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THE FARMER'S ADVOCATE

AND HOME MAGAZINE

* AGRICULTURE, STOCK, DAIRY, POULTRY, HORTICULTURE, VETERINARY, HOME CIRCLE.*

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LONDON, ONTARIO, SEPTEMBER 4, 1919.

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"More Bread and Better Bread"



The best only is good enough
for those who farm.

PURITY FLOUR

WILL SILO FILLING TIME FIND YOU READY?

SILO FILLING time will soon be here—and the Canadian Farmer is depending upon the corn crop this year as never before. It is your duty, and it will mean more money in your pocket, to use every effort, to get ALL the FEEDING VALUE out of every stalk of corn.

The most important thing is to silo your corn crop when it possesses the GREATEST FOOD VALUE. If you get a Gilson Silo Filler EARLY—before we are sold out—you will fill your own silo. This means that you will silo your own corn when it is just right for silage. Be independent of the cutter gang. You do not need big power to operate the "Gilson." Your own farm engine—4 h.p. or larger—will do the work.

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Your small engine will run it

It is as much a part of your Farm Equipment as your Binder or Plow.

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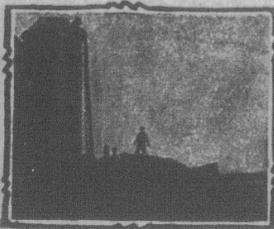
Makers of the Genuine and Only GILSON The Lightest Running Blower Cutter made

389 YORK STREET

GUELPH ONTARIO



"My silo is 40' high," writes Frank Bolton, Guelph, Ont. "but my 8 h.p. engine which I purchased from you nine years ago operates my 13' ensilage cutter splendidly, sending corn over the top in a steady stream. This outfit is the admiration of all who see it."



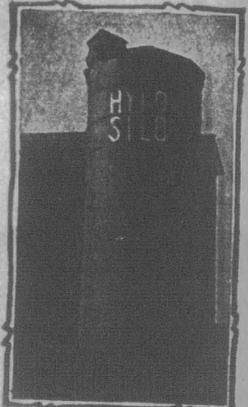
John H. Murray, Sea View Farm, Cap La Ronde, C.B. N.S., writes: "Enclosed find picture of my 10' Gilson Silo Filler, 6 h.p. Gilson Engine and 30' Gilson Hilo Silo. I filled my silo with oats, peas and vetch, and it is coming out fine and not a bit spoiled. My outfit does splendid work and I am very well pleased with it."



Fred Huether's farm showing his 8 h.p. Gilson Engine and 13' Gilson ensilage cutter filling his 30' Gilson Hilo Silo.



Jacob N. Halst, Ridgeville, Ont., writes: "The enclosed picture shows our 13' Silo Filler and 13 h.p. Gilson Engine hard at work filling our silo. This outfit works beautifully and is as much a part of every farm as a binder or mower."



M. I. Adolph, of Gowansville, Ont., declares that his silo filling outfit "is a source of real satisfaction and profit. I would not want to be without my 10' Gilson Silo Filler, 8 h.p. Gilson Engine and 12x50' Gilson Hilo Silo. I have used it for three seasons, and have had practically no trouble—it was always ready when wanted."

38

Ace High!

THE Dixie "Ace" Tractor has so many exclusive features that its superiority is unquestioned. It is the "Ace of Aces,"—acknowledged by everyone as setting an entirely new standard in tractor design and construction. The Dixie "Ace" leads,—others follow. You do not buy a tractor everyday—you cannot afford to do anything until you learn all about the Dixie "Ace."—A better Tractor at a better price!



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12-horsepower on the draw-bar. On the belt pulley 20-horsepower. Works 365 days in the year.

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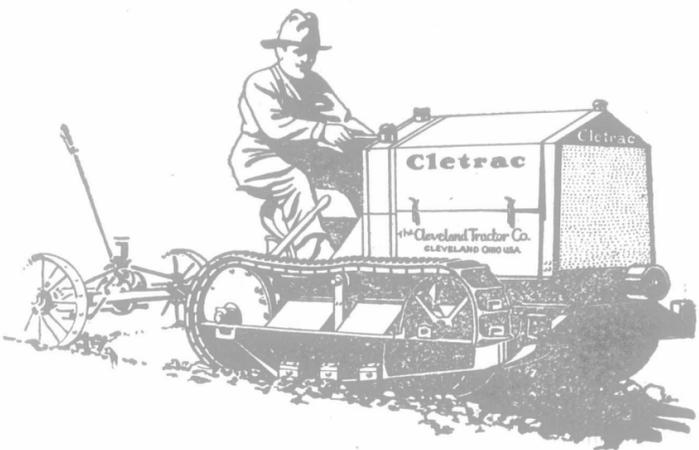
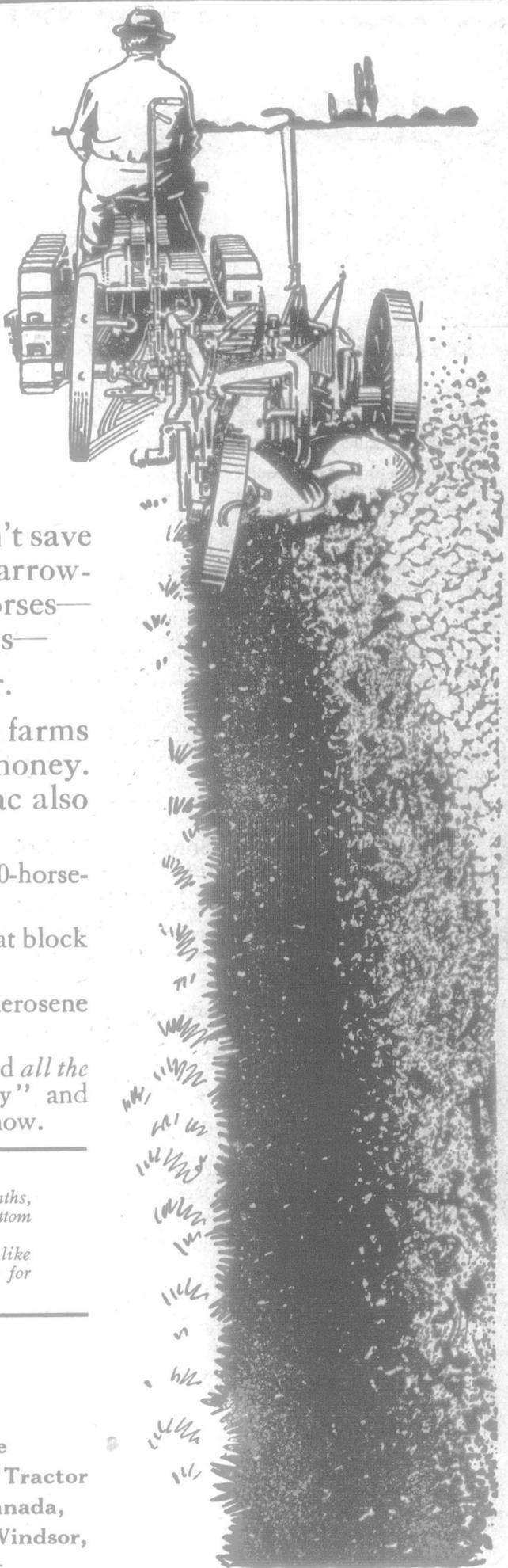
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want to be without
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line and 12x50" GH
Silo. I have used it
several seasons, and have
really no trouble—it
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FISH BRAND
LONG COATS
Get Out of Rain.
Reflex Long Coats

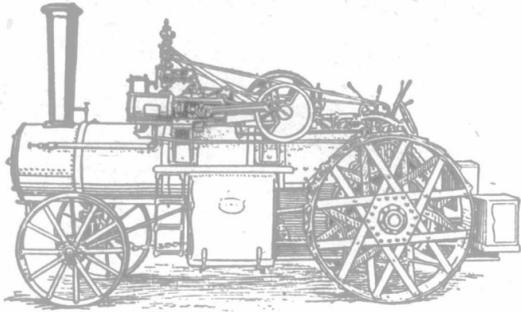


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5 to 12 h.p. Engines and the
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dug this ditch—it is digging ditches for hundreds of farmers, who have found the value of C. X. L. on the farm. Whether you want to drain or irrigate—whether your field is upland or swamp—the C. X. L. way is the most practical.

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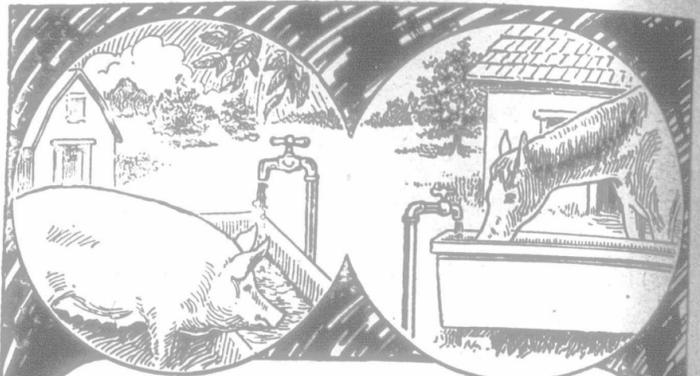
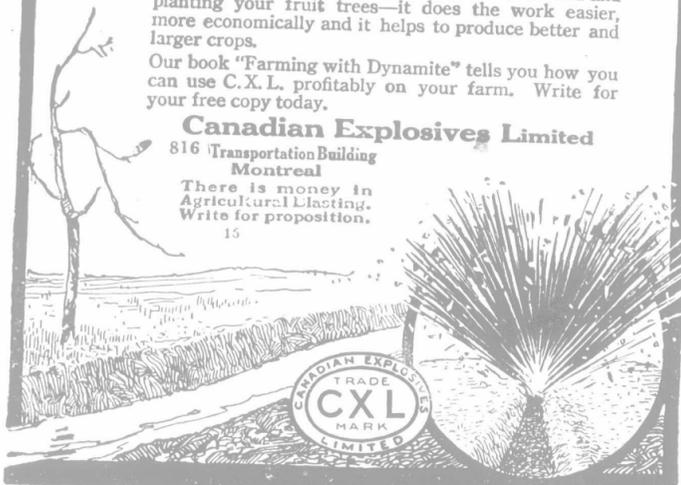
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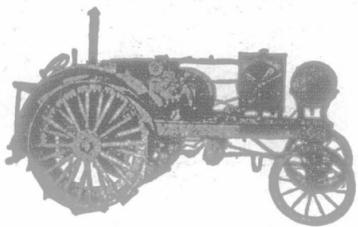
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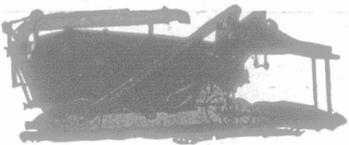
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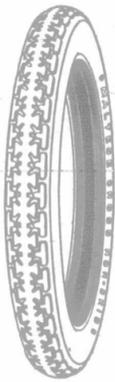
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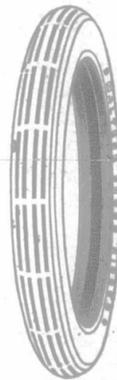
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The Farmer's Advocate and Home Magazine

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LONDON, ONTARIO, SEPTEMBER 4, 1919.

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EDITORIAL.

A summer or fall foal often works in well on the farm. It is not too late to breed for either.

The best time to prepare for a crop is the season previous. Keep the plow and harrows going.

Weeds have gained ground in this province during the war—fight them with after-harvest tillage.

The get of sire, produce of dam and breeder's calf herds are very significant features of a live-stock show.

It is no disgrace to be beaten by a better exhibit than your own, and a "good loser" usually wins out eventually.

Victory loan bonds purchased in 1919 will be good property, and each one will help to keep conditions healthy in Canada.

At present there seems to be more money in making and selling shoes than in farming, but the business could not accommodate us all.

Were we asked for an expression of opinion we would suggest putting a barb-wire fence around the Balkan States and let them "go to it."

The next best thing to seeing a fair is reading a good report of the same. Events staged during the first week of the Canadian National are described in this issue.

Any clover fields that promise even a fair crop of seed should be zealously guarded and harvested. Clover seed will be a scarce and valuable commodity next spring.

One can do more than vote these days. It is possible to have some say in whose name shall appear on the ballot; and right here an interested citizen can exert a beneficial influence.

Do you carry ample fire insurance on the buildings and contents. It is a great mistake not to have some means at hand for fighting fire and insurance to cover loss should such occur.

Where it is necessary to postpone the fall wheat seeding on account of Hessian fly, prepare the seed-bed extra well and give it ample fertilization. A good start in the autumn is essential.

If farmers took the wages of ordinary good mechanics and paid family help on the same basis, the industry would be bankrupt so far as accurate bookkeeping could reveal the true status of agriculture in this country.

Good plowing is the starting point of good farming. Get the young men interested in the local plowing matches, and help to maintain the traditions of their forebears in regard to the straight, well-turned furrow. There is more than sentiment in it.

The Prince's experience on the western front, where he became accustomed to the incessant roar of the "big guns," no doubt equipped him for a similar ordeal in Canada. If he stands up under the strain of addresses of welcome and declarations of loyalty from Halifax to Victoria, he will prove himself a worthy son of a noble family.

The Provincial Political Arena.

No little discussion nowadays centres round the steps being taken by farmers to secure proper representation in the Provincial Legislature. An election is impending, and, as never before, farmers are determined that the personnel of the next Legislature shall include a reasonable number of men whose sympathies with and knowledge of agriculture fit them to represent rural ridings. There is a healthy disregard for party and a commendable desire for sane, equitable legislation now existing throughout the country. This earnest and determined, though somewhat belated, effort is already producing favorable results for there seems to be a tardy willingness on the part of both parties to set up a farmer candidate in those constituencies where the rural vote predominates. In fact, there are likely to be several ridings where both party candidates are bona-fide farmers. There will be instances, too, where the U. F. O.'s choice will throw his hat into the ring and make a three-cornered contest with a farmer candidate at each corner of the triangle. We have no desire to throw cold water on this movement to get proper and fair representation for agriculture in either the Dominion or Provincial House, for "The Farmer's Advocate" has preached this doctrine nigh on to half a century, but three farmers striving for election in one constituency appears to us as somewhat unnecessary. Where the party machines permit two farmers to contest a riding one must be elected, and U. F. O. members could mark their ballots for the best man without any misgivings that their judgment was being influenced by partizanship. We still have sufficient confidence in human nature and farmers generally to expect a bona-fide farmer elected to the Legislature by his own people to do the right thing, if given a chance, regardless of what party, or organization put him there. The trouble in the past has been that agriculture was represented by so few farmers that they had about as much chance as the proverbial snowball of accomplishing anything substantial for the industry.

There is more than a possibility of the U. F. O. and the farmer's cause generally being injured by nominating candidates in too many constituencies. All of the nominees known to us personally are worthy of the honor and confidence imposed on them, but that is not the point; some ridings may be difficult to carry and it will not be possible for the central organization to supply the proper type of speakers and organizers if the field is too large. We understand that the U. F. O. is desirous of electing only sufficient men to exert a beneficial influence on legislation by supporting the party in power when that party's policy coincides with what is considered sane and just. If this be true, it would appear like good judgment not to reveal the full strength of the organization at first, but to make the election of a reasonable number of candidates sure, and not subject the doubtful ridings to a test. Moreover, there is a probability of several farmers being elected on a straight party ticket which is satisfactory progress towards the kind of representation for which farmers have been striving. Until the U. F. O. is prepared to assume full responsibility of Government should they find themselves in majority and so long as they are willing to support, where deemed advisable, the party which must assume the responsibility, we can see no reason why a bona-fide farmer, even if elected on a party ticket, should not prove a satisfactory representative. The primary object, as we understand it, is to have agriculture properly and adequately represented in Dominion and Provincial Houses by able, progressive, broad-minded, loyal farmers. Whether such men are members of the U. F. O. or not it matters little to the industry so long as they do their duty by agriculture and the country at large. We sound this note of caution in order that an honest effort to obtain proper and fair representation may not be

carried too far without consolidating the ground gained. It is always well to have ample reserves, which, combined with successful elections in the ridings contested will surely lead to beneficial results and bring the goal within the range of vision.

Help the Soldier Settler.

The Soldier Settlement Scheme is not understood any too well in Canada, although it is making rapid headway and thousands of men are being placed on land and assisted to a start. Some way or other the feeling exists in the minds of not a few that the Government is paying the shot and that it is only good business to get every cent possible for land upon which the soldier settler is to launch out on an enterprise which can guarantee nothing but failure if over-capitalized. Only recently a man endeavored to list a parcel of land at \$200 per acre, which we know for a certainty could have been bought privately at \$125 per acre, and even the latter price was more than experienced farmers, would pay. The feeling, no doubt, was entertained that the Government was doing the paying, so why not appropriate a very modest portion of the public funds. As a matter of fact, the soldier settler must pay for his farm, live stock and equipment; the Government is only the mortgagee. The Government lends the money but if the soldier farmer cannot meet his interest charges, annual payment on principal, and other obligations, he fails the same as any other farmer fails, and is obliged to begin over again. If anyone is entitled to purchase land or farms at rock-bottom prices it is the soldier settler, and he deserves every assistance that his neighbor farmers are in a position to render. It is easy to criticize a new-comer to any district because he is unacquainted with local conditions and ignorant, perhaps, of the customs peculiar to the neighborhood. Lend a hand; if advice is asked for, give it; and see that the community does its part in adopting and aiding the soldier settler.

Another Victory Loan.

The mention of another Victory Loan has come as a surprise, no doubt, to some who, secure in the sense that war is over, have failed to count the cost, although a few months ago another loan was forecasted in several of our parliamentary reports. Practically every belligerent country, except United States, is faced with the gigantic problem of liquidating the indebtedness created by the war, and the end is not yet. War gratuities to discharged men, pensions, and treatment for the lame, the blind and the nerve-shattered heroes who paid a tremendous price for victory have and will cost a considerable sum of money, but who is there who would legrudge the most that we can do for them? Besides providing for reconstruction projects, such as are being demanded by agriculture and other industries, the loan is necessary to maintain the stability of the Dominion's finances, for unless Canada is firmly solvent business will short-circuit and there will be stagnation in all lines. Those who hold large blocks of the last tax-free Victory Loan are duty-bound and should be obliged to take a proportionate amount of the forthcoming flotation. However, farmer and manufacturer, laborer and financier, are alike interested in the success of the 1919 loan, for if it be allowed to fail the consequences will be felt by all. Apart altogether from the question of patriotism or loyalty, which still command the consideration of all, there is an appeal in this loan from the standpoint of business, which no citizen can rightfully ignore. Therefore, all are duty-bound to give the loan moral as well as financial support. As an investment it will, no doubt, prove reasonably attractive on account of the fair interest rate, no trouble about collections, and good security.

The Farmer's Advocate

AND HOME MAGAZINE.

THE LEADING AGRICULTURAL JOURNAL IN THE DOMINION.

Published weekly by
THE WILLIAM WELD COMPANY (Limited).

JOHN WELD, Manager.

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

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A Warning to us as Well as Britain.

Lloyd George recently told the British people that unless they spent less and produced more the nation would become bankrupt. "We must bridge that chasm," he said, "or at the bottom of it is ruin. We are building a temporary bridge by borrowing, not only State borrowing, but traders borrowing for raw material, food, and so forth. That will only add to the catastrophe. In every direction we are spending more. We are earning less. We are consuming more and producing less. These are facts. It cannot last."

How real is this message even to Canadian ears! We have not yet realized that it is the "morning after," and must sober up from our war-time carousal of extravagance. Everyone is still spending freely on useless commodities, and when there is any objection to, high prices it is usually the downright necessities that appear to cost too much.

Thirty thousand more miners now than in 1914 are turning out 87,000,000 fewer tons of coal in a year in Britain. The claim that production can be maintained with shorter hours is falling to the ground. That is something we should take to heart in Canada. Farmers have not been misled by these wild claims, but industry and labor will realize in earnest, sooner or later, that reasonable hours are necessary in order to turn out volume of product at a reasonable price. We, too, must work more and spend less.

It is time that the citizens of Canada individually did some real thinking on public matters, and particularly on the financial position of our country. Even a superficial glance will show that our financial position is anything but satisfactory. We have a staggering debt that must again be increased before war expenditures are a thing of the past. Our public utilities are not all revenue bearing, far from it, and to make them profitable will require the expenditure of more money.

We need more demands for national economy, and fewer for reckless expenditures if we are to weather the times still ahead without hardship.

The Cause of Failures.

BY ALLAN MCDIARMID.

I have heard it said that there are smaller number of failures, in a commercial way, among farmers than in any other line of business in the country, taken, of course in proportion to the amount of money invested in these various branches.

The statement is probably true, for we know that the farm is supporting a lot of men that would almost certainly make a failure of any other line where they would have to meet the competition of men who had been especially trained for their particular work. The farm will take a man who has in no way been educated for the job, apart from what little he may have picked up from observation of the ways and methods of some man he may have worked for, and provide a fairly good living for him, and for his family besides, probably. This can't be said of many of the trades and professions and commercial undertakings of the city. With all the training that our city men get it is said that ninety-five per cent. of them meet failure at some time in their career.

I have no figures at hand regarding the percentage of failures among farmers but from what I have been able to observe I would think that not more, perhaps, than five per cent of them had been compelled to give up entirely and go to something else.

At the same time there are a considerable number of what we might call "near failures" and these deserve some attention from those who are interested particularly in the life of the "man on the land." The lack of success on the part of certain individuals has a reason behind it and it should be worth while finding out what this reason is and putting ourselves in a position to prescribe a remedy for a state of affairs that shouldn't exist in such a country of opportunity as Canada is supposed to be.

There isn't much doubt that the real cause of the lack of success on the part of certain farmers is just plain laziness. And there is such a thing as mental laziness as well as physical. The man who will not make the effort to think out the best way of doing his work or plan a system whereby he can get the greatest possible results with the least labor is just as lazy as the man who sits smoking his pipe, with his feet on the kitchen table, while his wife carries in the wood and water. In fact, his position is worse in some respects. The man who will not work with his hands, if he thinks to good purpose, can manage it so that his living is provided for him by the labor of others. But the farmer who will not take the trouble to use what brains he has been endowed with, in connection with his effort after results, will never accomplish anything worth while, no matter how good use he may make of his muscle.

At the same time the average farmer must expect to do a good share of plain hard work, in the ordinary sense of the term. A certain man I can recall put himself out of the business more quickly by not realizing this than by any other method he could have taken, apart from that mentioned above. He would sit on the door-step and send the dog to drive the cows out of the grain; not even taking the trouble to fix the broken fence so that the thing might not happen again. Eight o'clock in the morning often saw him still in bed and, on the whole, he had a pretty easy life of it. But it couldn't last. Not on the farm. A foreman is directing his efforts now. A little outside help of this kind seems necessary to men who lack the energy and ambition that keeps the other fellow on the job.

