay them with a fair share of the meat and grain as well as allowing them to keep their share of the clothes. So began the race of tanners and leather workers, and of tailors and all garment workers.

When the season's sewing was done, the leather workers noticed that there were pieces left over, and one day one of them had a brilliant idea. He went off by himself and studied his foot for a long time, then he took his primitive cutting weapon, perhaps a sharpened flint, and cut and fitted the leather and bound it about his foot, tying it with thongs. Then he came back and walked with great pride before his fellows, displaying this fine artificial protection for his feet. Now, even if you go barefoot all your life, you will still feel the prick of some sharp stones and thorns, and a covering and protection will seem very desirable. So thought these ancestors of ours, and immediately there was a great rush for this new fashion, and several leather workers started in to make the first shoes.

Well, time went on and mankind became more and more civilized, and his fields produced more and more grain, and his flocks and herds multiplied. And with his wealth grew his desires for comfort and even for luxury, so that in time he was sharing his products with many other men in return for rich clothes to replace his simple garment of fur or hide; for houses of stone and wood to replace his cave or tent; for pottery vessels in which to cook his food and serve it; and for many other things that to-day seem almost as necessary to us as food. In time the metal and wood workers gave to the farmer implements to help in tilling his fields and harvesting his crop, and that released still more workers who could devote their time to supplying him with still more comforts and luxuries, so that industries continued to increase, and the race became more and more civilized and progressive.

Many wise people tell us that one of the things that is very wrong with the world to-day is that we have carried this process too far. There are too many people producing what we might call secondary essentials and even luxurious non-essentials in proportion to those producing the real essentials which are food, fuel and raw materials for clothes and shelter.

It would be a splendid education for boys and girls if they could have a wander-year in which to see something of all the processes that go on year in and year out to provide them with food and comfort. The boys and girls in cities especially need a glimpse of farm life, which gives to them the first actual necessities of life, and the farm boys and girls would find untold interest if they could see something of the factories and shops where other people work to provide the things we think almost as necessary as food; clothes and shoes, and furniture and books and lots of other things. Such an education would give us all a new sense of the dignity of our own work, as well as of the work of others, and we would realize how each kind of worker depends on all the other workers for some things that he could not do without. For you know, of course, that though we use money and cheques and other means of exchange for the sake of convenience, the real basis is still the production of actual wealth in the form of food or mineral, or silk or cotton or linen or some form of raw material from which to fashion the elements of our modern life.



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There are five sizes, all of the knife and blower on flywheel type, one of which will do your work at little cost. Every International cutter can be depended upon for satisfactory work—every one is backed by a service that keeps it going throughout the filling season. To be sure of economy and satisfaction in your silo filling this year get in touch with a nearby International agent or write us for catalogues.

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On account of the continuous growth of City Dairy our present requirements call for

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Your roll developed 10 cents. Prints 3 cents up. Enlargements any size. Highest workmanship. Postage Paid.
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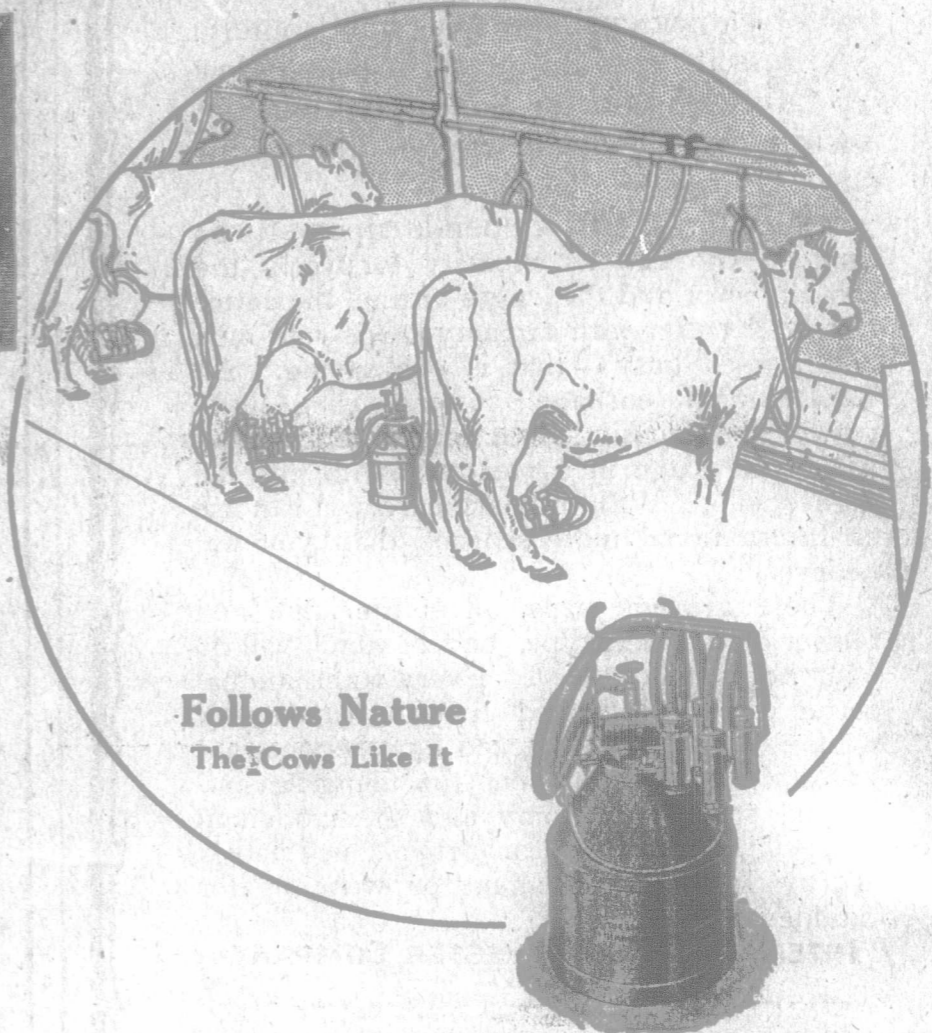
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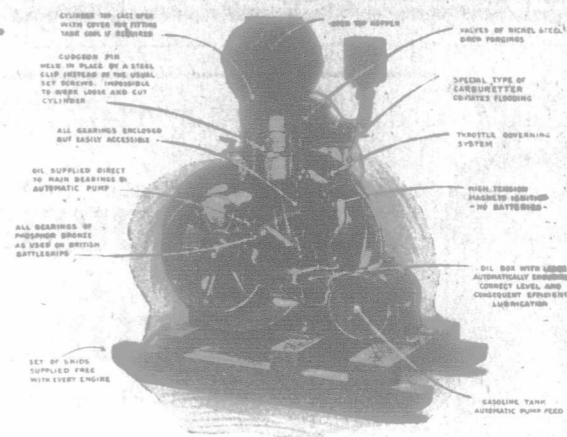
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