Another thing that leads to failure on the farm, or brings the owner uncomfortably near it, is a lack of system. Where there is a sort of routine, or order, in the doing of the work it is usually done in the shortest possible time and in the best possible way. It's far ahead of the idea so many have, which seems to be to get the work done "any old way" so long as it is done.

Here is where the farmer's executive ability should come in. Provided he has such a thing. Some men I have known were strong on theory but when it came to putting their theories into practice they were busy on another idea. They also finally got into the ranks of the failures.

There is a possibility that a farmer might run on the rocks through his being unable, or unwilling, to keep track of his business by means of some system of accounting. But so many farmers do not keep books and at the same time continue to make an apparent success of their business, that one can hardly speak of it as one of the absolutely no school education who bought farms and paid for them and then bought farms for their sons and still had money left in the bank when they died. Book-keeping as we know it was something they had never heard of, so apparently there are other qualifications that compensate for a lack in this respect. But I believe in keeping a set of account books. Doing the other thing is taking a lot of chances and not many of us can afford to do that.

Another way of going off the job and settling with ones' creditors for twenty cents on the dollar is to start in with too small a capital, or rather, to get too deeply in debt when buying a farm. If it takes all a man can make, over running expenses, to pay the interest on the mortgage, he might just as well be a slave, as the negroes used to be years ago in the cotton fields of the South. The fruit of all his labor will go to the money-lender and in the end he leaves a mortgaged farm to his children. Progress is the aim and purpose of life and the one thing that makes it tolerable, so it seems foolish to carry a load of interest that prevents one from doing more than "marking time."

Just recently I read what a certain well-known man said was one of the great qualifications for success in any business-man. He said, "to be able to decide quickly and be right fifty-one per cent of the time, is the best insurance against failure."

This should apply to the farmer as well as to any other business man, as he certainly has his share of decisions to make if any one has. And if he can decide right just a little better than half the time he's bound to get to the top of the pile in the end, if he is allowed to live. Anyway, it's not setting such a high standard for us but that we may all hope to reach it and in that it has a good deal to recommend it.

Nature's Diary.

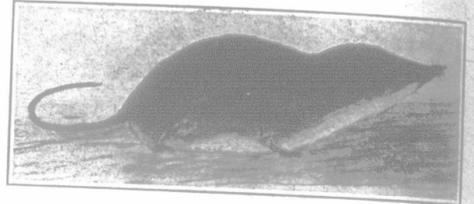
A. B. KLUGH, M. A.

A little mammal which is seen more frequently at this time of year, when the grain-fields have been converted into stubble-fields, than at any other season is the Jumping-mouse, *Zapus hudsonius*.

This species is about eight inches long, the tail being from four and a half to five and a half inches in length, thus exceeding the length of the head and body together. It has very long hind legs and is light yellowish fawn in color.

This species inhabits thickets and the borders of woods, and is not found either in the deep forests or in the open fields. It lives in short burrows, which are shallow in summer and deeper in winter.

The young which number from three to six, are born in the burrow in a globular nest, composed of fine grass, with an entrance at one side.



The Common Shrew.

When alarmed the Jumping-mouse fully vindicates its name, as it makes most remarkably long leaps of from eight to ten feet, thus jumping a distance equal to thirty times the length of its body. This great leaping ability of this species is more fully realized when we consider that if a Deer make correspondingly long jumps it would clear sixty yards at a single bound.

In its immense leaps the long tail is of great service in keeping it right side up and head end foremost, and observations upon one of these animals which had had the misfortune to lose the greater part of its tail showed that while it could still leap just as far as a normal individual it usually turned end for end in the air, so that it alighted facing the enemy from which it was fleeing, instead of facing away from the enemy and ready instantaneous for another bound. The jumps of this species are rarely made in a straight line but succeeding leaps are usually at an angle to one another, and this zig-zag course undoubtedly makes it far harder to catch than it would be if it bounded in a straight line.

The jumping-mouse feeds on the seeds of herbaceous plants, eating those of many weeds, such as pig-weed, rag-weed, and burr-marigold, also on beechnuts, and acorns, and on various leaves, buds and berries. It eats very little grain, and consequently, since it destroys weed-seed, it cannot be regarded as a species injurious to the interests of the farmer. It stores quantities of seeds in its burrow.

This species hibernates in a deep burrow which it has prepared, usually under a stump or the root of a tree, retiring about the end of September. It may, in severe winters remain in its burrow until spring, but mild weather, even in mid-winter, will cause it to appear above ground for a time, and then its far-spaced tracks, and the marks of the long tail, may sometimes be seen in the snow.

The range of the Jumping-mouse is from the Maritime Provinces to Manitoba, and north-westward to Alaska, and in the west it is replaced by several closely-allied species.

In the forests of eastern Canada another species, the Woodland Jumping-mouse, *Zapus insignis*, which is larger, being 10 inches long, and which has a white tip to the tail, occurs.

There is another little mammal which is very common, partly in the woods, yet is rarely seen—the Common Shrew, *Sorex personatus*. The Shrews, when they are seen, which is usually when one is picked up dead, are usually taken for some kind of mice, but they resemble mice only superficially, and even externally differ from mice in having very long, pointed, muzzles. In the structure of the teeth and in food habits they differ radically from mice. Instead of having long incisors and no canines, as is the case with mice and all other rodents, they have small incisors and well-developed canine teeth. Instead of feeding mainly on vegetable substances and only varying this diet occasionally with such meat as they run across, as is the habit with mice, the shrews are exclusively carnivorous, and feed mainly, in fact almost exclusively, on insects.

The Common Shrew is both nocturnal and diurnal. In the daytime they may be seen in the woods if the observer remains perfectly quiet for a considerable length of time. They dart from the cover of one dead leaf to another, appearing and disappearing like little brown flashes, all the time uttering their faint, very high-pitched, squeak.

None of the Shrews are large animals and the Pigmy Shrew, which occurs in eastern Canada, but is apparently not common anywhere, is only three and a quarter inches in length and is the smallest mammal of North America.

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Last w as the rest article th received a Cardiff. last week, was repres of optimis be seen o and confir Clydesdale of the Cly the show notice.

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THE HORSE.

Some Plain Words For Clydesdale Exhibitors.

In the "Scottish Farmer" of which Archibald Mac-Neillage, is manager and Editor, we find the following editorial and its contents should be interesting to all breeders and exhibitors of Clydesdales:

Last week we urged a commendable spirit of optimism as the result of a review of the Clydesdale situation. The article then published was written under the impulse received at the Royal Agricultural Society's show at Cardiff. We assume that a perusal of our issue of last week, alike in respect of what was written and what was represented, will have communicated the same spirit of optimism to our readers. A study of the horses to be seen on the streets of Glasgow will go far to deepen and confirm that impression. The records of the past in Clydesdale history proclaim abundantly the pre-eminence of the Clydesdale; depression is only engendered when the show-yard and its foibles are pressed upon our notice.

One good feature of the five past terrible years was the comparative immunity which the country enjoyed from the show-yard mania. Agricultural shows have rendered great service by stimulating zeal for breed improvement, but show-yard fancy has more than once imperilled the commercial value of breeds. The Ayrshire as a dairy cow would have been extinct had show-yard fancy been allowed to prevail. Happily the great body of breeders and users of Ayrshire cattle paid no attention to show-yard fancy; they bred and bought and sold Ayrshire cattle for the production of milk, and in the end of the day defeated the strenuous efforts of the fancy and their ring of "judges" to destroy the Ayrshire as a dairy asset. For some years past the Clydesdale breed has been menaced in a similar fashion. The methods of some leading fanciers have been heretofore directed towards destroying the essential characteristics of the Clydesdale as a draft horse. Fancy points, of no consequence at all in every-day commercial life, have been exalted to first place; the solid, well-ribbed thick horse, because he lacked the fancy points, has too often been kept in the background, while wasp-waisted, "tall," cow-hocked abortions have been highly honored. Because of these absurdities men have cause to be depressed.

A patent absurdity is what is called the "spat," This valuable property, without which merit cannot, by some "judges," be found in splendid cart horses, is cultivated by some men at all costs. Because of the lack of it the splendid draft stallion Moncreiffe Marquis (9953) was during almost the whole of his show-yard career, kept in the background, while glorified "mason's tresses," carrying the "spat" in excelsis, were placed high in the prize-list. The "spat" must be cultivated, so fashion decrees. Blistering, and other practices, which the day of the supremacy of Darnley and his sons saw discredited are resorted to, and the precious "spat" over the hoof head is made to cover a multitude of defects. One recalls with delight the far-off day when the former mania for hairy legs and the "spat" received its quietus at a Glasgow summer show. The three judges who had the courage to send a striking example of the hairy species down, as one cynic expressed it, "not a step but a hale stair," were David MacGibbon, Ardnacraig, Campbelltown; Jas. Crawford, then in Thirdpart, Skelmorlie; and Andrew Montgomery, then in Boreland of Balmaghie, Castle-Douglas. It was a great day, and men almost held their breath as they saw the hairy legs disowned. It was well done, and the breed immediately thereafter entered on a career of prosperity such as it had not enjoyed for many a day. History, however, repeats itself, and once more we are assured that the Clydesdale has not enough hair. Increase must be obtained, either by artificial cultivation or by the extinction of the breed as such. What folly!

Another legitimate cause of depression is ultra-close action behind—that is, such close action as causes the hocks almost to rub against one another. Our query columns contain a pathetic request from an "Amateur" for guidance in twisting the hind legs of a good filly so as to secure this show-yard merit. It is not claimed that such a degree of closeness as renders it almost impossible to place a half-a-crown between the points of the hocks is necessary to ensure power in draft; it is simply claimed that this is a show-yard point. It is not a point in the market and a horse cannot have well developed second thighs, and so possess muscular power, and move with the ultra-closeness behind which some alleged judges demand. In order to achieve that degree of closeness, the hind feet of many a good animal are pared down on the inside, twisted and destroyed, and the animal moves with the insides of its hind feet in front. The twisted, malformed condition in which fillies have this year been presented at some shows, in order to secure this superlative closeness behind, ought to have dis-

qualified them from competition. When will a bench of judges appear courageous enough to defy fashion, and so emulate the action of the three men already named, who sent the artificially hairy-legged animals of a former generation to their true places in the prize-list?

The Clydesdale as a draft horse need fear no rival if only the show-yard fancy would realize that the final and only abiding test of draft merit is the shafts of the street lorry. The qualities which enable a horse to excel there are the best qualities, and on these the highest value should be placed in the show-yard.

LIVE STOCK.

Let the sow and litter run out on sunny days. Sunshine imparts health and vigor to the young pigs.

Secure that stock ram now before the good ones are picked up. Nothing but the best of the breed available should be used in your flock.

Those spring calves which have been on grass require something more substantial added to their ration. Once the calf flesh is lost, gains are but slowly made.

Feed a little hay to the cattle rather than allow them to pasture on the meagre catch of new clover. Too often the new meadows do not get half a chance.

Have you inspected the fence around the corn field lately? With pasture fields dried up it is a great temptation for the stock to make a raid on the corn field. A broken rail is all that is needed to start the trouble.

The pastures have not picked up this fall as they usually do, consequently many stockmen will have to commence stable feeding earlier than is the general practice. It is a mistake to allow the stock to fail in flesh owing to bare pastures.

As soon as the young pigs will eat, a separate trough should be provided them where they may obtain shorts and skim-milk without being molested by the sow. When the milk is not available tankage is a good substitute. Little pigs may have all they will eat of it



Making Good Use of Horse Power in After-harvest Tillage.

but for the older pigs six to eight per cent. of tankage in the ration is sufficient.

Remember that individuality must be considered as well as pedigree when purchasing the herd or flock header. Endeavor to get the quality of sire you want even if the price is high. The higher priced bull, ram or boar is usually worth the difference. Many who have been looking for market toppers from mediocre sires have to be content with second-grade prices. The sire is more than half the herd or flock. If improvement in quality is wanted use a better sire.

We were in a stable recently and noted a pile of feed ready for the night and morning feeding of calves and cows; nice green corn and clover hay were put through the cutting box and sprinkled with water. This feed appeared appetizing and nutritious. The calves getting this ration were fatter and more contented than a group of calves in another barn, where the owner felt that he could not take time to prepare the feed. It pays to cater to the young stuff.

Weaning the Lambs.

The first few days after the lambs are weaned is a critical time in their lives, and care should be taken that they are properly looked after. It is a too common practice to leave the lambs with their mothers far too long; they should be weaned at from three to four months of age, and put on good fresh pasture. When the pastures get hard and dry the lambs do not get much nourishment and are hard on the ewes. Provision should always be made to have fresh clover or rape to turn the lambs on when they are weaned. As a rule, they will be eating fairly well at this age, and with luxuriant pasture will receive no serious setback. The ewes will keep in fairly good condition on the drier pasture. At weaning time the males and females

should be separated, and the former pushed for market. Any cull ewe lambs should also be fitted for the block, as improvement will never come by retaining inferior breeding stock in the flock. In the best-managed flocks there will be a few culls every year, and these should not be left to reproduce their kind. Before turning the lambs or ewes into fresh pasture, it is a good practice to go around the fences and cut all the burrs and burdocks which might be growing. It is much easier to keep the fleece clean than to endeavor to clean it after it has become clotted with burrs.

Intestinal Diseases of Swine.

Enteritis (Inflammation of the Bowels).

Enteritis, strictly speaking, means inflammation of any part of the bowels, but it is seldom that the inflammation extends the whole length of the bowel. This is a very serious, and often fatal disease in any animal, but especially so in the pig.

Causes.—Exposure to cold and dampness, injuries, irritating substances in the food, obstinate constipation or the opposite condition, diarrhoea. It may also be caused by drinking impure water, and may occur as a sequel to other diseases.

Symptoms.—The patient refuses food, is thirsty, very restless, has a dull appearance, and apparently suffers acutely, will lie down, roll on its side, get up, move around and grunt or squeal, the mouth is dry and of a purple color, and if the patient has white skin it will be reddish in patches, especially on the belly; There is well-marked tenderness of the walls of the abdomen, and the animal will moan or squeal if pressed upon; diarrhoea is usually present and the intestinal discharge is often followed by increased pain; but after a few minutes seems to become somewhat mitigated. The discharge may be very frequent and tinged with blood, occasionally it is a dark greenish color, being charged with bile; sometimes there is bloating or flatulent distention: the temperature increased and the pulse at first full and frequent, as the disease advances the pulse becomes very frequent but weak and almost imperceptible. The breathing is short and frequent, and the animal may have shivering fits; vomiting is sometimes noticed and is very distressing to the patient.

The duration of the disease is usually much longer than in other animals, usually lasting 3 days or longer, and death usually occurring from mortification and collapse.

Treatment.—As in cases of enteritis in any animal we depend upon large doses of opium. Give 10 to 30 drops of laudanum (according to size of patient) in a little new milk every 3 or 4 hours until recovery or death takes place. If after recovery, the bowels are constipated give ½ go 1½ oz. Epsom salt. If the pain appears very severe and not yielding to treatment, the dose of laudanum should be increased, as in these cases the patient can withstand very large doses of opium (of which laudanum is the tincture). The patient must be kept in a dry, comfortable place with plenty of clean straw to lie on, and efforts should be made to sustain strength by the careful administration of milk and a little oatmeal. After convalescence commences small quantities of laxative, easily-digested food should be given often for a week or two.

Dysentery.

Dysentery is an inflammation of the lining membrane of the large intestine, especially the rectum, characterized by severe straining and the frequent passage of liquid or semi-liquid faeces mixed with blood, accompanied by more or less severe pain.

Causes.—Eating decayed vegetable matter, or vegetables not easily digested, putrid animal substances, etc., or it may occur as a sequel to an attack of acute diarrhoea. Lying in cold, damp quarters at night is a common cause and is sometimes due to a sluggish condition of the liver. It is sometimes seen in fat pigs, drastic purgatives or over-doses of purgative medicines may cause the trouble, and it is sometimes caused by the presence of worms in the intestine.

Symptoms.—General uneasiness, dullness, impaired appetite, with usually stiff movements, more or less pain, the animal whines. There may be either constipation or diarrhoea. The rectal excretions are usually lumpy at first, and very frequent, after a time a whitish mucous or mucous mixed with blood is noticed. As the disease advances there will be shreds of mucous membrane or masses of coagulated matter voided. There is usually considerable flatus (gas) voided, which gives relief for a time. After a time the odor of the excretions becomes offensive. Usually a change is noticed in from 6 to 10 days. The patient may recover or become worse at this time. In the latter case there is great depression, straining ceases but there is usually an involuntary discharge of semi-fluid from the rectum. The animal persists in lying, breathes frequently and short, the skin is cold and pulse imperceptible, in which case death soon occurs.

Treatment.—Unless the patient be very weak a laxative of 5 to 12 grains of calomel followed in about 6 hours by 1 to 2 oz. castor oil. This should remove irritants and irritating secretions. After the laxative has operated 10 to 40 drops of laudanum in a little new milk should be given every two or three hours until the patient becomes easier or sleepy. If the patient be very weak 1 to 2 tablespoonsful of whiskey or other spirits with 2 to 4 grains quinine mixed with a little new milk or water may be given every 5 or 6 hours. Rectal injections of one teaspoonful of laudanum and 20 grains acetate of lead in a little starch gruel every

3 or 4 hours sometimes gives good results. The patient's strength should be sustained by the administration of milk and eggs.

WHIP.

Contagious Abortion.

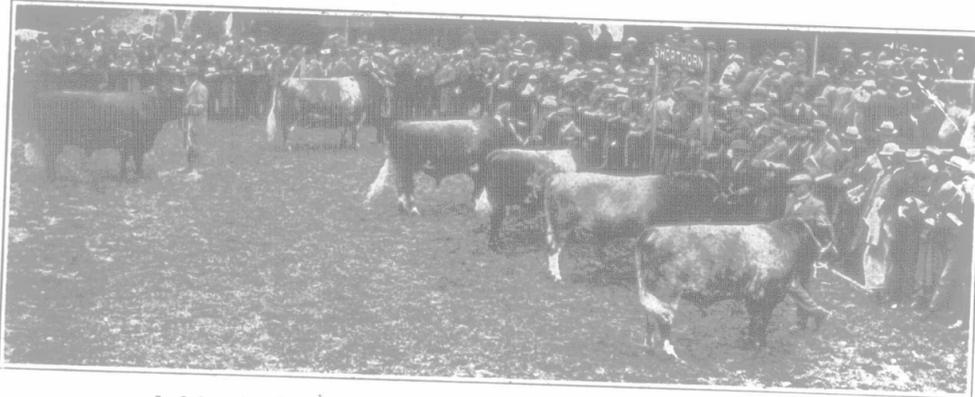
The disease known as contagious abortion exacts a rather heavy toll in the herds of the country. Not only is there a loss in calves due to premature birth but sterility very often results as an aftermath of this trouble and calves born normally may suffer from white scours which is generally believed to be associated with abortion. Hardly a week passes but some breeder writes to the "Farmer's Advocate" office for a description of causes, symptoms and treatment of this malady which leads us to believe that the trouble is becoming more prevalent rather than abating. Vigilance on the part of the herdsman in regard to prevention and treatment is imperative. It entails a good deal of extra work to treat this disease successfully. Dr. C. D. McGilvary the head of the Ontario Veterinary College treats with this disease in a practicable manner, in Bulletin No. 272, in which the causes, method of infection and treatment are explained in detail, in the following paragraphs:

NATURE AND CAUSE OF THE DISEASE.

The condition known as abortion, or "slinking the calf," is one which is often encountered among pregnant cattle. Its occurrence is increasing, and is becoming more acutely felt by many breeders, by noticeably lessening the productiveness of their herds. It has commonly been ascribed to result from a variety of causes, such as errors in feeding and watering, accidents and injuries of all kinds, influences of the weather, and also to supposed defects in the male parent.

While abortion, no doubt, may result in some cases from such causes, nevertheless, they account for only a very small percentage of the cases in cattle, the larger percentage resulting from a COMMUNICABLE DISEASE, which is termed CONTAGIOUS ABORTION.

This disease may be described as a contagious affection of cattle, which is manifested by the premature expulsion of the fetus, or untimely delivery of the calf, owing to an infectious catarrh, or inflammation, set up in the womb. The cause of this has been shown to be a germ known as the *Bacillus abortus*, or Bang's Bacillus of Cattle Abortion.



Judging for the Championship in Shorthorns at the Royal Show.

METHODS OF CONTRACTING THE DISEASE.

The disease is generally first introduced into a healthy herd through obtaining breeding cattle from a diseased herd, thus constituting a carrier medium of infection from one herd to another. The manner in which cattle contract the disease or infect each other has been a matter of some dispute. Somewhat extensive investigations have been conducted in Great Britain and America and the conclusions would seem to warrant the recognition of two channels, by either of which the disease germs may enter the system and reach the womb. One means of entrance is by the mouth with infected feed, water, and milk, and the other by the genital passage. With regard to infection entering the system by the mouth, some investigators consider that it is probably one of the most common means by which cattle contract the disease. The explanation of this is that an infective discharge containing great numbers of the bacilli, or disease germs, is frequently expelled from the womb of affected cattle. The infective discharges, on being expelled, are very liable to contaminate the bedding and fodder, such as hay and straw, pasture and water, which, in turn, are taken into the mouth and consumed by other pregnant cattle. The germs of the disease, being thus taken into the mouth with the feed and water, are swallowed, and pass into the bowels, from which they are absorbed and are carried by the blood throughout the system until they reach and finally locate themselves in the wall of the pregnant womb, which is their favorable place of abode. It is also claimed that the germs, in some cases, locate themselves in the udder and lymph glands, where they remain stationary for a variable period, and are given off in the milk from time to time. It is also claimed that infection of the surface of the udder and teats occurs by contamination with discharges passing down from the vulva. The surface of the udder and teats, thus contaminated, permits infection of the milk, either while the calf is sucking, or by the hands while milking. By this means it is thought that calves sometimes contract the disease from the milk and grow up infected.

With regard to infection taking place by means of the genital passage, this was formerly thought to be the only method of entrance. It was believed that the discharges from aborting cows, dropping in the stable gutters and against the stalls, infected others by direct contamination of the genitals, or by being switched by the tails of infected cows against the genitals of other pregnant cows occupying adjacent stalls. It was also contended that the infection was chiefly conveyed from female to female through the medium of the bull during service.

Due regard and consideration must always be given to each of these factors as likely means of conveying infection; also that infection frequently takes place by the mouth, through ingesting food, water, and milk, contaminated with infected discharges from aborting cattle.

Irrespective of the manner by means of which the germs may have entered the body, upon their reaching the womb of pregnant cattle they begin to operate harmfully by giving rise to a catarrhal condition, or inflammation of its surface, and also of the contacting fetal membrane, causing a gradual separation of the placenta, which forms the nutritive medium of connection between the mother and the fetus. The disturbance of this nutritive connection usually results in causing the death of the fetus and its premature expulsion, which is termed abortion.

SYMPTOMS AND COURSE OF THE DISEASE.

Abortion may take place without any special indications of its approach, and the animal may appear quite well up to the time when the fetus is being expelled.

The actual abortion may entirely escape notice if it occurs during the early stages of pregnancy, as the small fetus or embryo and the membranes are easily expelled, and the owner's suspicions are only aroused when he finds certain of the cows or heifers, considered safely in calf, to be again in season. Even when the fetus is fairly well developed during the advanced stages of pregnancy, it may be expelled without notice, and the accident is first discovered by the presence of the aborted calf and the membranes behind the cow.

In other cases, indications of its probable approach are manifested by the animal. She is noticed to be restless and uneasy and to keep whisking the tail. The udder may become enlarged and full, denoting the appearance commonly termed "making a bag." The

is abortion in a herd, that sterility, or barrenness, prevails among both cows and heifers, so that the number of "shy breeders" increases in the herd. This phase of the disease seriously reduces the productiveness of many herds. The cause of sterility in these cases is a resulting diseased condition of the womb and ovaries, the latter becoming cystic and with retained corpus luteum present, or the so-called brownish bodies, in the ovaries.

MEANS OF DETECTING THE DISEASE.

The importance of being able, if possible, to detect and recognize the disease when it first occurs in a herd is apparent, so that steps may be taken to arrest its progress. In this regard the safest course to pursue is to accept the fact of any cow aborting on premises formerly exempt as a sufficient reason for suspecting that the disease has been introduced, and particularly where new females have entered the herd. Additional cases of "calf slinking" occurring at intervals in the herd should be considered confirmatory of contagious abortion being the cause. Experiments have been made with the view of devising some satisfactory method of test capable of determining the presence of latent infection in female cattle, pregnant or otherwise. Among the methods used for this purpose may be mentioned the abortion test, the agglutination and complement fixation tests.

METHODS OF PREVENTION AND TREATMENT.

Up to the present, the essential basis of dealing with contagious abortion in cattle is by sanitary measures. This consists in adopting measures to protect a sound herd from becoming infected and to control the disease in an infected herd. Important requisites towards this end consist in preventing infected cows from mingling with healthy ones, and the separation of any suspected aborting cattle from other pregnant cows and heifers. In adding breeding cattle to a herd, careful enquiries should be made to ascertain if the herd from which they are being obtained is free from abortion disease. If doubt exists as to their freedom from this disease, the newly obtained pregnant females should be kept separate until they calve.

All cases of abortion should be regarded, irrespective of excusable circumstances, as at least probably the contagious form and precautions taken accordingly. As soon, therefore, as any animal in the stable shows signs of aborting, or has aborted, it should at once be removed to a separate stable. The feed should be removed from the mangers and all bedding and litter from the stalls burned, as well also as the aborted fetus and the after-birth. The stable walls and stalls, including the floor and gutters, should be thoroughly cleaned and disinfected with lime wash.

The aborting cow is very liable to retain the after-birth, and should have the membranes carefully removed if not expelled within two or three days. During this time the womb should be washed out once every day with a lukewarm antiseptic solution, such as a one per cent. solution of lysol, or with a one-in-one-thousand solution of potassium permanganate. After expulsion or removal of the after-birth the womb should be flushed out with about two gallons of a one per cent. Lugol's solution of iodine, followed by a saline solution made by adding two ounces each of fine dairy salt and bicarbonate of soda to a pail of clean lukewarm water.

The flushing may be repeated once a week for a month by the use of the Albrechtsen uterine return flow catheter. This method of treatment is recommended for the prevention of sterility in breeding females, particularly valuable pure-breds.

In many cases the frequency of washing of the womb may be reduced by the use of antiseptic in capsules. For this purpose a gelatin capsule containing an ounce, composed of equal parts of iodoform and boric acid, may be introduced into the womb a few hours after calving, and then repeated the following day. This practice has been found useful, particularly in cases where the afterbirth is retained.

The aborting cows, and all the exposed pregnant ones, particularly those occupying stalls adjacent to the aborting animal, should have their hind parts, including the tail, hips and udder, washed thoroughly with an antiseptic solution such as a two per cent. solution of lysol or creolin.

Cattle, after aborting should preferably be kept by themselves for a period of at least one month, and they should not during this period of time be pastured in the same fields as healthy pregnant cattle, nor allowed in the pasture fields so long as discharges continue to come from the vulva. This is important, because the discharges may infect the grass and water, and which, when thus contaminated, may remain virulent and a possible source of infection for sometime. At the end of the isolation period, before allowing aborting cattle to mingle with the other members of the herd, it is advisable again to thoroughly wash off their hind parts and disinfect the stable in which they have been kept. Cows which have aborted should not be bred again until a period of one or two months has elapsed, and not even then if they show any signs of discharges coming from the genitals.

The bull, each time after serving aborting cows, and before serving healthy cows, should have the end and inside of the sheath washed with a mild antiseptic solution, such as a one per cent. solution of lysol or a three per cent. borax solution. In treating the inside of the sheath the antiseptic solution can be injected with an ordinary metal or rubber syringe.

THE USE OF DRUGS.

The internal use of drugs alone appears to be of little real benefit in abortion disease of cattle. From

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time to time certain agents have been used and were highly praised for a time as a likely cure.

The carbolic acid treatment, which was particularly popular for a time, consisted in administering it daily, in dram doses, or at intervals of several days throughout pregnancy.

Another drug, known as methylene blue, has been advocated as a likely cure. It is given in doses of one or two teaspoonfuls daily in the feed for a period of five or six weeks.

While no serious objection to the use of carbolic acid and methylene blue need be taken, nevertheless their curative value has been over-stated. In fact, the use of these remedies in the hands of those most capable of judging as to their merits has shown them to be of no lasting benefit, and their popularity has greatly diminished.

VACCINE TREATMENT.

More recently the treatment of cows and heifers for abortion is being undertaken by means of special abortion bacterins and vaccines to confer immunity or protection against infection. The bacterins are composed of killed abortion bacilli in suspension, and are advocated for the treatment of doubtful cases and for infected cows during the first half of the term of pregnancy. The bacterin treatment has unfortunately not as yet proved altogether as satisfactory or successful in conferring immunity or protection as expected. The abortion vaccines are products containing living cultures of the bacilli, and on that account are only recommended for use in herds already infected, and to be administered to heifers and non-pregnant cows from one to two months before breeding. It is not advisable to use the vaccine on pregnant animals nor in herds in which the disease is not present.

The preparation and use of abortion vaccines are as yet largely in the experimental stage, and the evidence at hand so far is only sufficient to recommend their use in affected herds on heifers and non-pregnant cows before breeding as a means of assisting materially in obtaining living calves at full term.

HOW TO OBTAIN VACCINE.

The Health of Animals Branch of the Department of Agriculture at Ottawa will supply qualified veterinary surgeons, with contagious abortion vaccine, free of charge, providing an owner of cattle makes a request that he desires to have his animals vaccinated, and furnishes the name and address of the veterinarian he desires to employ and the number of animals to be treated. On receiving such a request the vaccine will be sent to the veterinary surgeon, with directions as to its use.

Owners desiring to avail themselves of this arrangement may do so by writing to the Veterinary Director-General at Ottawa.

Abortion vaccines are also sold by commercial concerns and may be obtained through reputable veterinary surgeons and used under their direction.

SUMMARY OF LEADING POINTS.

1. In purchasing pregnant cattle, make careful enquiries in order to ascertain if the herd from which they are being obtained is free from abortive disease.
2. If doubt exists as to their freedom from this disease, keep the newly obtained females separate until they calve.
3. As soon as a cow aborts remove her to a separate stable.
4. Thoroughly clean and whitewash the stalls in the stable. The bedding and litter removed from the stalls should be burned, together with the aborted fetus and the after-birth.
5. Wash off the hind parts of all the exposed pregnant cows with an antiseptic solution.
6. Cleanse the genital passage of the aborting animal with mild, warm antiseptics. This should be repeated daily until the neck of the womb closes. If the washing of the womb is not desirable, make use of antiseptic powders in capsules.
7. Do not allow cows with retained after-births to remain in stalls adjacent to other pregnant cows.
8. Keep aborting cows separate from the others so long as they are discharging. Wash their hind parts before allowing them to return to the herd.

9. Allow a period of at least one or two months to elapse before returning aborting cows to the bull.

10. Wash the end and inside of the bull's sheath after service of doubtful cows, and before service of healthy cows.

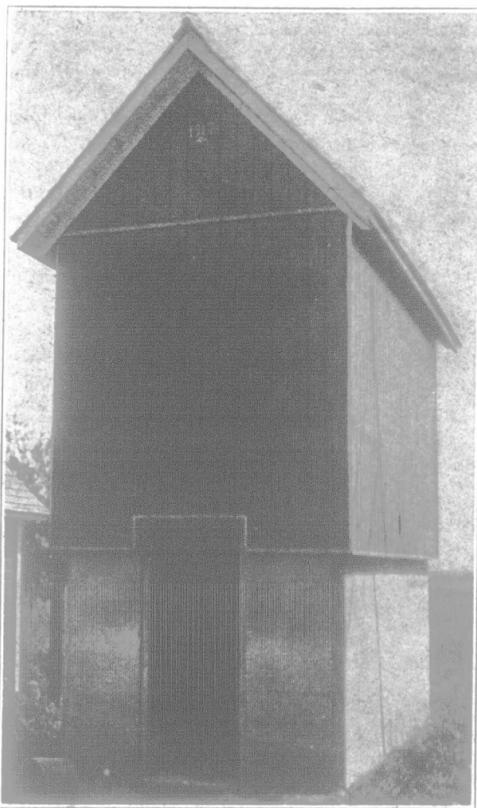
11. Do not allow the bull to serve aborting cows which have a discharge from the vulva.

12. Obtain the advice and guidance of a qualified veterinary surgeon as to the use of vaccines or bacterins, combined with the sanitary measures recommended.

13. If calves become affected with White Scours, immediately separate the sick ones from the healthy. Consult a reputable veterinary surgeon for special treatment and as to the use of special serums and bacterins in conjunction with sanitary measures.

14. In the case of valuable cows becoming barren, the services of a skilled veterinarian should be obtained for the purpose of treating the womb and ovaries.

THE FARM.



The accompanying illustration shows a unique structure photographed on the farm of W. Hodgins, of London Township. Its chief function is as a reservoir for water. The depth of the tank is indicated by the sheeting on the wall, and underneath is a convenient little outbuilding for which considerable use is found. At the ceiling of the basement a hose connects with the water tank above, and vehicles or the automobile can be easily washed from this supply of water. The elevation of the tank makes it a very convenient source of water for many uses.

Not Satisfied With the Seed Act.

EDITOR "THE FARMER'S ADVOCATE":

Kindly allow me space to comment on an article by Seed Merchant, which appeared in your issue of May 22, praising the Seed Act and citing an instance of

some farmers buying a quantity of third grade seed. That is just what I call the Act—"a dealer's Act". If the Act states that the seed must stand a certain germination test, why do the dealers put on their labels that they do not guarantee germination or variety. In England the seedsmen guarantee the variety and germination and the test is given that has been made. Ever since the Act came into force seed has been getting dearer, and the spread between the farmer's and the dealer's price very large. I only wish I had a copy of the Act to show where it hits the farmer, and through the loopholes, lets the dealer go easy. We want an Act to guarantee both germination and variety, and the test and variety to be guaranteed on the label on the package. I have purchased mangel seed and it had several varieties. I do not know in how many different years it was grown, but several, and it came up in two or three lots, while seed grown by my neighbor had no misses and a full crop. Of my high-priced dealer's seed about half came up and of several varieties. High-priced seed does not always mean good seed in my experience, and an Act is wanted to get the dealer who mixes old and new seed of different varieties. Another thing is the name every big dealer has for his own variety when that is not the name in many instances at all. If I pay a high price I want it from the grower of that seed, and the Act should require the grower's name on the package also as well as the seller's. Then the farmer would know who to go after.

Herts, England. J. Lloyd-Jones.

Corn and the Silo.

EDITOR "THE FARMER'S ADVOCATE":

The fodder question is a very serious one throughout this County. The grain crop being very light and the straw exceedingly short, it throws more responsibility on the corn and silo. This crop is promising in many parts of York County. However, there is much that was put in under very unfavorable conditions, where a good yield cannot be expected. Since a very great need of roughage exists, it is quite necessary that we make use to the utmost of every stalk we can produce and the question is how to preserve it in the best possible manner. Of course, the silo is a way that has been most extensively used to preserve corn, but the silo is often misused with the result that dissatisfaction is caused and in some cases the silo is condemned, even without a fair trial.

When should corn be harvested? This is one of the first questions we have to discuss and it must be decided by ourselves individually. I have found that the further corn is matured the more feed and the better feed I get. However, I would sooner have it cut a week too soon than allow it to get a heavy frost, and just in this locality I think it wise to cut it as soon as possible after the 20th of September. My order to my thrasher is "Come as soon as you get your machine out." He never gets it out too soon, and sometimes has hard work to keep the box going the first week.

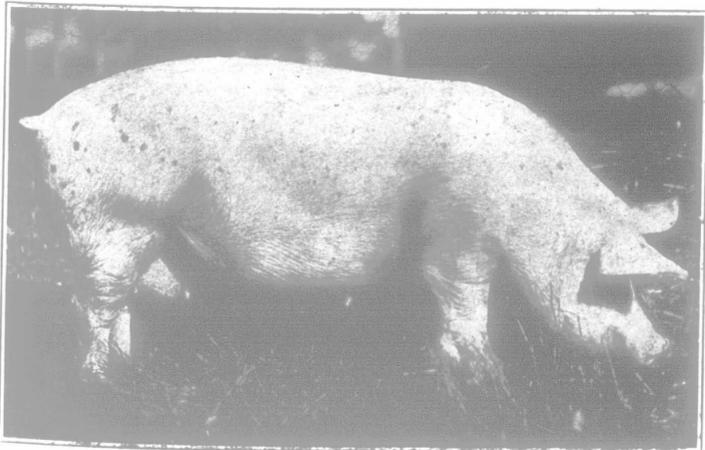
When the day has come to fill the silo I try to get enough men and teams to keep the box running, the remainder are sent to the silo. My silo is 12 feet in diameter and when I can secure a distributing pipe I want four men in the silo, in addition to the man operating the distributor. Where it is not convenient or possible to secure a distributor, a man can substitute to good advantage by erecting a platform at the mouth of the blower and with a shovel scatter the corn around before it falls to the bottom. This makes it unnecessary to do any forking.

Never leave the corn lying on the damp ground, as it is sure to must, and when it is put into the silo tramp it thoroughly.

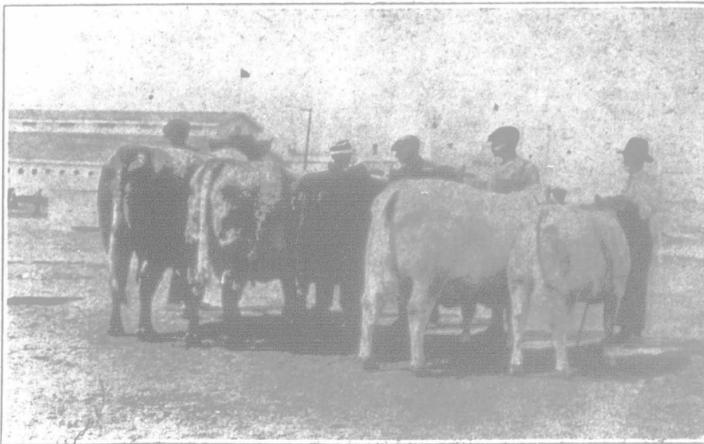
The silo should be air-tight and great care should be taken to make the doors fit. Where the doors do not fit tightly, fill in the cracks with wet cement, as wet as it will stick.

I do not think this question gets enough discussion in the columns of farm papers. I myself feel that I have only begun to find out the importance of small features in connection with the successful ensiling of corn, and I am anxious to hear from beginners as well as experienced users of the silo.

York Co., Ontario. W. E. THOMSON.



A Yorkshire Sow of Good Type.



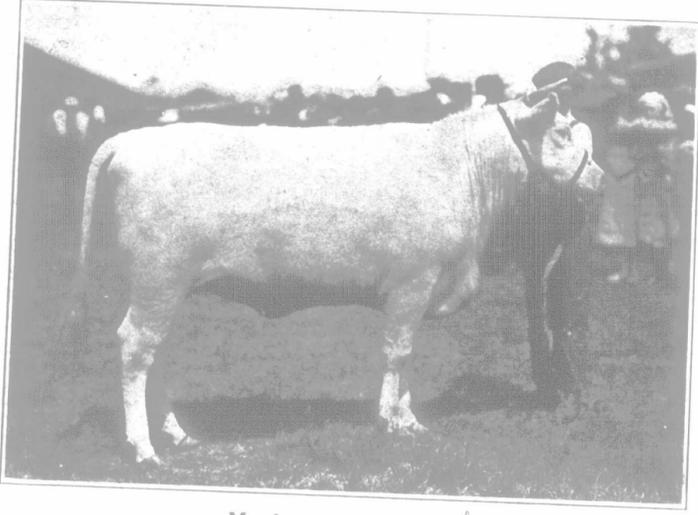
J. G. Barron's Shorthorn Herd on the Western Show Circuit.

Preparation for a Wheat Crop.

Some interesting information in regard to wheat is contained in the fifty-seventh annual report of the State Board of Agriculture for the State of Michigan, and, since climatic and soil conditions there bear considerable similarity to those found in Ontario, we are drawing attention to some of the more important features of an article appearing in that report.

After dwelling on varieties and the early preparation of land for wheat, the author, J. F. Cox, has the following to say regarding lime on acid soils. "From two to four bushels increase can be expected in the wheat crop after a suitable application of lime where needed. Acid phosphate and other fertilizers are much more effective on soils well supplied with calcium carbonate. An indirect benefit, but an important one nevertheless, is the great increase in the stand of clover secured after liming. Two tons of finely-ground limestone, or two cubic yards of marl, or 1,500 pounds of hydrated lime are the amounts usually applied."

Dwelling on the matter of preparing the soil and supplying fertilizer to insure a good stand and an abundant yield the writer makes these observations: "Manure is the most effective fertilizer used on the farm. In preparing wheat land, an application of manure at the rate of six or eight tons to the acre will greatly benefit the crop, for not only is plant food supplied but the water-holding capacity of the soil also is greatly increased. Director R. S. Shaw, of the Experiment Station of the Michigan Agricultural College, strongly advocates the disking in of manure applied after plowing. It is not wise, however, to manure land which is high in organic matter previous to planting wheat. Just before winter a light topdressing of manure or straw will prove very effective in preventing winter killing and in giving the wheat a good start in the spring. Manure, however, is deficient in phosphorous and the benefits derived from its use will be greatly increased if it is reinforced with acid phosphate or rock phosphate.



Meadowsweet Jewel 2nd.

Heifer in best sale condition at the Halton County Shorthorn Calf Club sale, Oakville, August 20, 1919. Owned by Max Heslop, Palermo.

"Phosphate is the most effective mineral that can be applied to the wheat crop. Michigan soils, as a rule, are deficient in phosphorus, but wheat demands a large amount of this element in order to develop plump grains and to yield heavily. The application of acid phosphate hastens maturity and increases the yield. At the Michigan Experiment Station two hundred pounds per acre on wheat gave a return of six bushels, or over four hundred per cent. on the money invested in fertilizer. Under average conditions about two hundred and fifty to three hundred pounds of acid phosphate should be applied at the time of seeding, either by broadcasting or through a fertilizer attachment.

"Acid phosphate is particularly effective when it is used to re-enforce manure. From results obtained at the Michigan Experiment Station, Professor V. M. Shoesmith states that twenty-five pounds of acid phosphate with each ton of manure will more than double its value and pay for the phosphate as well. Rock phosphate also is valuable when used in this way. From fifty to seventy-five pounds of raw rock phosphate to a ton of manure, either mixed with the manure at time of application or used as a stable absorbent scattered in the stalls or over manure in feeding yard, will render the manure much more effective. When nitrogen and potash are used in connection with phosphorous, a further increase is noted but at present prices the greatest net profit will come from the use of acid phosphate. Ammoniated phosphates also return a good profit and when complete fertilizers cannot be bought at reasonable prices or acid phosphate cannot be secured their use is strongly recommended.

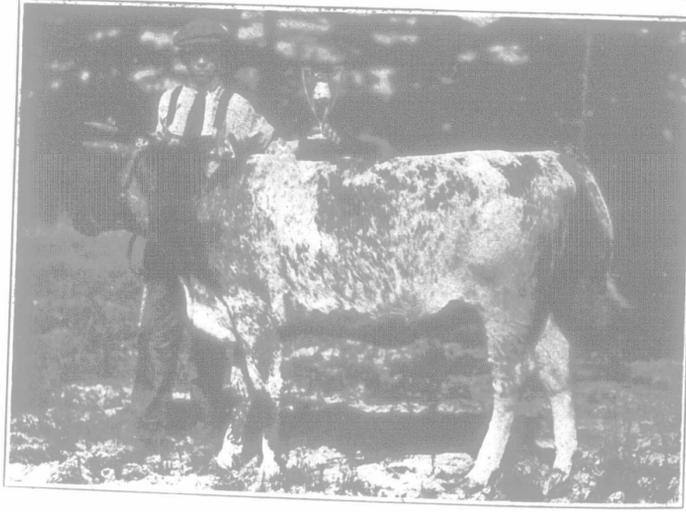
"The proper use of the fanning mill will remove weed seeds, dirt, smutted kernels and light kernels. Heavy seed will give a greater yield than light seed. A good

fanning mill will pay for itself in a short time. All seed wheat should be thoroughly fanned before treating with formaldehyde in order to remove smut balls."

Fall wheat has always been more or less of a risky crop in Ontario, and there is no doubt, but what some fertilizer intelligently applied would reduce the risk. Especially on late sown fields would some easily available commercial fertilizer give the crop a boost and render it more resistant to inclement winter weather.

Elgin County Farmers Visit Middlesex.

The automobile has made it possible for farmers to visit different parts of the country. For several years parties have been organized in several counties, and a trip taken to neighboring counties, where prominent herds and farms were inspected. These outings sometimes lasted two or three days, and were not only a real holiday but were very instructive. It permits the farmers to see methods carried on in neighboring counties, and also enables them to get better acquainted with their neighbors. If a person has his eyes and ears open, he is bound to see something of interest and value wherever he goes. Possibly the largest farmers' excursion was held on Friday, August 22, when over one hundred automobiles, carrying Elgin County farmers and their families, toured a portion of Middlesex County. C. W. Buchanan, the District Representative, and the executive of the Board of Agriculture arranged for the trip and left no stone unturned that would add to the pleasure of the party. The party met in St. Thomas, and, at a pre-arranged time, formed a procession and motored to Weldwood Farm, where an hour was spent in looking over the buildings and inspecting the crop and herd of milking Shorthorns. From Weldwood, the party proceeded to Springbank Park, where they picnicked, after which a number of addresses were delivered by members of the County Councils of both Elgin and Middlesex, and by other



Victoria Varden.

Heifer showing greatest margin between purchase and sale price at the Halton County Shorthorn Calf Club sale, Oakville, August 20, 1919. Owned by Bobbie McLean, Palermo.

forty-nine members, the Essex Pig Club with forty-seven members, and the Dundas Pig Club with forty-six members, have also been doing good work.

The illustrations shown here are from pictures taken at the Halton County Shorthorn Calf Club sale two weeks ago, and show the calf belonging to Bobbie McLean, whose heifer made the greatest margin between the cost price and her sale price. The white heifer was owned by Max Heslop and was declared by Prof. G. E. Day, who judged the calves, to be in better sale condition than any of the others.

AUTOMOBILES, FARM MACHINERY AND FARM MOTORS.

Oils and Lubricants For Engines

To look at a smooth bearing surface of an engine or piece of other machinery, one would scarcely think that these surfaces are really covered with very fine projections not visible to the naked eye. This is, however, the case, since if examined under a microscope even a bearing surface that is very finely finished will appear more or less rough. If these bearings were run without oil or some other lubricant these little projections on closely-fitting parts would interlock as they pass each other, and a great deal of friction would result. It requires power on the part of the engine to overcome any friction that is developed, so that to get the greatest amount of efficiency from the machinery it is necessary to have it well oiled and thus lessen the amount of friction. Besides decreasing the amount of

power, the parts as they shortly wear so dry and

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G FARMERS AND LEADERS.

Girls' Clubs.

Account of a successful Boys' Club that took place in Halton Girls' Club idea has gained during the last year and a twenty-two clubs organized, in successful operation, but sheep, pig and clubs as well. For instance, now organized in Ontario, following counties: Dufferin, 3; Simand, Peel, Victoria and Lennox and Addington, 2. Distributed Yorkshire pigs ten weeks to bred sows from the Essex Club, which Among the calf clubs, and Welland each have one Addington have a Short-Grenville and Peel Counties in addition to these clubs in County, and clubs which in Brant and Waterloo

average of twenty members boys' and girls' clubs, or are nearly 450 boys and girls of these clubs and are pig, or a colt, or a sheep. Largest membership is the which was organized just a eight members, and dis-bred Holsteins, Ayrshires were from twenty to twenty-ered so that by this time, ber of the club will have and her calf. Other clubs, nington Pig Club which has



Halton County Shorthorn McLean, Palermo.

x Pig Club with forty-as Pig Club with forty-ving good work. are from pictures taken om Calf Club sale two f belonging to Bobbie he greatest margin be-ale price. The white op and was declared by e calves, to be in better thers.

M MACHINERY MOTORS.

s For Engines

g surface of an engine e would scarcely think covered with very fine ked eye. This is, how- d under a microscope very finely finished will these bearings were run at these little projections interlock as they pass friction would result. of the engine to over- ped, so that to get the m the machinery it is and thus lessen the reasing the amount of

power, friction always generates heat, and over-heated parts as those parts which are dry from want of oil, very shortly wear out. Sometimes, indeed, the parts become so dry and so hot that they will fairly burn together.

Lubricants of various kinds supplied to close-fitting bearing surfaces really act as a sort of cushion, in addition to filling up the minute depressions on the surface of the part, and by fulfilling these functions, as well as absorbing a large part of the heat generated by friction, they take all the wear that would otherwise come on the metallic surface. Nearly everyone who has used machinery knows that different kinds of oils are used for different kinds of machines, and perhaps for different types of machines. The quality of the oil and the amount to use depends upon the bearing points so that an oil that would be suitable for the interior surface of a gas engine cylinder would not be suitable for lubricating a part where heavy pressure is felt. On the other hand, heavier oils or greases, which are more suitable for the latter case, could not be used for the cylinder in the engine. The cylinders of gas engines become very hot when in operation, and oils for these parts must be able to absorb and withstand considerable heat without evaporation or decomposition. Moreover, such oils should be able to withstand cold weather without thickening up, because one of the first requisites of a cylinder oil is that it flows freely over a wide range of temperature. Another point in connection with lubricants is that they should be free from acids, because, as is well known, acids will corrode metal and destroy the smooth bearing surface.

Body is required in an oil so that it can perform its function as a cushion to better advantage and thus prevent the metallic parts of the engine from coming in contact. For reasons given previously, it is possible to have an oil with a body that is too heavy or too light. If it is too heavy, it will generate considerable friction in itself and will not flow readily; if it is too light, there will not be sufficient body to bear up under the heavy pressure. Heavy body oils and semi-solid greases are used in slow-moving, heavy-pressure bearings such as those of the rear axle, or where great cushioning qualities are absolutely necessary in addition to lubrication. The grease or oil is less valuable if it contains injurious adulterations of either vegetable or animal nature, because of the acids that these contain. Gums, also, if used in lubricants, will coagulate or oxidize when exposed to the air and thus make less efficient the action of the bearing parts. For tractor use, crude petroleum is used as a base for lubricants, or else graphite, which is a form of pure carbon, takes its place.

Oils obtained from animal fat or vegetable substances are more subject to decomposition, and have a tendency to become rancid after exposure to the air, from which they absorb oxygen. As a rule, too, these oils solidify at comparatively high temperature so that they are unsuitable for use in cold weather. On the other hand, combustion takes place at a comparatively low temperature, and for this reason they are not satisfactory where considerable heat is to be met with. Castor oil is about the only oil used to any extent in lubricating gas engines. It is occasionally used in high-speed racing automobile engines or aeroplane engines, where it is practically pushed right up past the piston and out of the combustion chambers with the exhaust gases, so that fresh oil must continually be supplied. Obviously, this is not an economical method of oiling.

Solid substances, such as tallow obtained from cattle and sheep, graphite and soap-stone, have been used for lubrication. Tallow is occasionally employed as a filler for greases which are used in slow-speed bearings, or transmission gearing, but it is unsatisfactory where much heat is generated. Graphite commercially is obtained in the flake and in the dust form. In the first case it exists in the form of small scales, and in the latter case these have been ground up into a dust. Graphite is usually mixed with oil that has considerable viscosity, or stickiness, and used as a lubricant for running gear parts. It has a strong attraction for metal surfaces and is not affected by heat or cold, acids or alkali, remaining in place better than an oil. Thus when mixed with some oils, the mixture is better than the oil itself.

The best oils for gasoline engines are distilled so that the petroleum is not so apt to decompose and deposit carbon. Authorities state that a suitable lubricant for a gas engine cylinder has a vaporizing point at about 200 degrees Fahrenheit; a flash point of 430 degrees Fahrenheit, and a fire test of about 600 degrees Fahrenheit. As a general rule, the best quality oils are the most expensive, for the reason that more care has been taken in their preparation. Cheap oils will deposit carbon very freely in the cylinder head, and also are likely to gum up the piston rings and valves, detracting considerably from the smoothness of operation and the power of the motor. It is always advisable to purchase cylinder oil very carefully.

THE DAIRY.

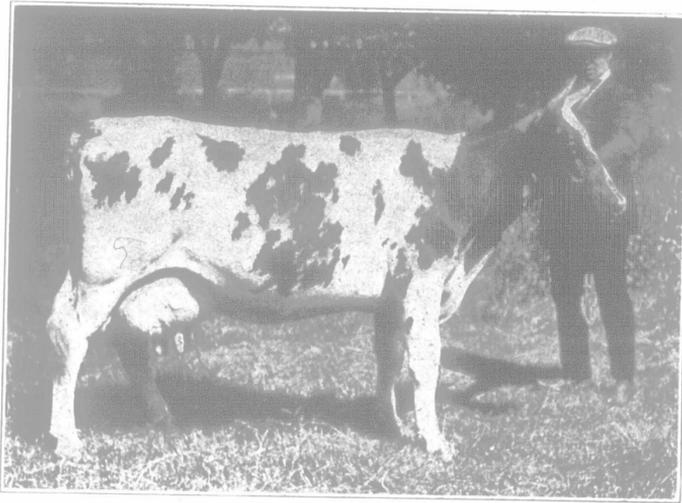
The American Jersey Cattle Club has taken a forward step in appropriating the sum of \$2,500 for premiums to be given in boys' and girls' calf clubs for the year 1919. Premiums will be confined to clubs organized in 1919 and which consist of not less than twenty members each who have purchased Jersey heifers.

John Cochrane, Nethercraig, Ayrshire, Scotland, one of Scotland's foremost Ayrshire breeders and judges is dead, according to the Secretary of the American Ayrshire Breeders' Association. Mr. Cochrane was said to be the pioneer exporter of the Ayrshire breed, having exported as early as 1881 to Norway and Sweden.

The production of factory cheese by provinces in 1917 is given by the Dominion Bureau of Statistics to be as follows: Of a total production for Canada of 194,904,336 lbs., Prince Edward Island contributed 2,234,985 lbs.; Nova Scotia, 67,497 lbs.; New Brunswick, 1,244,106 lbs.; Quebec, 67,835,017 lbs.; Ontario, 121,173,086 lbs.; Manitoba, 1,003,646 lbs.; Alberta, 1,274,905 lbs.; British Columbia, 71,094 lbs.

Official figures as to export of butter and cheese from Canada from 1901 to 1918 show that since 1906 the export of cheese has remained below one hundred and ninety million pounds yearly, varying from 137,601,661 lbs. in 1915 to 189,710,463 lbs. in 1908. From 1901 to 1906, inclusive, the lowest export was 195,926,397 lbs. in 1901. It is interesting to note that our greatest export 233,980,716 lbs. which occurred in 1904 was worth only \$24,184,566, as compared with our export in 1918, consisting of 169,530,753 lbs. worth \$36,602,504.

Glen Canary De Kol 2nd. is credited by the Superintendent of Advanced Registry of the United States Holstein-Friesian Association with a record of 25,590.6 lbs. milk, containing 1,058.69 lbs. fat in 365 days. She



Nancy Whitehall.

New junior four-year-old world's champion Ayrshire. Milk, 18,797 lbs.; fat, 754.27 lbs.; 4.01 per cent. She is owned in Massachusetts.

made her best seven-day official production 127 days from freshening, and gave 564.2 lbs. milk containing 23.581 lbs. fat. She has become, as a result of her yearly record, the twenty-ninth Holstein-Friesian cow in the United States to produce more than 1,000 lbs. of fat in one year. On the eighty per cent. basis, her butter record for the year is equivalent to 1,323.36 lbs.

Twenty-nine samples were scored in July for the Dominion Educational Butter-scoring Contest being conducted by the Dairy Division of the Department of Agriculture, Ottawa, Alberta, with three samples averaging 41.70 points for flavor, scored the highest of all the provinces. The highest individual score for flavor was 43 points for a Saskatchewan sample, while one sample from Ontario and one from Manitoba scored only 37. The average water in all July samples was 14.16 per cent. Information received from the Dairy Branch indicates that the butter made from pasteurized cream is holding its flavor much better than the raw-cream butter.

Recent cheese-market reports indicate that nearly all of the cheese selling for export is being sold at the price paid by the Cheese Export Committee, namely, 25 cents per pound for No. 1 grade delivered in store, Montreal. The last weekly report from the Dairy and Cold Storage Branch, Ottawa, dated August 23, states that no further sales to United States firms have been reported. It is also interesting to learn that from May 1 to August 23 a decrease of 116,976 boxes of cheese has taken place, as compared with 1918. The total receipts this year for this period were 961,431 boxes. A table is also given showing the exports of cheese for the weeks ending August 2, 9 and 16, from New York, Boston, Philadelphia, San Francisco and Portland. These export figures show only 34,304 pounds of cheese exported to the United Kingdom

practically all of this going out the week of August 9. During these three weeks over 630,000 lbs. of cheese were exported, principally to the following countries: Scandinavia, Belgium, West Indies, the United Kingdom, South America, Alaska, Central America, the Hawaiian Islands.

Milk Prices in the United States.

Milk producers will be interested in the fact that the range of prices reported to the United States Bureau of Markets for standard or Grade B milk, in the month of August, was from \$2.46 to \$4.88 per 100 lbs. The range in the New England States over fifty local markets was from \$3.31 to \$4.42, or an average of \$3.76. In the Middle Atlantic States the average was \$3.37 over 101 local markets, or a range of from \$3.09 to \$4.19. The prices for the month of August for 3.5 per cent. milk, delivered at dealers' country receiving stations, were as follows: Chicago, \$3.52 per 100 lbs.; St. Louis, \$3.10; Kansas City, \$3.20; Cleveland, \$3.30; Buffalo, \$3.20; Pittsburg, \$3.25; Indianapolis, \$2.80. A few representative prices for market milk in different markets are herewith given, these prices being for 3.5 per cent. raw milk delivered at the city: Detroit, \$4.05; Buffalo, \$3.59; New York, \$3.77; Rochester, \$3.61; Cleveland, \$3.84; Dayton, \$3.23; Columbus, \$3.55; Pittsburg, \$4.07; Philadelphia, \$3.94; Harrisburg, \$3.44; Scranton, \$3.67. Dairy men will also be interested in some comment made by the Bureau officials with regard to the retailing of milk to grocery stores as a means of reducing prices to the consumer, more particularly as at the present time Ontario milk producers are up against the problem of procuring a more adequate price for their product without unduly adding to the cost of this product before it reaches the consumer.

"Numerous investigators of the costs of marketing fluid milk have developed the fact that in most markets the greater portion of the margin between farm prices and city retail prices of milk goes to defray the expenses of city milk dealers. Analyses of the expenses of numerous dealers in different cities show, moreover, that approximately from 2/3 to 3/4 of the difference between the cost of milk delivered in bulk at city railway terminals and the price at which it is sold to retail trade, is accounted for by the costs of city distribution, i. e., city delivery expenses as distinguished from expenses of plant operation. In other words, only about 1/3 or 1/4 of the dealer's total "spread" is to be accounted for by plant expenses such as are entailed in the receiving, weighing, clarifying, pasteurizing, bottling and cooling of the milk, and the cleansing and sterilizing of cans and bottles.

These facts suggest that the greatest possibilities of reducing the costs of market distribution of milk are to be found in the delivery end of the business rather than in plant operations. While there are considerable variations in the plant costs of different milk marketing concerns (dependent largely on the extent to which different sized plants are operated at full capacity) by far the most striking illustration of wastefulness of competitive activities in market distribution are to be found in the great differences in the per unit cost of sales to retail trade. Generally speaking, the costs of selling and delivering milk to family trade, after it has been pasteurized and bottled in city milk plants, vary from approximately 2 1/2 cents to 4 1/2 cents per quart. One of the chief causes for this wide variation in the expenses of selling and delivering milk, including also the collection and return of empty containers, is to be found in the differences in the average daily volume of sales per delivery route. On strictly retail routes the average daily sales commonly range from \$25 to \$65, which represent the sale of from approximately 200 to 450 quarts of milk or equivalents expressed in points or units of sale. The cost of operating retail routes is approximately the same, whether the sales are large or small; consequently the most effective way of reducing the cost of city distribution of fluid milk, is to increase the average of daily sales per route."

A table is given showing the records of sales of two milk dealers operating in Detroit, Mich., and Kansas City, Kan. The average amount of daily sales on each route, involving the distribution of from 1,225 to 1,575 quarts each, varied from \$148.40 to \$188.56. The daily gross profits per route, which represents the difference between the gross daily sales just given and the cost of milk delivered at the city plant, plus all expenses of operation and delivery, varied from \$18.15 to \$28.01 per route per day. Continuing, the comment of the Bureau officials is that "A comparison of the average volume of daily sales per route shown in the foregoing table with the usual average amount of sales on most retail routes, would suggest the possibilities of substantial reductions in the prevailing retail prices by marketing milk through retail stores. It is doubtless true that wholesale delivery routes are not generally quite as profitable as those referred to in the above table, but cost analyses of other dealers' businesses have shown that after milk has been bottled, it can be distributed through retail stores at a cost to the milk dealer of from 3/4 to 1 1/4 cents per quart, provided that retail stores are obliged to pay cash on delivery, including payment for shortages in empty bottles returned. Retail stores generally handle milk along with other goods at margins varying from 1, 1 1/2, 2 and 3 cents per quart. However, in cities where a large portion of the market supply of fluid milk is retailed through stores, the prevailing margin of the retailer is not usually greater than 2 cents per quart; and in some instances it is only 1 1/2 cents or even as low as 1 cent per quart.

"At present there are comparatively few cities in the United States where milk may be obtained regularly at prices which are lower than those prevailing on milk dealers' retail delivery routes. Perhaps the main reason for this condition is the fact that under a dual system of retailing milk (selling both from retail routes operated by milk dealers themselves and retail stores supplied by the same or other milk dealers) it is impossible to realize the economies inherent in an exclusive, or out-and-out, store system of retailing milk—the per quart cost of retail route deliveries increases as the volume of retail store sales increases. Unless dealers specialize on wholesale deliveries they cannot usually so organize their sales on delivery routes as to obtain the maximum loads; nor can a milk dealer afford to supply stores at prices substantially lower than his own route prices, when such stores are selling in competition with his own delivery routes."

With reference to the large cold storage warehouse to be constructed by the Dominion Government at Montreal to facilitate our export trade in animal and dairy products, J. A. Ruddick, Dairy and Cold Storage Commissioner, Ottawa, spoke recently as follows before the Cost of Living Committee of the House of Commons: "A large cold storage warehouse now under construction by the Harbor Commissioners of Montreal, will be situated on the docks; will have track connections with all railways, and will have at least one steamer berth where goods can be loaded direct. The location is very central, being close to the present produce district. Provision will be made for unloading directly from the cars into the warehouse, and from the warehouse direct to the steamer. This warehouse will have a total capacity of two million cubic feet and will cost in the neighborhood of \$1,500,000."

HORTICULTURE.

Standard Of Judging Vegetables.

The following standards for judging vegetables, as adopted at the 1919 session of the Manitoba Horticultural Association, were originally prepared by J. A. Neilson, now Lecturer in Horticulture at the Ontario Agricultural College, Guelph. It is the results of three years of preparation and revision, but we understand that it was necessary at the last annual meeting to make only a few minor changes. Readers who intend exhibiting vegetables at the fall fairs or exhibitions, or those who intend practicing selection work, would find these judging standards valuable in this work. It must be remembered that as a general rule in judging vegetables at fall fairs and exhibitions, quality and uniformity with size suitable for table use, should govern all awards.

ASPARAGUS.—Shoots should be thick, of medium length and uniform in thickness, tender, and free from blemish.

BEANS: BROAD.—Straight, broad, well-formed pods, filled with large, tender beans. Free from disease. Size of bean and length of pod to be determining factors. **STRING BEANS.**—Pods should be long, straight, moderately broad, tender and free from disease. Pods should be uniform. Color according to variety.

BEETS: LONG.—Should be medium in size, smooth and free from side roots, gradually tapering from crown to tip, and firm in texture. Cross-section cuttings should show fine dark red, tender flesh, free from white lines. Top small and compact. Roots should be uniform. **ROUND.**—Medium in size, firm, flat or round in shape, smooth, with a fine tap root. Flesh should be tender, firm, fine, and of a dark red color. Roots should be uniform.

CABBAGE: EARLY.—Generally round or heart-shaped. The heads should have fair size, be heavy, firm, hard and free from insect injury or disease. **LATE.**—Heads round or slightly flattened in shape, with a dense formation of dark green outer leaves, and inside leaves of cream color. Specimens should be heavy and have firm texture. **RED.**—Good shape, (round and flat.) Dark red in color. Texture firm and solid, with good weight. Specimens to be uniform. **SAVOY.**—Good shape (round or flat). Leaves close and compact, of a dark green color with a fine curl. Good weight.

CARROTS: (RED) LONG.—Roots should be long, straight and smooth, without any green at the crown; have a small compact top, be free from side roots, and gradually taper from crown to tip. Texture tender and crisp. Heart small with a large outer ring. Roots should be uniform. **HALF LONG.**—Half long, straight, free from side roots and gradually tapering, with or without blunt tip. Skin smooth. Cross-sections should show a small core and a large outer ring. Flesh should be tender and have a rich flavor. Roots should be uniform. **SHORT.**—Short, straight, of true ox-heart type. Smoothness and texture same as above.

CAULIFLOWER.—Head, large in size with a dense formation of flower, pure white in color and without small leaves in the head. Shape, round horizontally, with a nice, even, curving crown. Cauliflower should be exhibited trimmed.

CITRON.—Large, oblong or round, heavy specimens, and well colored throughout.

CELERY.—Head, leaf and stalk to be solid, clean, crisp and well blanched. Free from all blemish.

CORN: SWEET.—Cobs should have fair size and be well developed, with straight, even rows, well filled out at base and tassled end. The kernels should be tender, juicy and sweet. Ears should be uniform. **YELLOW.**—Same conditions to apply as in sweet corn.

CUCUMBERS: INDOOR.—Straight, of uniform length,

thickness and color, neck short, and should be young and tender. **OUTDOOR.**—Specimens should be of good form, straight, with thickness carried well out towards the ends; of a dark green color and heavy weight. Specimens should be uniform.

LETTUCE: CABBAGE.—Heads should be large, well-rounded, compact, composed of crisp, sweet leaves, free from any discoloration. **COS.**—Conical in shape, with straight, upright-growing leaves, well-blanched and crisp and with a firm heart.

ONIONS: LARGE.—Shape globular or flat, according to variety. Should be smooth and even in form, of good weight and color, and have a small well-ripened neck, with solid, firm texture, especially at the base of the neck. **PICKLING.**—Should range from 3/4 to 1 inch in diameter, be uniform in size and shape, clean, firm and white in color. Specimens should be uniform.

PARSLEY.—Head large and bushy, with numerous finely-curved dark green leaves, which should be crisp and free from discoloration of any kind.

PARSNIP.—Should be of medium length, broad at top, gradually tapering from crown to tip, smooth and straight, skin free from rust, firm in texture, and have a small core.

PEAS.—Pods long and straight, dark green in color and well filled with large, sweet-flavored, tender peas. Samples should be uniform in size and color and not over-ripe. Free from blemish.

POTATOES.—Specimens should have uniformity and be of good marketable size, with smooth, even shape, firm, solid, flesh, fine and white in color, and clean and free from disease of any kind. Potatoes with shallow eyes are preferred to those with deep eyes. All potatoes exhibited in different classes should be true to type and color.

PUMPKIN.—Round or oblong in shape, symmetrical, large, thin-skinned, firm in texture, with deep yellow or creamy-yellow color according to variety.

RADISH: SUMMER.—Medium size; smooth, even form; free from blemish and side roots; firm texture and mild flavor. Cross sections should show solid, fine white flesh. Specimens should be uniform. **WINTER: LARGE.**—Conditions as above to apply.

RHUBARB.—Stalks medium in diameter, long, straight tender, smooth, and bright red in color.

SALSIFY.—Large, clean smooth and finely tapered.

SPINACH.—Specimens should be large with heavy foliage; broad, dark green tender leaves; free from disease and insect injury.

SQUASH: WINTER.—Should be large, heavy, and firm in texture, with color and shape according to variety.

HUBBARD.—Conditions as above to apply.

VEGETABLE MARROW.—Large size, oblong in form, smooth and even, with uniform thickness and good weight. Texture firm and in condition for table use. Color varies from a creamy yellow to green.

TOMATOES.—Medium in size, with an even, well-rounded shape; smooth, fine, well-colored skin, firm texture. Not over-ripe. May be pink, bright red or yellow. Specimens should be uniform. Free from blemish.

TURNIPS.—Medium size, with smooth, symmetrical form, free from side roots, firm in texture and heavy. Cross-sections should show fine firm, evenly colored flesh. Color varies from white to light yellow according to variety.

POULTRY.

Killing and Plucking Poultry.

If poultry that is killed and dressed on the farm is to command the best price on the local or larger city markets, it is necessary that it be prepared in such a manner as will make it most attractive to the purchaser. It has been estimated that fully thirty per cent. of all poultry shipped into the larger cities is not properly bled, and a great deal of it is in such a poor condition that it retails at a loss of from two to five cents per pound, as compared with other birds marketed in the proper condition. Insufficient bleeding gives the body of the bird a bad appearance, and causes more rapid spoiling. In addition, the flavor is partially destroyed and the flesh loses its natural firmness.

Before killing, the birds should be starved for twenty-four hours, giving only fresh, clean water during this time. Fasting for this period empties the crop and partially empties the intestines, both of which conditions are very desirable for the reason that a distended crop destroys the appearance of the bird and with the latter is put into storage with its crop full the body of the bird will be discolored. Unless the intestines also are emptied as well as possible, the same effects follow, and the contents offer a good field for the development of putrefactive bacteria.

As mentioned before, the essential point in killing is to empty the blood vessels as thoroughly as possible; in other words, the birds should be well bled, a factor which is of more than ordinary importance if dry plucking is followed. Beheading is the common way of killing birds on the average farm where only a few are killed at a time, but the larger markets do not like birds killed in this way because they are not attractive, and, moreover, they do not keep well. Another method of killing poultry is by dislocating the neck. This, however, is not very common and consists in holding the bird's head, just back of the jawbone, with the right hand while the left takes hold of the body at the shoulders. The neck is then bent backward and turned about three-quarters of the way around, then extended quickly with considerable force. This method of killing dislocates the spinal column and causes instant death. It is moreover, rapid and clean, but does not permit

of free bleeding which practically prevents it from being used where birds are to be held in storage.

Sticking is undoubtedly the best method, and consists in severing the arteries of the neck by means of a small knife inserted in the mouth. When the feathers are to be removed by the ordinary scalding method, the mere severance of these arteries is sufficient, but if dry plucking is followed the muscles of the feathers must be paralyzed by further piercing the brain. A very satisfactory knife for sticking can be made by using an eight-inch flat file and grinding this down on an emery wheel, or grind-stone so as to make a knife about seven inches long over all, with the blade two inches long and only about a quarter of an inch wide. The cutting edge should be straight and sharp, the ordinary curved edge on some knives not being satisfactory for this purpose. Before sticking the bird, it should be hung up by the feet with a small rope or cord. A common method is to use a rope with a small block attached at one end and with the other end fastened to a pole or a stringer of some kind overhead. The end of the rope on which the block is attached is wrapped around the feet and then the block dropped in between the feet and the rope. When hanging up, the feet should be about level with the shoulders of the person doing the killing and plucking. When the bird is ready for bleeding, the head should be taken with the thumb and forefinger at the juncture of the neck and head so that the under side of the head faces the operator. The knife is then inserted in the mouth, about the full length of the blade, and with the edge of the blade turned down, a rather heavy cut should be made with a drawing stroke of the knife. This will sever the jugular veins at the point where they unite at the back of the head, and if the cut has been made properly the bird will bleed freely. Where dry plucking is to be followed, the blade should then be turned over and the point inserted in the slit or groove in the roof of the mouth. A quick push backward will pierce the brain, and the chicken will immediately squawk. If it does not squawk it means that the brain is not pierced, and plucking will be much more difficult. These two operations can be completed practically before bleeding is well started, but immediately afterward a blood-can should be attached to the lower bill. These cans are usually weighted at the bottom so as to prevent undue movement on the part of the bird. The chicken should then be immediately plucked, the long wing feathers and tail feathers being removed first, then the breast, the legs, and finally the back.

Discussing the dry plucking of fowl, Bulletin 247 of the Ontario Agricultural College says: "Do not try to pull the feathers either forward or backward, but more sideways or at an angle. The rough or coarse feathers should be removed in the shortest time possible, as the more quickly the feathers are removed after sticking, the easier they will come and the less danger there is of tearing the skin. For instance, in removing wing feathers grasp both wings in the left hand and the feathers of both in the right, removing them all at one stroke of the right hand. Next, raise the right hand to the tail, grasping all the feathers in the tail, and with a slight twist remove with a second stroke of the right hand, and so on over the different sections of the body. To remove the pin feathers use a dull, round-bladed knife, similar to an ordinary paring knife. Be careful not to rub or bark the skin. This may be done very easily by rough handling, or by placing the chicken in contact with coarse clothing, hence do not put a chicken on your lap to pluck it. If you should unfortunately, tear the skin, hold the skin at the torn part tightly to the body between the thumb and first finger, and then remove the rough feathers near torn part. Anyone with a little practice can remove the rough feathers in from three to five minutes. Expert pickers will do it in from three-quarters of a minute to one minute.

"The birds should be plucked clean, the blood washed from the head and out of the mouth and the feet washed clean."

FARM BULLETIN.

Beware of Fraudulent Subscription Agents.

We learn that strong-armed subscription agents from Western Canada have appeared in Ontario with the intention of working this Province during the fairs, and we desire to warn our readers and prospective subscribers against any misrepresentation that may be perpetrated. Agents are inclined to work on the good name of The Farmer's Advocate and Home Magazine in order to get, by unfair methods, subscriptions to other papers. Whenever you pay money to an agent make sure your receipt reads: The Farmer's Advocate and Home Magazine," London, Ontario, and do not accept as bona-fide any receipt where this names or address has been altered with pen or pencil. Other papers may have a similar name, but there is only one which bears the name The Farmer's Advocate and Home Magazine. Make sure before paying your money that these words, as printed here, appear on the blank form and, furthermore, see that the address is London, Ontario. We sound this note of warning that farmers may not have other papers foisted upon them which they do not desire and would not subscribe for. Please report immediately the name and personal description of any agent seeking subscription from you who cannot show satisfactory proofs that he is authorized to act for us.

We will pay a handsome reward for information which results in convicting fraudulent agents.

As this successful (the second previous expression exhibitions cast a shadow the Canada determined that five National gr on those suc arly success that in Au Victory fla captured G and parade Passchendai "shows" ri finally and 1919 Canada of victory, sion of joy l

While t of all, there ment of th those whos gained for full of wa will be as g All branche to feel tha and sobrie prevented country.

Attenda increased General S guests of th the two ve dition to th to be thr round the when aviat of more im of aeronau The daily ac closely for v daring exp sisted of a pictures, bu in the man Dominion C studying th of all kind space avail permit of a to be seen in over the 26 grounds, an following pa outstanding leaving the dealt with it

The Gov just inside from former somewhat o though was display wh neighborhood by the Prov the activiti culture usua and this ye arch while a Lion occup in this depa manner the other year petitions o agricultural the Ontario, and the Can with display ing was a magnitude practically coal and ti produces 45 Canada, A and located ment of Ga cultural Bu various win instruments, and fruit is l

Much fa the Dairy B is housed a tempting vi was an exc Division of hand to ins products in desir partic

Victory Year at the Canadian National.

As this is being written the forty-first and most successful Canadian National Exhibition is entering upon the second week with fair prospects of surpassing all previous events of its kind in regard to exhibits, performances and features which combine to give a tangible expression to the mind and spirit of the Nation. Five exhibitions were held at Toronto while the war cloud cast a shadow of doubt and sorrow across the minds of the Canadian people. Those were the days of grim determination and "carry on" and it was in that spirit that five successful fairs were held on the Canadian National grounds. Little did the public think, however, on those sad days when reports were featured by temporary successes, over-shadowed by casualties and reverses, that in August, 1919, Toronto Fair could hoist the Victory flag and proclaim with the exhibition of 150 captured German guns, vast quantities of war trophies, and parades staged by the heroes of St. Julien, Amiens, Passchendaele, Cambrai, Festubert, Ypres, and other "shows" right down to Mons that the Hun had been finally and overwhelmingly defeated. Visitors to the 1919 Canadian National move about in an atmosphere of victory, but, alas! in many cases the outward expression of joy hides tragedy in the heart.

While the idea of victory is borne in upon the winds of all, there are features which symbolize the re-establishment of soldiers into civilian life; and the utterances of those whose intelligence or knowledge of public affairs gained for them a hearing at the luncheon board, were full of warning that the complex problems of peace will be as great if not greater than the problems of war. All branches of society must be re-established and made to feel that only by unity, self-sacrifice, perseverance and sobriety will hardship and ultimate hard times be prevented from seriously affecting the future of this country.

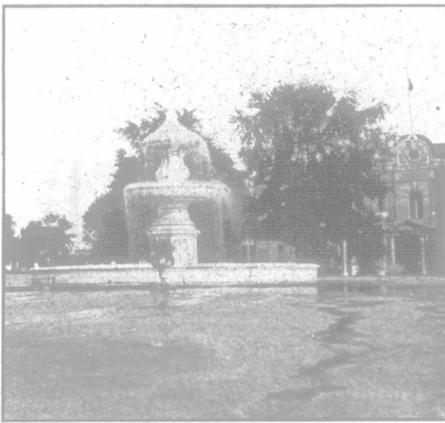
Attendance and interest in this year's Fair were increased by the presence of the young Prince and General Sir Arthur Currie. Other notable persons were guests of the Exhibition from day to day and throughout the two weeks there was always some feature, in addition to the show itself, to make it worth one's while to be there. In some circles much interest centred round the aerial contest held during the first week, when aviators flew to New York and return. This was of more importance through its influence on the future of aeronautics than as a spectacle for sightseers. The daily aeroplane flights and manoeuvres were watched closely for we have not yet become accustomed to man's daring exploitation of the air. The art feature consisted of a remarkable collection of war memorial pictures, but the general public took a greater interest in the mammoth display of war relics owned by the Dominion Government. Here people lingered for hours studying the various weapons, uniforms, and trophies of all kinds taken from now vanquished foes. The space available in one issue is entirely inadequate to permit of anything like a full description of what was to be seen inside and outside of the 70 buildings scattered over the 264 acres which comprise the exhibition grounds, and as much is to be commented on in the following pages, we shall here refer briefly to the outstanding features in which readers may be interested, leaving the matter of competitions and awards to be dealt with in greater detail.

The Government Building which stands to the right, just inside the main entrance, was not vastly different from former years although the exhibits were arranged somewhat differently. Worthy of particular mention though was the Board of Health and Child Welfare display where free clinics were held daily. In its neighborhood, too, was a commendable display erected by the Provincial Secretary's Department exemplifying the activities at the Hospitals for the Insane. Agriculture usually occupies the centre wing of this building and this year it was prefaced at one end by a gigantic arch while at the other end Miss Canada and the British Lion occupied a prominent position. The products in this department were displayed in a much different manner than usual with a view to lending variety from other years. The Fruit Branch and the Field Crop Competitions deserve the credit for the greater part of the agricultural exhibit, but the Ontario Veterinary College, the Ontario Agricultural College, the Women's Institutes and the Canadian Fertilizer Association were represented with displays. Inside the main entrance of this building was a provincial mineral exhibit of considerable magnitude and attention was drawn to the fact that practically all the minerals found in Canada except coal and tin are mined in Ontario, which province produces 45 per cent. of the total mineral output of Canada. Among other exhibits found in this building and located in the south wing was a decidedly interesting and instructive one provided and erected by the Department of Game and Fisheries. The body of the Horticultural Building was a veritable flower garden and the various wings were occupied by seed firms, musical instruments, etc. One wing is given over to vegetables, and fruit is brought on during the second week.

Much favorable comment could be made concerning the Dairy Building where the cheese and butter exhibit is housed and various packing houses display their tempting viands to the consumer's eye. Here, also, was an excellent display of honey, and the Poultry Division of the Live Stock Branch, Ottawa, was on hand to instruct the producer and handler of poultry products in practices peculiar to the business. We desire particularly to commend the display of butter,

cheese, and milk products of all kinds arranged by the Dairy Branch of the Ontario Department of Agriculture. The staple products made from milk were temptingly set forth and by the use of charts a strong argument was made in favor of a more liberal use of milk, the natural and cheapest food for the human race. The importance of the dairy industry in Ontario was impressed upon visitors by the figures which showed that 970 cheese factories, 160 butter factories, 9 condensed milk factories and 5 powdered milk factories are required to absorb a portion of the lactic supply, and the total volume of milk produced on Ontario farms amounts to \$74,427,300.

Owners and prospective owners of automobiles and motor trucks spent many interesting hours in the Transportation Building—where the very latest models were displayed. This building was perhaps the most artistically decorated of any, but once inside, that was forgotten when the mind became fixed on something new in lines of equipment, models or the great array of accessories.



The Fountain at the National.

We shall not attempt to describe the interior of the manufacturer's building but suffice it to say that it was a woman's paradise, and even men were wont to stroll there under the pretence of accompanying their wives or lady friends. Under the Grand Stand was a grand array of Dairy equipment, cleaners, washing machines, harness, boots, toys and a miscellaneous display. The Industrial and Process Buildings were never more attractive, but here we must pause to mention the process exhibit by returned soldiers who have been re-educated in civilian pursuits. There they were engaged in dozens of the 300 occupations which are absorbing the war heroes and a very favorable impression was created by these men, many of whom on account of disabilities are obliged to re-educate themselves for occupations which suit their infirmities. In the outdoor agricultural section there were a few new features exemplifying a further use of gas on the farm. Tractors predominated, but many labor saving devices were seen at work and a good opportunity was afforded users of motor power to discuss their problems with experts and study the whole power proposition.

Another exhibit of agricultural importance was that revealing the wonderful possibilities of Northern Ontario. Here were seen a sample of this year's growth of timothy 5½ feet high, red clover which grew 24 inches in 30 days, and alfalfa which acquired a length of 40 inches in 35 days. In addition to these were pea vines 9 feet long and corn from 11 to 12 feet high. The exhibit of potatoes upheld the reputation of the country as a seed potato district, while the grain and grass seed were further evidence in favor of that vast agricultural territory now awaiting settlement. Whatever the hardships of the modern pioneer may be, it is certain from this exhibit that drought was not a contributing factor during the season now past, when older settled districts were crying out for rain.

Another extensive exhibit of special interest to sheep raisers was that prepared by the Live Stock Branch Ottawa. A full-size sheep-dipping plant was shown, feed-racks, pens, creeps, etc., of most up-to-date design were displayed and the proper kind, as well as the type of breeding stock not to use, were actually on exhibition. In addition to this, wool-grading was featured with all the equipment necessary to conduct it properly.

The more important features from an agricultural viewpoint only have been mentioned here, but before passing on to live stock and animals, it is only fitting that we should briefly refer to a freshly-covered grave on a quiet corner of the judging ring. Passers-by, attracted by the ungrazed turf and the modest slab and railing, reverently pause to gaze upon the last resting place of a one-time conspicuous figure, but solemn countenances beam with joy when they read: "Here Lies the Scrub Bull Ontario's Live Stock May Flourish Now."

Concerning live stock much will be recorded in the succeeding columns, and in the next issue of "The Farmer's Advocate." Suffice it to say here that the

live-stock industry of Canada gives every promise of expansion, for under the most unfavorable conditions known in years (in regard to feed, labor, importations and all factors which have a direct influence in the business) the live-stock department of the Canadian National maintained its high reputation and in some respects eclipsed previous records.

Dairy Cattle.

The showing of dairy cattle at the National is ever one of the most interesting features of the live-stock classes, and, for that matter, of the whole exhibition, to those who are to any degree interested in agriculture. There is no discounting the very great value of the dairy industry and, admitting this, the pure-bred is the dairyman's best friend, and a very essential factor in the success of the industry. Numerically the dairy cattle were not so strong as last year, for which it might be possible to assign very good practical reasons, but it is, nevertheless, unfortunate that more smaller breeders, or breeders new to the show-ring, do not appear at the National and assist the cause of the pure-bred and their own particular choice of a breed more actively.

Of course, there are breeders every year who, early in the season, make up their minds to show, but who for a variety of reasons do not finally come. Sometimes these reasons are really good, but occasionally they appear more important than they really should, with the result that the show, the breed and admirers of good type in useful animals are deprived of good entries. Inexperienced exhibitors are prone to reason that the "big men" will get all the good placings and preferential treatment. This should not and need not be. It is wrong and unfair, and if it does, unfortunately, happen in certain cases, there is no surer way of securing fair treatment for all than to add to the number of exhibitors. Most fair boards want honest judging; most judges and breeders want to see justice done; and it is only the odd man, to whom money is more than honesty, who occasionally succeeds in spoiling the good sportsmanship of the ring.

Holsteins.—The Holsteins this year were not so satisfactory in either numbers or quality as last year. Certain individuals and certain classes were all that could be desired, but, generally speaking, the classes were not as uniform as they should be. Black and whites hold an enviable reputation as a great dairy breed, and it is not fair that lack of uniformity at the fairs should prove a deterrent to progress. During the last few years the outcropping of millionaire speculators in high records has led to too near a vision of the almighty dollar for the good of the breed. Perhaps the recent upheaval in American Holstein circles will provide us with a new perspective and lead to more progressive development of the breed for the breed's sake. E. S. Archibald, Director Dominion Experimental Farms, Ottawa, placed the awards.

The senior bull class numbered thirteen and constituted as fine a showing of senior dairy sires as the National has ever called forth. It was not that this large number were absolutely uniform, for this could not be said, but for a class of such numerical strength, the uniformity was excellent. Last year's senior and grand champion, Bonerges Hartog, again won premier honors in his class and in the male section. There is no doubt that this bull is a magnificent specimen of the breed, his wonderful depth and even lines constituting a standard difficult to surpass. He handles as well as he looks and were he a little longer, little more could be desired. Prince Bonheur Abbecker, last year's junior champion and runner up for grand honors, was a second in the aged class this year. He is a strong bull, perhaps a little over-fitted and not so good behind, but he was good enough to win from Count Plus Inka Sylvia, a lighter bull not carrying the same fleshing. Fourth position was ably filled by Avondale Segis Korndyke Pontiac, while Major Sylvius Colantha stood fifth.

Two-year-old bulls were only three in number, led by Count Paul C. Posch, last year's winner as a junior yearling. This fellow is a very clean-cut individual and although smaller and younger than King Fayne Alcartra, winner of second honors, carried sufficient quality to win. King Korndyke's Lulu Keyes looked well in third position. He was too fat and lacked the strong top and good heart girth of King Fayne Alcartra, although the latter is perhaps slightly coarse in front.

Sir Valdessa Banks was a lone and none too worthy representative of the senior yearlings, and he was well served with a second prize. Nine bright ones made competition among the junior yearlings, however, where quality and character combined to send Riverside Sir Totilla Hartog to a well-merited position at the top. He was in splendid fit and handled beautifully. King Paul Pontiac Echo reached second place over the depth and conformation of Elmerest Teake Netherland, Calamity Sylvius standing fourth.

Seven senior calves did not make a particularly strong class, although Duke Ormsby Mercena, easily an outstanding youngster, had no difficulty in annexing first honors, and, in fact, the junior championship. Sir Midnight Aggie Valdessa showed slightly rougher and inferior in quality, with perhaps less middle, although the third prize winner, Sir Colantha Shadeland Segis was more upstanding and in none too good fit.

Junior calves numbered six, topped by a very sweet and well-proportioned youngster, King Nicolo Korndyke Keyes. His closest follower was Count Paul Ladoga,

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BULLETIN.

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hardly as well topped, but the latter easily beat King Colanthus Valdessa, relegated to third.

The aged milking cow class saw ten pretty fair females lined up. They were not a uniform lot, but there were nevertheless some excellent individuals among them. Homestead Susie Colantha led off, and a strong, heavy-barrelled cow she was too. She lacked fitting, but won on type and udder over Pauline Colantha Posch, an older cow showing her age somewhat at the neck and udder. Beauty Pietertje Mechthilde, last year's senior and grand champion, was forced to third, notwithstanding that she forced the old cow to second place last year amid greater numbers. She has youth and freshness, but her back udder shows unevenness. Manor P. H. Belle, stayed at fourth because she lacks somewhat in smoothness and quality. She is, however, a good working cow.

The three-year-olds in milk were an unsatisfactory class. Only three came out, and aside from Francy Maid 2nd, eventually senior and grand champion, the breed had nothing to boast of. She, however, is a strong-backed and strong-bodied cow with a good udder. The two-year-olds were much better on the whole and were led by Aggie Butter Baroness. Pauline Mercena Colantha achieved second in a class of seven, forcing Braeside Susie Fern to third, while Manor Keyes Summerville stepped at fourth position.

The dry classes among the females were led by ten good matrons. These were cows four years old and over. Quality was essential to leadership here, but Lucy Gray had more than enough to head the line. She had, in addition, notable veining and a strong back. Following her came Jessie Grace Keyes, a splendid cow and a past winner at Ottawa, but she needed more heart girth to repeat at the National this year. The quality, however, forced Bessie Belle Banks to third, although the latter carried better veining.

Maple Grove Rose led the three-year-old dry cows in calf, followed by Bessie Belle Fayne and Centre View Mary Abbekerk. Seven good animals constituted this class. Among the two-year-old heifers in calf, Oakhurst Midnight Comet led with milkiness combined with quality and capacity. Her nearest neighbor was Patricia Colantha Abbekerk, that, with a little less quality and depth yet easily led Clara Springbank Beets,

Clarkson, Ont.; Haley & Lee, Springford, Ont.; Dymont Bros., Dundas, Ont.; M. & W. Schell, Woodstock, Ont.; James Rettie, Norwich, Ont.; Milton Press Brick Co., Milton, Ont.; W. C. Prouse, Tillsonburg, Ont.; A. E. Hulet, Norwich, Ont.; Allied Stock Farm, Wilsonville, Ont.; C. C. Kettle, Wilsonville, Ont.; C. N. Hilliker, Burgessville, Ont.; T. A. Trick, Clinton, Ont.; J. E. Brethour & Nephew, Burford, Ont.; J. S. Watson, Woodbridge, Ont.; Sir John C. Eaton, Toronto, Ont.

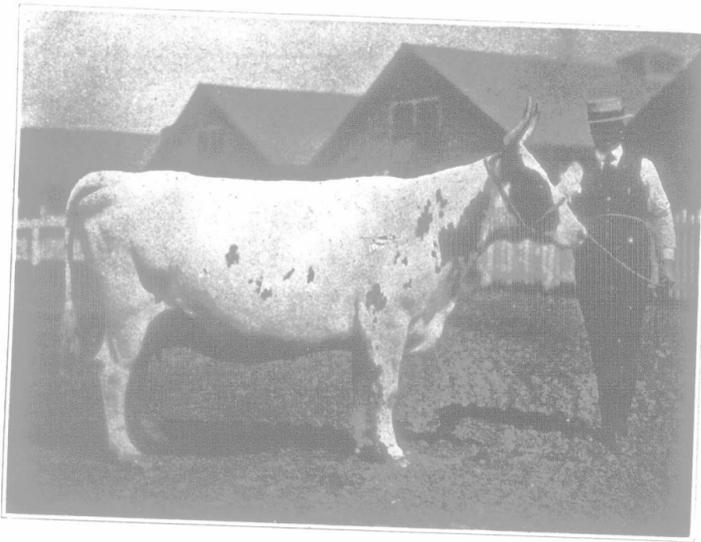
Awards.—Aged bull (13): 1, Haley & Lee, on Bonerger Hartog; 2, Marshall, on Prince Bonheur Abbekerk; 3, Watson, on Count Plus Inka Sylvia; 4, Gooderham, on Avondale Segis Korndyke Pontiac; 5, Hulet, on Major Sylvius Colantha; 6, Milton Press Brick Co., on Butter Baron Hengerveld; 7, Schell, on Colantha Fayne Butter Baron. Bull, 2 year (3): 1, Hulet, on Count Paul C. Posch; 2, Haley & Lee, on King Fayne Alcartra; 3, Gooderham, on King Korndyke's Lulu Keyes. Bull, senior yearling (9): 1, Dymont Bros., on Riverside Sir Toitilla Hartog; 2, Hulet, on King Paul Pontiac Echo; 3, Hilliker, on Elcrest Teake Netherland; 4, Haley & Lee, on Calamity Sylvius; 5, Prouse, on Duke Aaggie Colantha; 6, Gooderham, on King Keyes Tensen; 7, Trick, on Joseph Canary Keyes. Senior bull calf (7): 1, Rettie, on Duke Ormsby Mercena; 2, Prouse, on Sir Midnight Aaggie Valdessa; 3, Schell, on Sir Colantha Shadeland Segis; 4, Dymont Bros., on Hartog Colantha; 5, Haley & Lee, on Sir Sylvia Colantha; 6, Gooderham, on King Artis Keyes; 7, J. S. Watson, on Prince Canary Sylvia. Junior bull calf (6): 1, Gooderham, on King Nicolo Korndyke Keyes; 2, Hulet, on Count Paul Ladoga; 3, Prouse, on King Colanthus Valdessa; 4, Trick, on King Segis Wafker; 5 and 6, Allied Stock Farm, on Braeside Pontiac Prince and Allied Howtje Posch.

Cow, 4 years and over, in milk (10): 1, Haley & Lee, on Homestead Susie Colantha; 2 and 5, Hulet, on Pauline Colantha Posch and Della Schuiling De Kol; 3, Dymont Bros., on Beauty Pietertje Mechthilde; 4, Gooderham, on Manor P. H. Belle; 6, Allied Stock Farm, on Faforit Kent; 7, Schell, on Helen Panarista Segis. Cow, 4 years and over, in calf, not milking (10): 1, Rettie, on Lucy Gray; 2, Gooderham, on Jessie Grace Keyes; 3 and 4, Haley & Lee, on Bessie Belle Banks, and

Jeanette Sylvia Fayne, Jean Sylvia Fayne and Aaggie De Kol Sylvia; 3 and 5, Hulet, on Lady Pauline Ladoga and Madam Pauline Sylvia 2nd; 6, Gooderham, on Manor Keyes Nicolo; 7, Dymont Bros., on Canary De Kol Tensen; 8, Rettie, on Bessie Atlas Colanthus. Senior and grand champion male: Rettie, on Duke Ormsby Mercena. Senior and grand champion female: Hulet, on Francy Maid 2nd. Junior champion female: Hulet, on Lassie Echo Abbekerk.

Senior herd: 1 and 5, Haley & Lee (herd headed by Bonerger Hartog and King Fayne Alcartra); 2, Rettie, (Pontiac Atlas Colanthus); 3, Hulet, (Count Paul C. Posch); 4, Gooderham, (King Korndyke Lulu Keyes); 6, Dymont Bros., (Smithdale King Colantha); 7, Allied Stock Farm, (Manor King Segis Korndyke). Three, get of one sire: 1 and 4, Haley & Lee, (get of May Sylvia Pontiac Cornucopia); 2 and 6, Hulet, (Prince Colanthus); 3, Rettie, (Prince Colanthus Abbekerk); 5, Gooderham, (King Korndyke Sadie Keyes); 7, Allied Stock Farm, (Manor King Segis Korndyke). Two, progeny of one cow: 1 and 5, Haley & Lee, (progeny of Nettie Fayne 2nd and Shadelawn Colantha Queen); 2 and 7, Hulet, (Pauline Colantha Posch and Lady Veeman Abbekerk); 3, Allied Stock Farm, (Maggie Kent); 4, Rettie, (Bessie Posch Francy 2nd); 6, Pro se, (Oakhurst Butter Girl 3rd). Junior herd: 1, Hulet, (herd headed by King Paul Pontiac Echo); 2, Haley & Lee, (Calamity Sylvius); 3, Rettie, (Duke Ormsby Mercena); 4, Dymont Bros., (Riverside Sir Toitilla Hartog); 5, Gooderham, (King Nicolo Korndyke Keyes); 6, Prouse, (Duke Aaggie Colantha); 7, Schell, (Sir Colantha Shadeland Segis). Breeder's herd: 1, Haley & Lee; 2, Hulet; 3, Gooderham; 4, Prouse; 5, Schell; 6, Allied Stock Farm; 7, Dymont Bros. Breeders' graded herd: 1, Haley & Lee; 2, Hulet; 3, Gooderham; 4, Prouse; 5, Dymont Bros.; 6, Allied Stock Farm; 7, Schell.

Ayrshire.—Five Ayrshire breeders brought out a memorable showing of the "bonnie" Scotch breed. Not only were the classes well represented, but the quality and character of the entries surpassed that of past shows. There is a marked uniformity of type in the various herds which shows the different breeders



Maple Leaf Jean.

Senior and grand champion Ayrshire cow at the Canadian National Exhibition, Toronto, 1919. Owned and exhibited by Hunter Bros., Freeman, Ont.



Lessnessock Golden Love.

Senior and grand champion Ayrshire bull at the Canadian National Exhibition, Toronto, 1919. Owned and exhibited by Gilbert McMillan, Huntingdon, Que.

a rather large, raw heifer with the makings of a splendid cow.

Twelve senior yearlings next appeared, but udder development and quality put Lassie Echo Abbekerk, on the top, and later on junior champion female. Nettie FINDERNE Ormsby finished close up at second. While she might possess a better udder, her strong back and constitution nevertheless served her well. Pauline Colantha Canary 2nd, looked good in third position with her quality and udder development, but a weakness was noticeable on the top line.

Another twelve snappy heifers came out as junior yearlings and made some real thoughtful work necessary for the judge. Mercena Segis Lass finally scored a win, on a combination of strength and quality, over Lady Beeman Abbekerk 3rd, a heifer in good fit and with plenty of strength, but inferior in quality. Some coarseness behind shoved Maggie Clothilde Ormsby 2nd down to third place, where she was followed by Echo Colantha Johanna in fourth.

The classes, as usual, were strong, and sixteen likely youngsters required some time to place. Sylvia Mercedes, a straight, strong and even calf led them all, however, with Sylvia Butter Baroness hugging her close. Grace Sylvia Posch, more upstanding and with a poorer top line, carried off third, making the third of a trio in this class for the same exhibitors.

Twins led the twenty-one babies in the next class. This line-up was crowded with good ones, and there was not much choice between Jeanette Sylvia Fayne and her twin, Jean S. F. Both were nice, as indeed were Lady Pauline Ladoga, that followed, and Aaggie De Kol Sylvia that stayed at fourth.

Exhibitors: W. E. Watson, Pine Grove, Ont.; K. B. Marshall, Dumfries, Ont.; G. S. Gooderham,

Nettie Fayne 2nd. Cow, 3 years old in milk (3): 1, Rettie, on Francy Maid 2nd; 2, Hulet, on Winnie Dewdrop Keyes; 3, Prouse, on Alice Rattler. Cow, 3 years old, in calf, not milking (7): 1, Trick, on Maple Grove Rose; 2, 3 and 4, Haley & Lee, on B. B. Fayne, Centre View Mary Abbekerk and Shadelawn Mercedes Queen; 5, Gooderham, on Manor Segis Princess. Heifer, 2 year, in milk: 1 and 7, Haley & Lee, on Aaggie Butter Baroness and Colantha Fayne Butter Girl; 2, Rettie, on Pauline Mercena Colantha; 3, Allied Stock Farm, on Braeside Susie Fern; 4, Gooderham, on Manor Keyes Summermill; 5, Hulet, on Ladoga Idaline Mercena A.; 6, Dymont Bros., on Pauline Pontiac Echo. Heifer, 2 years, in calf, not milking: 1, Prouse, on Oakhurst Midnight Comet; 2, Hulet, on Patricia Colantha Abbekerk; 3 and 4, Dymont Bros., on Clara Springbrook Beets and Princess Fayne Pontiac. Heifer, senior yearling (12): 1, 3 and 7, Hulet, on Lassie Echo Abbekerk Pauline Colantha Canary 2nd, and Madam Vale Abbekerk; 2 and 5, Haley & Lee, on Nettie FINDERNE Ormsby and Miss Veeman; 4, Dymont Bros., on Cora Segis Wayne; 6, Prouse, on Alfalfadale Queen Valdessa. Heifer, junior yearling (12): 1, Dymont Bros., on Mercena Segis Lass; 2, Hulet, on Lady Veeman Abbekerk 3rd; 3, Rettie, on Maggie Clothilde Ormsby 2nd; 4 and 5, Haley & Lee, on Echo Colantha Johanna and Nellie Wayne Pontiac; 6, Gooderham, on Manor Jewel Keyes; 7, Allied Stock Farm, on Maggie Kent Schuiling. Heifer, senior calf (16): 1, 2 and 3, Haley & Lee, on Sylvia Mercedes, Sylvia Butter Baroness and Grace Sylvia Posch; 4, Gooderham, on Manor Keyes Princess; 5, Schell, on Netherland Fayne Baroness; 6, Dymont Bros., on Francy Tensen De Kol; 7, Hulet, on Lady Veeman Ladoga; 8, Rettie, on Segis Pride De Kol. Heifer, junior calf (21): 1, 2 and 4, Haley & Lee, on

to have the same ideal in mind. Alf. Kains of Byron, was judge.

In the aged-bull class the chief contest was between McMillan's Lessnessock Golden Love and Turner's Humeshaugh Invincible Peter. Both are excellent individuals, but are of slightly different type. The former commands attention with his masculine carriage, bold front, well-proportioned body and clean-cut head. He is a long bull with a smooth, neat shoulder and lengthy, well-filled quarters. The Turner bull is also a show animal, but with scarcely as fine dairy quality as his rival. He is a shorter coupled, lower-set, thicker bull, a worthy son of Hillside Peter Pan. The two entries from the Ness herd were not fitted for such strong company. However they are two good individuals and if in bloom would appear to better advantage.

A quartette of two-year-olds made an interesting class. Auchinbrain Union Jack is a son of the winner of the aged class falls well within the pattern established by the former class and bears tribute to the influence of a good sire. His markings and conformation are very much like his sire. Humeshaugh Perfect Peter, a straight, deep-bodied full-hearted bull was second. He is scarcely as long bodied or as well quartered. Selwood Ideal Rosewood worked up to third. He is a good-fronted animal with Ayrshire type and quality, but might be faulted for not being let down sufficiently in the twist. Seven senior calves competed for four places. Springburn Golden Morn, a bonny youngster by the winner of the aged class carried the red ribbon and also annexed the junior championship. He is a sweet calf with splendid outline. Undoubtedly he will be heard of again in show circles. Springbank General fitted nicely in second place. Eight junior

calves developed. The female room for Henny at the end of the posing circuit sufficed for formation parison cow, she added to forward, favor of t ship test placing of Lady was a decision difference land Lady with exc stronger cow in th coarse to with the money an the second Four and return Here was veining c has plenty no doubt, it is need but she d udder exhib There but it wa three priz without a haugh Na on account owing to l udder. W fairly good class comp Springburn claims to a There was line. The thro strong. of the large of true Ay balanced ud Maple Lea six-year-old mostly whi smooth sho barrel. She Being dry h well attach older cow w conformation ston 5th in in the past, indicate tha Pride in four an excellent vanced in la all the entri of Springba is a heifer in high fit. substance t Bains 2nd rterned after scale and wa A useful class. They typey cows place stool land Mastee deep, body burn Belle in the ring, con vantage as t heifer with a not look out were a thick, side Emma 1 senior calf clasters. Exhibitors. Huntingdon, Corner: Hun Campbellfor Awards.—Golden Love Peter; 3 and Douglas. B brain Union Perfect Pete Stans II, on S Turner, on yearling, 21, on Robinho 1, McMillan, on Springban master; 1, F Bull, junior c Glow; 2 and

Sylvia Fayne and Aaggie, on Lady Pauline Ladoga 2nd; 6, Gooderham, on Hymment Bros., on Canary Bessie Atlas Colanthus. male: Halcy & Lee, on champion male: Rettie, on prior and grand champion 2nd. Junior champion Abbeker.

Lee (herd headed by Alcartra); 2, Rettie, Hulet, (Count Paul C. Korndyke Lulu Keyes); King Colantha); 7, Allied (Korndyke). Three, Lee, (get of May 2 and 6, Hulet, (Prince Colanthus Abbeker); Lyke Sadie Keyes); 7, King Segis Korndyke); 5, Haley & Lee, (progeny of Alawn Colantha Queen); Antha Posch and Lady Stock Farm, (Maggie Francy 2nd); 6, Pro se, Junior herd: 1, Hulet, (Latic Echo); 2, Haley & Rettie, (Duke Ormsby (Riverside Sir Toitilla nicolo Korndyke Keyes); Antha); 7, Schell, (Sir reeder's herd); 1, Haley; 4, Prouse; 5, Schell; ment Bros. Breeders' Hulet; 3, Gooderham; Allied Stock Farm; 7,

calves made a strong class and show indications of developing into promising herd sire material.

The aged cow in milk, one of the best classes of the females, presented no surprises, but it did leave room for some differences of opinion. Chapmanton Henny at once loomed up as a profitable first and to the end none of the remaining seven entries challenged the position. She is too well known in showing circles to require individual comment and suffice it to say that for dairy type and Ayrshire conformation she is one of the best. However in comparison with Maple Leaf Jean, the winning aged dry cow, she lacked a trifle in substance and capacity, which, added to the fact that her udder, while carried well forward, ends somewhat abruptly, threw the odds in favor of the dry cow when it came to a senior championship test. Any difference in opinion concerning the placing of the aged class in milk arose when Highland Lady was found above Carleton Baroness. It was a decision where age was considered, there being a difference of four years with youth on the side of Highland Lady, whose splendid style and good udder, coupled with exceptionally good veining, was considered a stronger argument than the superior capacity of the cow in third place. The latter might appear a trifle coarse to the critical observer especially when compared with the others. Gem of Primrose House got fourth money and she was more of the type represented by the second prize cow than by the first or third winners.

Four three-year-old cows in milk came forward and returned with Humeshaugh Helen 3rd in the lead. Here was a case of pleasing udder formation and good veining combined with Ayrshire style. This individual has plenty of length and with years will deepen down, no doubt, into a cow with plenty of machinery where it is needed. Selwood Snowdrop was a good second, but she did not have the development or excellence of udder exhibited by the Hume entry.

There were five two-year-heifers in milk presented, but it was not a strong class. Any one of the first three prize winners could have been put at the top without any great injustice to exhibitors. Humeshaugh Nan 3rd which appeared somewhat chubby on account of a short, thick neck, went first, largely owing to bloom and well-placed teats on a promising udder. Whitehill May Scott 4th had good size and fairly good conformation, but she will never win in high-class company. She was second and next to her came Springburn Actress, a milky-looking heifer, with some claims to a higher placing in that particular company. There was nothing to choose from further down the line.

The three year olds and over not in milk were eleven strong. It was a class which arrested the attention of the large crowd of spectators. In it were individuals of true Ayrshire type and character carrying well-balanced udders and with capacity for heavy production. Maple Leaf Jean was picked for first place. She is a six-year-old sired by Hobsland Bonnie Boy Imp., mostly white in color with a bright, clean-cut head, smooth shoulder, straight top, arching ribs and deep barrel. She presented a picture long to be remembered. Being dry her udder did not show its capacity, but it was well attached both fore and aft. Betsy Brown, an older cow with excellent veining but of slightly firmer conformation was second with Burnside Maggie Finlayston 5th in third. This cow has won higher honors in the past, but falling back a place or two does not indicate that she is losing her show-ring form. Selwood Pride in fourth place had a good deal of scale and carried an excellent udder. She appeared to be further advanced in lactation than many of the others. Practically all the entries were cows with substance. Dainty Lass of Springbank headed the two-year-old dry class. She is a heifer of outstanding merit and was brought out in high fit. She is a thick, deep sappy heifer with substance to stand heavy work. Burnside Nellie Bains 2nd nicked nicely in second place. She is patterned after the winner but possibly lacked some of the scale and was not quite so highly fitted.

A useful lot of heifers competed in the senior yearling class. They give promise of developing into big, strong, typey cows capable of making high records. In first place stood Burnside Randy 3rd, a daughter of Hobsland Masterpiece. She has a splendid head and a smooth, deep, body. Her udder attachment is good. Springburn Belle in second was not on her good behavior in the ring, consequently she did not show to as good advantage as the winner. She is a tidy, straight lined heifer with a silky skin. Humeshaugh Kate 3rd did not look out of place in third. The junior yearlings were a thick, strong lot with splendid capacity. Burnside Emma Blossom was the winner. The junior and senior calf classes were well fitted with promising youngsters.

Exhibitors.—R. R. Ness, Howick, Que.; G. McMillan, Huntingdon, Que.; A. S. Turner & Son, Ryckman's Corner; Hunter Bros., Freeman; A. Hume & Co., Campbellford; J. L. Stansell, Strathfordville.

Awards.—Bull, aged (4), 1, McMillan, on Lessnessock Golden Love; 2, Turner, on Humeshaugh Invincible Peter; 3 and 4, Ness, on Holehouse Hopeful and Sir Douglas. Bull, two years, (4), 1, Hunter, on Auchinbraun Union Jack; 2 and 4, Hume on Humeshaugh perfect Peter and Burnside Rising Star Master; 3, Stansell, on Selwood Ideal Rosewood. Bull one year, Turner, on Sir Hugh of Springbank. Bull, junior yearling, (2), 1, Ness, on Burnside Sir Audrey; 2, Stansell, on Robinhood of Springbank. Bull, senior calf, (7), 1, McMillan, on Springburn Prince Imperial; 2, Turner, on Springbank General; 3, Ness, on Burnside Dentmaster; 1, Hume, on Humeshaugh Prince Imperial. Bull, junior calf, (8), McMillan, on Springburn Golden Glow; 2 and 4, Ness, on Burnside Pearl Parlin and

Burnside Finlay Prece; 3, Hume, on Humeshaugh Snow Peter.

Aged cow, in milk, (8), 1 and 3, Ness, on Chapmanton Henny and Carleton Baroness; 2, Stansell, on Highland Lady; 4 and 5, Turner, on Gem of Primrose House and Briery of Springbank 3rd; 6, McMillan, on Ruth of Wil-lows. Cow, 3 years, in milk, (4), 1, Hume, on Humeshaugh Helen 3rd; 2, Stansell, on Selwood Snowdrop; 3 and 4, Ness, on Drumsie Primrose and Nether-ton Nancy 4th. Cow, 3 years and over, in calf, not milking, (11): 1, Hunter Bros., on Maple Leaf Jean; 2, Turner, on Betsy Brown; 3, Ness, on Burnside Maggie Finlayston 5th; 4, Stansell, on Selwood Pride; 5, McMillan, on White Star of Cedarcroft. Heifer, 2 years, in milk, (5): 1, Hume, on Humeshaugh Nan 3rd; 2, Ness, on Whitehill May Scott 4th; 3, McMillan on Springburn Actress; 4, Turner, on Miss Floss of Springbank 2nd; 5, Stansell on Selwood Pride 2nd. Dry two-year-old heifer: 1, Turner, on Dainty Lass of Springbank; 2, Hume, on Burnside Nellie Bains 2nd; 3, Stansell, on Selwood Dairy-maid; 4, Ness, on Burnside Emathla Blossom. Heifer, senior yearling: (9), 1, Ness, on Burnside Randy 3rd; 2 and 4, McMillan, on Springburn Belle and Springburn Chance; 3, Hume, on Humeshaugh Kate 3rd; 5, Turner, on Springbank Lady Jane 4th. Heifer, junior yearling: (5), 1, Ness, on Burnside Emma Blossom, 2, Stansell, on Selwood Leading Lady; 3 and 5, Hume, on Humeshaugh Helen 6th and Humeshaugh Snowdrop 4th; 4, McMillan, on Springburn Genta 2nd. Heifer, senior calf: (11), 1, Ness, on Burnside Henny Chapman; 2 and 3, McMillan, on Springburn Lovely Cherry and Springburn Lovely Rose 3rd; 4, Hume, on Humeshaugh Eva 4th; 5, Turner, on Heather Belle of Springbank. Heifer, junior calf: (6), 1, McMillan, on Springburn Lovely Duchess; 2, Ness, on Burnside Sunbeam; 3, Turner, on Edith Cavell of Springbank; 4, Hume, on Humeshaugh Snowdrop 3rd; 5, Stansell, on Selwood Primrose. Cow having official record in the Canadian R. O. P. test, begun at 5 years or over (prizes awarded on the basis of 100 points for perfect conformation plus one point for each 500 pounds of milk and one point for each 20 pounds fat, over and above the amount required to qualify. Each prize-winning cow must score at least 80 points for conformation and must be recorded in the Canadian Ayrshire Herdbook: 1 and 2, Turner, on Betsy Brown (conformation 90 + R.O.P. 30.34 = 120.34) and Springbank Daisy Star (84 + 24.44 = 108.44); 3 and 4, Ness, on Violet of Kelso (85 + 16.81 = 101.81) and Chapmanton Henny (95 + 5.70 = 100.70). Cow having official record in the Canadian R. O. P. test, begun under 5 years (prizes awarded as above): 1, Hunter Bros., on Maple Leaf Jean (96 + 17.38 = 113.38); 2 and 3, Turner, on Briery of Springbank 3rd (85 + 21.26 = 106.26) and White Lady of Springbank (87 + 16.42 = 103.43); 4, Stansell, on Highland Lady (90 + 10.26 = 100.26). Turner cup for best Canadian-bred Ayrshire cow (prizes awarded as above plus five points if either sire or dam have qualified in the R. O. P. or ten points if both have qualified): Hunter Bros., on Maple Leaf Jean (96 + 17.38 + 5 for dam = 118.38.) Senior and grand champion male: McMillan, on Lessnessock Golden Love. Junior champion male: McMillan, on Springburn Golden Moon. Senior and grand champion female: Hunter Bros., on Maple Leaf Jean. Junior champion female: Ness, on Burnside Randy 3rd. Graded herd: 1, Ness, (herd headed by Holehouse Hopeful); 2, McMillan, (Lessnessock Golden Love); 3, Turner, (Humeshaugh Invincible Peter); 4, Hume, (Humeshaugh Perfect Peter); 5, Stansell, (Selwood Ideal Rosewood). Three animals get of one sire: 1, Ness, (with progeny of Holsland Masterpiece); 2, Hume, (Hillside Peter Pan); 3, Turner, (Nether-ton King Theodore); 4, McMillan (Lessnessock Golden Love); 5, Stansell, (Selwood Prince Ideal). Two animals progeny of cow: 1, (Turner, (progeny of Springbank Josie); 2, Hume, (Humeshaugh Helen); 3 and 5, Stansell; (Highland Lady and Barcheskie Juniper); 4, Ness, (Burnside Blossom.) Junior herd: 1, Ness, (herd headed by Burnside Sir Andrew); 2, McMillan, (Springburn Golden Morn); 3, Turner, (Sir Hugh of Springbank); 4, Hume, (Humeshaugh Prince Imperial); 5, Stansell, (Robinhood of Springbank).

Heifers.—There were fewer herds competing for Jersey prizes than in either of the other two breeds, but this is not unusual. Of those that were out none were unusual in quality or general excellence, although Jersey type and sweetness were carried in a goodly number of the entries. John A. Lee, Shelbyville, Kentucky, judged.

Brampton Radiator won the aged bull class, as well as senior and grand champion honors. He had few points of superiority over Brampton Bright Noble, a bull with a better rib and eye, and perhaps breeder in appearance. The latter bull was, however, very poorly shown, and appeared to be very weak on top. Had he been as well handled as the winner he would have put up a better appearance. Edgeley Bright Prince, standing in third place was a good bull but had not the points to win higher. The two-year-old bull class saw some good ones out, led by Edgeley Bright Gem, a bull of good quality and better behind than Sunbeam's Golden Boy, that captured second. Brampton Dote Heir won third.

Only two were out as senior yearlings, both from the same stable, but a class of four junior yearlings disclosed the junior champion in Br. Second Tarcow. Edgeley Bright Chief, a typey young bull, came in for second, and Brampton Douglas for third. Eleven senior bull calves made a very fine class, and Brampton Bright Leader, an exceptionally sweet calf, looked well on top. Edgeley Premier Prince filled second position with credit to the breed, scoring over Brampton A. Oxford Lad. A pair of beautiful straight-backed youngsters led the junior calf class, Brampton Radiant

Star, winner of the red ribbon, being a little straighter at the tail head than his stable mate Brampton Actr. Brampton Majestic and Buttercup's Noble occupied third and fourth positions.

Five aged cows in milk provided a good class. Brampton Penithorpe's Patricia led with ease, being a well-built little matron, showing strength, character and a splendid udder. Brampton Serena, a leading prize winner at last year's National Dairy Show, Columbus, Ohio, was not in the best of trim, and stayed at second, but she always carries plenty of character and milkiness. Br. B. P. Ina and Edgeley Fairy Lass followed for third and fourth, although here there was room for a difference of opinion. The three-year-old class in milk was led by Brampton Second Golden Maid. She is the personification of Jersey type and quality, showing that combination of beauty and usefulness which leads to perfection. She later secured senior and grand champion honors. Br. Black Beauty, standing second, was of a different type, larger, with more substance and a greater show of udder, but hardly the fine quality of the winner. She is, however, a more rugged matron and looks well in the ring. Edgeley Molly Ann looked well in third.

The aged dry class was well led by Beauty Maid, the veteran matron in the ring and at the pail. Never has she looked better, and there never was a doubt as to her position because she carries a blend of type, quality and substance that requires no little beating. Br. Dorothy Oxford Pearl and October Opal contended for second honors, both being of a different type from either Beauty Maid or Lilly May of Edgeley that stood fourth. Second position finally went to Br. Dorothy Oxford Pearl. Br. Sultan's Interest 3rd captured the red among a worthy line-up of two-year-old heifers. Br. Second Dorey, Edgeley-Bright Pansy and Br. Oxford Nurse followed.

Brampton Sybil Gomboge, a daughter of the \$65,000 bull, led a string of seven senior yearling heifers, followed by Bright Noble Gera and Br. Lady Voter. They were worthy heifers in this class.

A splendid body and a fine show of udder characterized Br. Raleigh Maid, the leader of 6 junior yearlings. Buttercup Noble Spot had many claims to quality and desirable conformation, but stood second with Edgeley Princess Mary third.

The calf classes were well contested, and the junior champion female was found among the junior calves. She is a Golden Princess Gipsy.

Exhibitors.—B. H. Bull & Son, Brampton, Ont.; Papple Bros. & Lang, Brantford, Ont.; H. Colton & Son, Malton, Ont.; J. Bagg & Sons, Edgeley, Ont.; Amelius Jarvis, Toronto.

Awards.—Bull, 3 years and over (4): 1, Bull & Son, on Brampton Radiator; 2, Papple Bros. & Lang, on Brampton Bright Noble; 3, Bagg & Sons, on Edgeley Bright Prince; 4, Colton & Son, on Brampton Bright 9499. Bull, 2 years (4): 1 and 2, Bagg & Sons, on Edgeley Bright Gem and Sunbeam's Golden Boy; 3, Jarvis, on Brampton Bright Sultan; 4, Bull & Son, on Brampton Dote Heir. Bull, senior yearling (3): 1 and 2, Bull & Son, on Brampton Nelson and Brampton Bright 9449. Bull, junior yearling (4): 1, 3 and 4, Bull & Son, on Brampton Second Tarcow, Brampton Douglas and Brampton Sylvia's Lad; 2, Bagg & Sons, on Edgeley Bright Chief. Bull, senior calf (11): 1 and 3, Bull & Son, on Brampton's Bright Leader and Brampton A. Oxford Lad; 2 and 4, Bagg & Sons, on Edgeley Premier Prince and Beauty's Handsome Boy. Bull, junior calf (6): 1, 2 and 3, Bull & Son, on Brampton Radiant Star, Brampton Actor and Brampton Majestic; 4, Papple Bros. & Lang, on Buttercup's Noble Fern. Aged cow in milk (5): 1, 2 and 3, Bull & Son, on Brampton Penithorpe's Patricia, Brampton Serena and Brampton B. P. Ina; 4, Bagg & Sons, on Edgeley Fairy Lass; 5, Papple Bros. & Lang, on Pauline Golden Beauty. Cow, 3 years, in milk (6): 1, Bull & Son, on Brampton Second Golden Maid; 2 and 3, Bagg & Sons, on Brampton Black Beauty and Edgeley Molly Ann; 4, Papple Bros. & Lang, on Belmont Foxy Girl. Cow, 3 years and over in calf, not milking (6): 1 and 2, Bull & Son, on Beauty Maid and Brampton Dorothy Oxford Pearl; 3, Papple Bros., on October Opal; 4 and 5, Bagg & Sons, on Lilly May of Edgeley and Brampton Bess Beven. Heifer, 2 years: 1, 2 and 4, Bull & Son, on Brampton Sultan's Interest 3rd, Brampton Second Dorey and Brampton Oxford Nurse; 3, Bagg & Sons, on Edgeley Bright Pansy. Heifer, senior yearling (7): 1 and 3, Bull & Son, on Brampton Sybil Gomboge and Brampton Lady Voter; 2 and 4, Papple Bros. & Lang, on Bright Noble Gera and Belmont's Noble Foxy. Heifer, junior yearling, (6): 1 and 4, Bull & Son, on Brampton Raleigh Maid and Brampton Miss Wolseley; 2, Papple Bros. & Lang, on Buttercup Noble Spot; 3, Bagg & Sons, on Edgeley Princess May. Heifer, senior calf: 1 and 2, Bull & Son, on Br. Bright Annette and Br. Cowslip's Marie; 3, Bagg & Sons, on Edgeley Sweet Princess; 4, Papple Bros. & Lang, on Golden Beauty's Primrose. Heifer, junior calf: 1, 2 and 3, Bull & Son, on Golden Princess Gipsy, Br. Wonder Mary 2nd and Br. B. P. Silvery Moon; 4, Bagg & Sons, on Edgeley Sweet Alice.

Senior and grand champion male: Bull & Son, on Brampton Radiator. Junior champion male: Bull & Son, on Brampton Second Tarcow. Senior and grand champion female: Bull & Son, on Brampton Second Golden Maid. Junior champion female: Bull & Son, on Golden Princess Gipsy. Graded herd: 1 and 4, Bull & Son, (herds headed by Br. Radiator and Br. Dote Heir); 2, Bagg & Sons, (Edgeley Bright Gem); 3, Papple Bros. & Lang. Three, get of one sire: 1 and 4, Bull & Son, (get of Fern's Oxford Noble 2nd and Fern's Oxford Noble); 2, Bagg & Sons, (Br. Prince Stephen); 3, Papple Bros. & Lang. Two, progeny of one cow: 1 and 2, Bagg & Sons, (progeny of Fontaine



on, Toronto, 1919.

Alf. Kains of Byron,

contest was between Love and Turner's both are excellent different type. The masculine carriage, and clean-cut head, neat shoulder and Turner bull is also fine dairy quality, lower-set, thicker Pan. The two not fitted for such two good individuals ter advantage.

made an interesting son of the winner pattern established to the influence of formation are very Perfect Peter, a was second. He artered. Selwood He is a good- and quality, but down sufficiently competed for four bonny youngster led the red ribbon onship. He is a Undoubtedly he les. Springbank ce. Eight junior

Rose and Edgley Flossie); 3, Bull & Son, (Br. Eleanor); 4, Papple Bros. & Lang. Junior herd: 1 and 4, Bull & Son, (first herd headed by Brampton Second Tarcow); 2, Bagg & Sons, (Edgeley Bright Chief); 3, Papple Bros. & Lang. Best bull and 3 females, 2 years and over: 1, Bagg & Sons; 2, Papple Bros. & Lang. Best bull and 4 females, under 2 years: 1, Papple Bros. & Lang; 2, Bagg & Sons. Matthews cup for best bull and 4 females, 2 years and under: Bull & Son. King Edward Hotel cup, best 4 females: Bull & Son.

Guernseys.—Although represented by only one herd, the Guernseys were of better quality and in better fit than usual. Martindale Farm, St. Catharines, Ont., exhibited several splendid individuals, the senior herd sire, Clover Boy of Pencoyd being particularly worthy of mention.

Brown Swiss.—The Brown Swiss breed of cattle is not well known in Ontario, but that is no gauge of their value. They are a dual-purpose breed in that the females give a creditable flow of milk and at the same time carry a fair amount of flesh. J. W. Laidlaw, of Wilton Grove, was the only exhibitor at Toronto. He has built up a very nice herd and his entries in the different classes were favorably commented upon by ringside spectators. The herd is headed by a typey, well-built bull, and several promising youngsters were out in the calf classes.

Light Horses.

The light-horse exhibit at the National dispelled any doubt which might have existed in the minds of the public as to the complete elimination of the carriage or saddle horse by the automobile. The entries were not only above average but seldom has the quality of the entire entry been of as high order. There was no walk away with the honors in any class, as competition was extremely close and, in some instances, young blood forced past show-ring warriors to yield up the honors. The keen interest taken in the judging and the frequent cheers from spectators as a favorite won a placing or displayed unusual action indicated that the horse still has many ardent admirers. The awards were placed by Robt. Miller, Toronto.

Hackneys.—Seldom have Hackney breeders treated the ring-side spectators to as free a display of Hackney form and action as was given this year by the equine celebrities brought into the various classes. The contest started with an aged stallion's quartette. Warwick Model, the strongest-built horse in the ring, and showing particularly attractive style and action, was challenged by Terrington Cetewayo, a typey, clean-cut, trappy individual. After considerable deliberation the former won the red ribbon, and later was declared the champion stallion. Mainspring, an eight-year-old, was placed third. He is well moulded, but scarcely showed the training of the former two. Waverly King was the only entry in the three-year-old class. He won the two-year-old class last year and his quality and action this year would have given him a high place in strong competition. Two attractive colts constituted the two-year-old class. Waverly Merrylegs, the winner, travelled nicely, but his body did not appeal like that of King Spartan, a shapely, well-proportioned chestnut. The former, however, moved freely and easily and was awarded first place.

The three-year-old fillies, while not making an outstanding class, were a useful lot. Fashion Laddie's Model, with her neatly-turned body and graceful carriage, was placed first, with Silver Belle, a daughter of Spartan, second. Nine yield mares made a class long to be remembered. They were an extra good lot, making the picking of the winner a difficult proposition. Finally the honors fell on Daisy Thornton, a beautiful chestnut.

Exhibitors.—McGregor's Horse Exchange, Toronto; Jas. Tilt, Brampton; G. W. McLaughlin & Son, Oshawa; Crow & Murray, Toronto; Graham Bros., Claremont; Jos. Telfer, Milton West; J. W. Rush, Nanticoke; Le Roy Goff, Glencoe; W. E. Jewell, Bowmanville; R. T. Chester, Hespeler; R. C. Rogerson, Fergus; G. T. Castator, Weston; P. Cowan, Bowmanville; G. G. Brecken, Bronte.

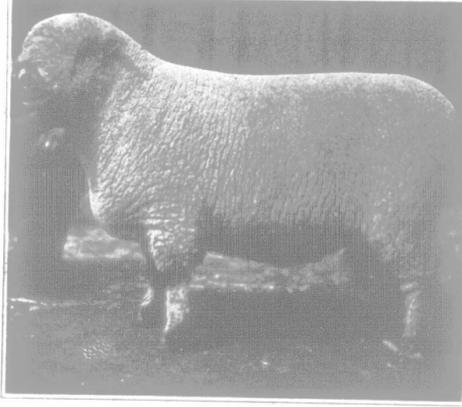
Awards.—Stallion, aged: 1, Crow & Murray, on Warwick Model; 2, Graham Bros., on Terrington Cetewayo; 3, McLaughlin & Son, on Mainspring; 4, McGregor, on Paramount. Stallion, 3 years: 1, Telfer, on Waverly King. Stallion, 2 years: 1, Crow & Murray, on Waverly Merrylegs; 2, Tilt, on King Spartan. Stallion, 1 year: 1, Crow & Murray, on Waverly Star; 2, Goff, on Lieutenant; 3, Tilt, on Spartan Laddie. Filly, 3 years: 1, Chester, on Fashion Laddie's Model; 2, Bush, on Silver Belle; 3, Rogerson, on Beauty Model; 4, Jewell, on Lady Jewell. Filly, 2 years: 1, Castator, on Spartan Queen; 2 and 4, Goff, on Dancing Girl, and Lady Acroplane; 3, Jewell, on Terrington Madge. Filly, 1 year: 1, McLaughlin, on Waverly Belle; 2, Goff, on Babe Model; 3, Jewell, on Terrington Belle; 4, Cowan, on Tissington Violet. Yield mare: 1, 2 and 4, Crow & Murray, on Daisy Thornton, Dunhill Wild Rose, and Maud Mischief; 3, Telfer, on Pauline. Brood mare: 1, Crow & Murray, on Landesborough Madge; 2 and 4, Goff, on Princess Reka, and Princess Reka; 3, Tilt, on Miss Derwent. Foal: 1, Jewell; 2 and 4, Tilt; 3, Brecken. Two, progeny of one mare: 1 and 4, Goff, on Dancing Girl and Lady Acroplane; 2, Jewell, on Roseline; 3, Tilt, on Dainty Spartan. Champion stallion: Crow & Murray, on Warwick Model. Champion mare: Crow & Murray, on Princess Patricia. Best string of five: Crow & Murray.

Standardbreds.—It is doubtful if better classes of Standardbreds have been seen in a Toronto ring than appeared this year. Not only were the classes larger than usual, but the quality, action and general style of the entries were of high merit. Peter Wilton, the noted sire from T. H. Hassard's stable, showed to ex-

cellent advantage. He loses none of his attractive style and trappy action with the advance of years. Although in his fourteenth year he appeared as active as a colt. In a class of ten he stood first and was also champion. Jim Todd, a smaller horse, was sandwiched in between Peter Wilton and Burt Axworthy, a horse of great scale. Billie Bingen was the sensation of the three-year-old class. He is a proper, good colt with great freedom in action. Only three appeared in the yield-mare class, but they were a quality trio, with pleasing lines and true, snappy action. Five good mares and foals were out. The contest for first place was between Pear's Susan Hall and Cruickston Stock Farm's Vera Peters. Both are worthy individuals. The awards were placed by Dr. Routledge, Lambeth, and Mr. McColl, Thamesville.

Exhibitors.—T. H. Hassard, Markham; L. Fried, New Dundee; J. J. Wolfe, Cooksville; Graham Bros., Claremont; Wm. Pears, West Toronto; E. A. Burns, Toronto; Crow & Murray, Toronto; Paterson Bros., Agincourt; M. Kreh, New Hamburg; Cruickston Stock Farm, Galt; D. Douglas & Sons, Mitchell; T. Cowan, Orono; I. A. Mabee, Alymer; J. Essery, Exeter; G. A. Cameron, Alton; S. Plewes, Cobocok; P. Cowan, Bowmanville; H. J. French, Toronto; C. J. Shore, Glanworth; H. W. Russell, Wingham.

Awards.—Stallion (trotter): 1, Hassard, on Peter Wilton; 2, Cruickston Stock Farm, on Jim Todd; 3, Crow & Murray, on Burt Axworthy. Stallion (pacer): 1, Kreh, on Pilot Nell; 2, Paterson, on Bob McKerron. Stallion, 3 years: 1, Cowan, on Billie Bingen; 2, Essery, on The Substance; 3, Mabee, on Euxino. Stallion, 2 years: 1, Cameron, on Spier Peter; 2, Plewes, on Peter Rhythmic. Stallion, 1 year: 1, Cruickston Stock Farm, on Vann Todd; 2 and 3, Cowan, on G. L. Todd, and Vernon Castle. Yield mare: 1, French, on Ideal Princess; 2, Mabee, on Axie; 3, Shore, on Kentucky Belle. Filly, 3 years: 1, Cruickston Stock Farm, on Vanity o' Todd; 2, Plewes, on Dawn Fast. Filly, 2 years: 1, Cruickston, S. F., on Princess Sable; 2 and 3, Paterson Bros., on Princess Axworthy and Betty Axworthy. Filly, 1 year: Douglas, on Dora Chimes. Brood mare: 1, Pears, on Susan Hall; 2, Cruickston, S. F., on Vera Peters, 3



Shropshire Ram.

Champion at Toronto, 1919. Owned and exhibited by Larkin Farms, Queenston, Ont.

Russell, on Lady McMartin. Foal: 1 and 2, Cruickston, S. F.; 3, Pears. Champion stallion: Hassard, on Peter Wilton. Champion mare: Pears, on Susan Hall.

Roadster.—The Roadster classes were well filled with horses in show form. Eight competitors entered the contest in the three-year-old class. Ida, exhibited by T. Cowan, Orono, was first. She is a well-proportioned, flashy individual, and was declared to be the best Roadster mare any age in the ring. Cowan also had an attractive brood mare and foal. The keen competition in all classes held the attention of a large crowd of spectators. Dr. Routledge, of Lambeth, and Mr. McColl, of Thamesville, were the judges.

Exhibitors.—D. M. Chalmers, Milverton; T. Cowan, Orono; W. J. Cryderman, Thamesville; Cruickston Stock Farm, Galt; W. Johnston; J. W. Bush, Nanticoke; J. Brown & Sons, Galt; Wm. R. Wheeler, Milton West; D. Douglas & Sons, Mitchell; Le Roy Goff, Glencoe; Paterson Bros., Agincourt; L. Fried, New Dundee; Thos. McMichael & Son, Seaford; Bater Bros., Oakville; J. Telfer, Milton West; S. Creighton, Scarborough; C. J. Shore, Glanworth; J. W. Cunnell, Toronto; W. G. Cross, Toronto; G. T. Castator, Weston; Geo. Cheyne, Milton.

Awards.—Filly or gelding, 3 years: 1, Cowan, on Ida; 2, Wheeler, on Lambert Todd; 3, Chalmers, on Topsy. Filly or gelding, 2 years: 1, Cruickston, S. F., on Helen Battle; 2, Paterson Bros., on Orley Axworthy; 3, Douglas, on Maplehurst Rocket. Filly or gelding, 1 year: 1, McMichael, on Black Bird; 2, Fried, on Spit Fire; 3, Shore, on Watson. Brood mare: 1, Cowan, on Lyla; 2, Cruickston, S. F., on Sue Fletcher; 3, Castator on Lyla; 2, Cruickston, S. F., on Sue Fletcher; 3, Castator, on Daisy Barthorpe. Best mare: Cowan, on Ida.

Carriage.—The entry in the carriage classes were below par for the standpoint of numbers. However, what was lacking in numbers was compensated for in quality.

Exhibitors.—S. L. Hall, Streetsville; J. Telfer, Milton West; Geo. M. Anderson, Guelph; G. H. Smith, Delhi; Bater Bros., Oakville; C. J. Shore, Glanworth; M. Carter, Brampton; W. A. Henry, Kiswick; N. Wigglesworth, Georgetown; J. Watson, Tolmorden.

Awards.—Filly or gelding, 3 years: 1, Hall, on Pat; 2, Smith, on Gay Boy. Filly or gelding, 2 years: 1, Shore, on Madge; 2, Bater Bros., on Grasshopper; 3, Carter, on Jim. Filly or gelding, 1 year: 1, Wigglesworth, on Gladys H.; 2, Creighton, on Lady Axworthy; 3, Shore, on Kate. Brood mare: 1, Wigglesworth, on Mollie; 2, Watson, on Nancy; 3, Shore, on Gypsy.

Swine.

With 451 entries, the swine exhibit at the Canadian National last week did not break any new records for high numbers. It was rather singular to note, too, that the representation this year in all divisions came from practically the same herds that made up the 1918 exhibit. Yorkshires and Berkshires as usual brought forward all the larger classes, although the Duroc Jerseys followed close and filled the classes much better than this breed was able to do a very few years ago.

Yorkshires.—Exhibitors.—J. K. Featherston, Streetsville; Jno. Duck, Port Credit; J. Lerch, Preston; R. Harrison, Brampton; and J. E. Brethour & Nephews, Burford. Judge, Wm. Jones, Mt. Elgin.

Awards.—Boar, 2 years: 1, Brethour; 2 and 4, Duck; 3, Featherston. Boar, over 18 months: 1, Duck; 2 and 4, Featherston; 3, Brethour. Boar, over 12 months: 1, Duck; 2, Featherston; 3, Brethour; 4, Harrison. Boar, over 6 months: 1, Duck; 2 and 3, Brethour; 4, Featherston. Boar, under 6 months: 1 and 4, Brethour; 2, Duck; 3, Featherston. Champion boar: Brethour, on aged boar. Sow, 2 years: 1 and 4, Brethour; 2, Duck; 3, Featherston. Sow, over 18 months: 1, Brethour; 2 and 3, Duck; 4, Featherston. Sow, over 12 months: 1 and 3, Brethour; 2, Duck; 4, Harrison. Sow, over 6 months: 1, 3 and 4, Brethour; 2, Duck. Sow, under 6 months: 1 and 2, Brethour; 3, Duck; 4, Lerch. Champion sow: Brethour, on 18 months sow. Boar and two sows: 1 and 3, Brethour; 2 and 4, Duck. Four pigs, get of one sire: 1, Brethour; 2, Lerch; 3, Duck; 4, Featherston.

Berkshires.—The exhibitors were G. L. Smith, Meadowville; S. Dolson, Norval; A. Thomson, Stratford; P. W. Boynton, Dollar, and W. W. Brownridge, Georgetown. Judge, P. J. McEwen, Wycmring.

Awards.—Boar, 2 years and over: 1, Brownridge; 2, Thomson. Boar, 18 months: 1, Brownridge; 2, 3 and 4, Thomson. Boar, 12 months: 1 and 4, Brownridge; 2, Thomson; 3, Dolson. Boar, over 6 months: 1 and 4, Brownridge; 2 and 3, Thomson. Boar, under 6 months: 1, 2, 3 and 4, Brownridge. Champion boar: Brownridge, on aged boar. Sow, 2 years: 1 and 3, Brownridge; 2 and 4, Thomson. Sow, 18 months: 1 and 3, Brownridge; 2 and 4, Thomson. Sow, over 12 months: 1 and 4, Thomson; 2, 3 and 4, Brownridge. Sow, over 6 months: 1, Thomson; 2, 3 and 4, Brownridge. Sow, under 6 months: 1, 2, 3 and 4, Thomson. Champion sow: Brownridge, on 18 months sow. Boar and two sows: 1 and 3, Brownridge; 2 and 4, Thomson. Four pigs, get of one sire: 1 and 3, Brownridge; 2 and 4, Thomson.

Tamworths.—Exhibitors.—D. Douglas & Son, Mitchell; S. Dolson & Son, Norval, and C. B. Boynton, Dollar. Judge, J. C. Nichol, Glanworth.

Awards.—Boar, 2 years: 1, Douglas. Boar, over 1 year: 1 and 2, Douglas. Boar, over 6 months: 1, 3 and 4, Douglas; 2, Dolson. Boar, under 6 months: 1, 2 and 4, Douglas. Champion boar: Douglas, on 6 months' boar. Sow, 2 years: 1, 2 and 3, Douglas; 4, Dolson. Sow, over 18 months: 1, Boynton; 2, 3 and 4, Douglas. Sow, over 12 months: 1, 2, 3 and 4, Douglas. Sow, over 6 months: 1, 2 and 3, Dolson; 4, Douglas. Champion sow: Boynton, on 18 months' sow. Boar and two sows: 1, 2, 3 and 4, Douglas. Four pigs, get of one sire: 1, Dolson; 2 and 3, Douglas; 4, Boynton.

Chester Whites.—Exhibitors.—W. Roberts & Son, Peterboro; J. G. Annesser, Tilbury; G. G. Gould, Essex, and W. E. Wright & Son, Glanworth. Judge, P. J. McEwen.

Awards.—Boar, 2 years: 1 and 2, Annesser; 3 and 4, Roberts. Boar, over 1 year: 1, Gould; 2 and 3, Roberts; 4, Wright. Boar, over 6 months: 1 and 2, Roberts; 3, Wright. Boar, under 6 months: 1 and 2, Roberts; 3, Gould; 4, Wright. Champion boar: Annesser, on aged boar. Sow, over 2 years: 1 and 2, Annesser; 3, Roberts. Sow, over 1 year: 1, Annesser; 2, Wright; 3 and 4, Roberts. Sow, over 6 months: 1 and 2, Annesser; 3, Wright; 4, Roberts. Sow, under 6 months: 1 and 2, Wright; 3 and 4, Roberts. Champion sow: Annesser, on sow over 1 year. Boar and two sows: 1, Annesser; 2, Roberts; 3 and 4, Wright. Four pigs, get of one sire: 1 and 3, Wright; 2, Roberts; 4, Gould.

Duroc Jerseys.—Exhibitors.—C. Stobbs, Leamington; C. Mallott, Wheatley; Ed. McPharlin & Son, Essex; Calvin Brees, Essex; R. A. Smith, Leamington; Thos. Dunn, South Woodlee; Gus Byrne, South Woodlee. Judge, H. A. Dolson, Georgetown.

Awards.—Boars, 2 years: 1 and 3, McPharlin; 2, Mallott; 4, Stobbs. Boar, over 1 year: 1, Mallott; 2, Brees; 3, Robinson. Boar, over 6 months: 1, Smith; 2 and 4, Mallott; 3, McPharlin. Boar, under 6 months: 1, Stobbs; 2, 3 and 4, Mallott. Champion boar: McPharlin, on aged boar. Sow, over 2 years: 1 and 2, Mallott; 3 and 4, McPharlin. Sow, over 1 year: 1, Stobbs; 2, McPharlin; 3 and 4, Mallott. Sow, over 6 months: 1, Robinson; 2 and 4, Mallott; 3, Byrne. Sow, under 6 months: 1 and 4, Stobbs; 2, Dunn; 3, Mallott. Champion sow: Stobbs, on 1-year-old sow. Boar and two sows: 1, Mallott; 2 and 4, McPharlin; 3, Stobbs. One boar and 3 sows under 6 months: 1, Stobbs.

In the section for "Other Distinct Breeds," the entries of J. C. Stobbs, Leamington, and G. G. Gould, Essex, made up the entire showing. Stobbs received six of ten first ribbons and also both championships; Gould, however, came in for many seconds, and in this way the money was quite evenly divided.

Export Bacon Hogs.—Awards: 1 and 4, J. E. Brethour & Nephews; 2, Jno. Duck; 3, S. Dolson & Son; 4, J. Lerch; 5, J. K. Featherston; 7, Geo. Duck.

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Toronto, Montreal, Buffalo, and Other Leading Markets

Week Ending August 28.

Receipts and Market Tops.

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

	CATTLE						CALVES					
	Receipts		Top Price Good Steers (1,000-1,200)				Receipts		Top Price Good Calves			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (U. S. Y.)	7,565	6,207	9,207	14.50	15.50	14.00	1,595	740	1,454	22.00	17.50	22.00
Montreal (Pt. St. Charles)	2,030	1,682	1,718	13.75	13.00	13.75	888	907	808	16.00	15.00	16.00
Montreal (East End)	1,863	1,445	1,898	13.75	13.00	13.75	546	474	1,123	16.00	15.00	16.00
Winnipeg	10,563	7,993	8,930	13.50	15.00	13.00	599	339	401	13.00	12.00	14.00
Calgary		4,265	4,882	11.75	15.00	11.75			1,878	10.25	9.50	11.25
Edmonton	1,544	1,494	1,445	11.00	14.00	11.50	169	107	328	10.00	9.00	10.00

	HOGS						SHEEP					
	Receipts		Top Price Selects				Receipts		Top Price Good Lambs			
	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Week Ending	Same Week	Week Ending	Same Week	Week Ending	
Toronto (U. S. Y.)	6,082	5,106	6,623	21.75	19.75	23.75	8,736	4,571	7,494	16.50	19.00	17.50
Montreal (Pt. St. Charles)	1,147	2,090	1,471	21.75	20.00	22.75	3,689	4,281	3,985	15.50	18.00	16.00
Montreal (East End)	1,162	904	1,503	21.75	20.00	22.75	1,738	1,669	1,924	15.50	18.00	16.00
Winnipeg	1,106	3,733	3,033	20.00	19.00	22.00	1,228	1,672	1,623	14.50	17.00	16.00
Calgary		1,302	485	19.75	18.75	22.50		965	445	13.00	14.00	12.50
Edmonton	285	457	233	19.25	18.25	21.00	191	94	247	12.50	12.50	12.50

Market Comments.

Toronto (Union Stock Yards.)

Light Eastern cattle continued to arrive at the market in large numbers, but good butcher cattle were again represented by a very small offering. Most of the latter class are moving direct from country points to Buffalo, where slightly higher prices prevail compared with local quotations. The better prices together with the exchange on the American dollar of four to five per cent., has been responsible for drawing heavy shipments from Ontario points to the American markets during recent weeks. The local trade was very active throughout the week, and good kinds of cattle were in keen demand. On Monday, quotations were about steady on all grades, but on Wednesday anything of good killing quality had advanced 25 cents per hundred; the market closed on Thursday steady in tone. Only a few heavy cattle were on sale during the week; of these a handful of prime steers averaging fourteen hundred pounds, shipped in from Port Elgin, Ontario, topped the market at \$15 per hundred, while on Wednesday, thirty-six head, averaging twelve hundred and fifty pounds, sold at \$14.50. A few choice loads averaging in weight from eleven hundred to twelve hundred pounds per animal brought equally satisfactory prices; one load of eleven hundred pounds average, selling at \$14.35 per hundred, another load of eleven hundred and seventy pounds average at \$14.25, and a load of about equal weight at \$14.10; other good sales were made from \$13.25 to \$14 per hundred. The offering of steers and heifers under ten hundred pounds in weight was with a few exceptions limited to light eastern cattle. However, a number of choice beef yearlings were on the market, and for the best of these as high as \$14 per hundred was paid; two head of nine hundred and sixty pounds sold at \$14, and two head of six hundred and eighty pounds brought an equally good price. Other loads of good quality stock sold from \$12.25 to \$13, a few lots of medium butchers from \$10, but the largest proportion of the offering sold within a range of \$7.50 to \$9.50 per hundred. Choice cows and bulls sold at prices up to \$11 per hundred, and those of good quality from \$9.50 to \$10.25. Medium grade cows changed hands from \$7.50 to \$8.50, common cows from \$6.50 to \$7.50 per hundred, and Bologna bulls from \$6.50 to \$8 per hundred. Canners and cutters found an outlet locally from \$4.50 to \$6 per hundred. A few hundred head of stockers and feeders were shipped to Ontario farmers during the week, but the demand was away below that of the same period of previous years, owing to the shortage of feed in the country. Quotations were unchanged from \$9 to \$10 for choice heavy feeders, and up to \$11 for good heavy feeders. Calf quotations were unchanged with best quality veal selling up to \$22 per hundred, good calves from \$16 to \$19, and common from \$10 to \$14. Lamb prices were a dollar per hundred lower, the highest price for top lambs being \$16.50 per hundred, a few decks bringing that price on each market day of the week. At the close, the lamb trade was inclined to be a little easier. Sheep prices were unchanged from \$8 to \$10 per hundred. A few carloads were ship-

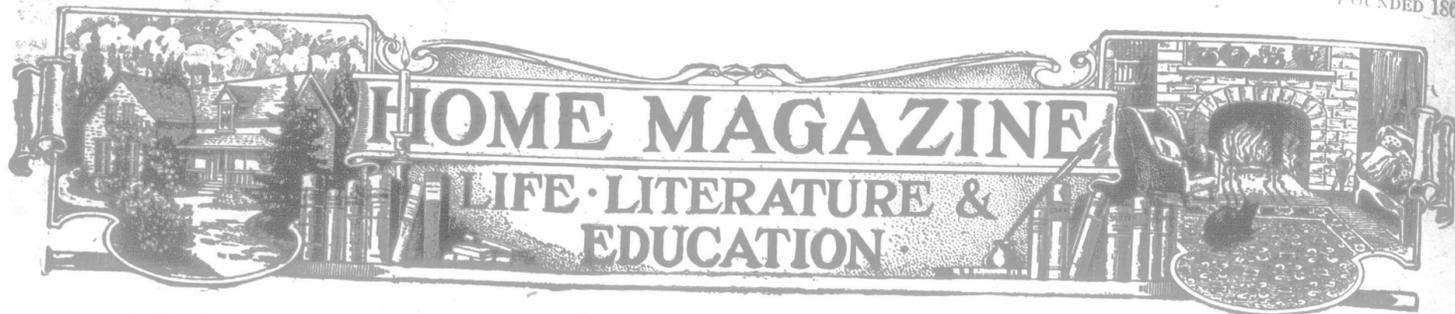
CLASSIFICATION	No.	TORONTO				MONTREAL (Pt. St. Charles)			
		Avg. Price	Price Range	Bulk Sales	Top Price	No.	Avg. Price	Price Range	Top Price
STEERS									
heavy finished	93	\$13.93	\$13.40-\$14.50		\$15.00				
STEERS good	593	13.50	12.75-14.25		14.50	101	\$13.00	\$12.75-\$13.50	\$13.75
1,000-1,200 common	74	10.57	9.50-12.75		12.75	21	11.25	11.00-11.50	11.50
STEERS good	688	12.69	12.00-13.00		13.50	104	11.50	10.00-12.75	12.75
700-1,000 common	981	8.89	7.75-10.50		10.50	402	8.50	7.75-9.50	10.00
HEIFERS good	775	12.60	12.00-13.25		13.50	11	10.00	9.50-11.00	11.50
fair	361	9.74	9.00-10.25		12.00	29	8.75	8.50-9.50	9.50
common	470	7.93	7.00-9.00		9.00	194	7.00	6.75-8.50	9.00
COWS good	393	9.88	9.00-10.25		12.00	104	9.25	9.00-10.50	11.00
common	1,124	7.68	7.00-8.00		9.00	208	7.25	6.50-8.50	8.75
BULLS good	51	9.75	9.26-10.50		11.25	4	9.00	9.00-	9.00
common	339	7.38	6.75-8.25		9.50	713	7.00	6.50-8.00	8.50
CANNERS & CUTTERS	292	5.42	4.75-5.75		5.75	86	5.25	5.00-6.00	6.00
OXEN	6					6	9.50	9.00-10.00	10.00
CALVES veal	856	17.50	16.00-19.00		22.00	183	13.00	12.50-15.00	16.00
grass	674	8.00	7.00-9.00		9.00	702	8.25	8.00-8.50	8.75
STOCKERS good	532	9.57	9.00-10.00		10.25				
450-800 fair	542	7.70	7.00-8.50		9.50				
FEEDERS good	244	11.25	10.75-11.50		11.50				
800-1,100 fair	7	10.43	10.00-11.00		11.00				
selects	5,487	21.28	21.25-21.75		21.75	761	21.75	21.75-	21.75
HOGS heavies	4	21.25			21.25	5			20.75
(fed and lights	353	19.25	19.25-		19.75	122			
watered) sows	235	18.41	18.25-19.00		19.25	80	16.75	16.75-	16.75
stags	3	16.25			16.25	7	14.75	14.75-	14.75
LAMBS good	7,047	15.92	15.00-16.50		16.50	1,397	15.50	15.50-	15.50
common	508	14.00	13.00-15.00		15.00	1,891	14.00	13.00-14.50	14.50
SHEEP heavy	159	8.50	8.00-9.00		9.00				
light	708	9.50	9.00-10.00		10.00	135	8.50	8.50-	8.50
common	314	6.00	5.00-7.00		7.00	250	8.00	8.00-	8.00

ped to country points for breeding. The hog market settled to \$21.25 for fed and watered selects, while a few loads were bought at country points at \$21 f.o.b. Light hogs are being cut \$2 per hundred, with the packers inclined to grade more rigidly. Present indications are that the hog market may become a trifle firmer. Of the disposition from the Yards for the week ending August 21, Canadian packing houses purchased 300 calves, 5,737 butcher cattle, 7,857 hogs and 5,177 lambs. Local butchers purchased 494 calves, 742 butcher cattle, 261 hogs and 1,396 lambs. Canadian shipments were made up of 17 calves, 20 milch cows, 339 stockers, 216 feeders, 82 hogs, 86 sheep and 8 lambs. Shipments to United States points consisted of 792 calves, 20 cows, 21 bulls, 997 butcher cattle, 62 stockers, 820 feeders and 310 lambs. The total receipts from January 1 to August 21, inclusive, were 200,343 cattle, 46,241 calves, 234,799 hogs and 63,286 sheep compared with 161,216 cattle, 42,386 calves, 227,999 hogs and 33,790 sheep, received during the corresponding period of 1918. Montreal. Prices for cattle were practically unchanged from those prevailing during the previous week, while a fair demand was in evidence throughout. A few small lots of good steers weighing from eleven

hundred and twenty-five to eleven hundred and sixty per head, were sold at \$13.75 per hundred. There was a large percentage of steers around the weights mentioned, but not so well finished, that sold from \$12.75 to \$13.50. Twenty-four head averaging eleven hundred pounds changed hands at \$13.50, and twenty-one head averaging about eleven hundred and fifteen at \$13.25. A few three-year-old steers, not fat, weighing around ten hundred and fifty pounds were weighed up from \$11 to \$11.50. Light common steers and heifers sold as low in range as \$7.75 to \$8.50. The top price for cows was \$11; the majority of the good cows sold from \$10 down, a good many sales of strong cows in just fair flesh being made around \$7 to \$7.50 per hundred. The common figure for bulls weighing six hundred pounds and up was \$6.75. A number of fair bulls weighing ten hundred to fourteen hundred pounds, were sold from \$8 to \$8.50, while an odd sale was made at \$9. Good veal calves were not very plentiful. The best calves sold for \$15, a few choice at \$16, common grass calves from \$8 to \$8.50. Good lambs went at \$15.50 per hundred, common lambs at about \$14, and some large lots at \$13.50. The supply of lambs promises to be quite plentiful as the season advances. Select hogs sold at \$22 off car weights. There were fewer light hogs offered than

usual, and the market seemed a little firmer at the close than for the previous two weeks. Pt. St. Charles.—Of the disposition from the Yards for the week ending August 21, Canadian packing houses purchased 721 calves, 75 canners and cutters, 586 bulls, 837 butcher cattle, 1,471 hogs and 3,895 lambs. Canadian shipments were made up of 36 milch cows. Shipments to U. S. points consisted of 102 calves. The total receipts from January 1 to August 21, inclusive, were 24,836 cattle, 56,401 calves, 55,740 hogs and 23,446 sheep; compared with 26,065 cattle, 51,640 calves, 42,788 hogs and 16,994 sheep, received during the corresponding period of 1918. EAST END.—Of the disposition from the Yards for the week ending August 21, Canadian packing houses and local butchers purchased 696 calves, 1,665 butcher cattle, 738 hogs and 1,810 sheep. Canadian shipments were made up of 765 hogs and 106 lambs. Shipments to United States points consisted of 327 calves, 72 butcher cattle, and 8 lambs. The total receipts from January 1 to August 21, inclusive, were 27,710 cattle, 40,526 calves, 37,143 hogs and 20,143 sheep; compared with 23,914 cattle, 38,506 calves, 27,200 hogs and 13,494 sheep, received during the corresponding period of 1918.

Continued on page 1605.



A Goal.

BY CAMILLA ZAVITZ.

I shall sing!
I shall sing of my exultation
In every beautiful thing,
Of the dewy new creation
Star-robed night brings, in the spring.

Oh, my song
Is of sunsets of purple and gold,
'Tis of twilight that lingers long,
Of the witching light that the old
Moon sheds through night's wild song.

Oh, my love
Is of ways where the echo-elves stray,
And the thrushes sing, and the pewee
above,
Is calling a woodland to pray;
Is calling the wren and the dove.

Oh, I see
On a winter twilight, purpling dells,
The shadows of evening come, hear silvery
Waters flow, then, vesper bells,
And heaven, serene, enfolds me.

Oh, my soul
For these consummate things is a-brim
With love: yet there's never a goal
But beckons through distance grim
To lofty height of the pole.

Oh, grant me
The grace to laugh and give
Me the heart to sing when the sea
Is gloomed and 'tis hard to live
In the spirit of minstrelsy.

Just to laugh
And to sing all the glooms away
Is the only "gift of the gods" I ask,
Such power unto every day,
And I sing, I sing at my task.

The Banner Exhibition.

THE Exhibition of 1919 is surely the "Banner" exhibition. The war is over, a huge building on the grounds is filled with trophies won victoriously, and the future king of the British Empire is, as this is being written, the guest of the Queen City.

All Toronto is talking about "the Prince." We saw him to-day as he rode down through the grounds, standing up in his car, heralded by the cheers of the tens of thousands of people along the way, and waving his gloves all the way in recognition.

Truly he is the nation's pet. So slender he is, so boyish looking, not a day over nineteen in spite of his twenty-five years. And so gracefully does he acknowledge every tribute.—To-day people stood patiently for two hours along the streets by which, it was expected, he would go to the Exhibition. In the grounds they stood on every point of vantage, even around the edge of the fountain, slippery though it is, at imminent danger of falling in. The van of the procession was the signal for a mad rush from every part of the immediate vicinity—boys, girls, fat men, fat women, lean men, lean women all running in a scramble to catch sight of the boyish face and the winning smile about which everyone speaks. Little Betty Jamieson, aged four, was carried away—literally—by her enthusiasm. She sprang up on the step of his car and held up a tiny hand, winning the smile, a handshake and a pat on the back, while the crowd cheered again and again.

This afternoon (Aug. 27) the Grand Stand was given over almost wholly to returned soldiers and their dependents, and the Prince presented medals and honors.

For the past four years the sadness of war has hung over the Exhibition like a pall. This year the pall is lifted, and although one's heart is saddened by the sight of the hundreds of maimed soldiers

hobbling about among the crowd, there is an air of gladness everywhere, from the smiling faces of the people to the airplanes cavorting like playful birds above—one of them manned by Aviator Barker who brought down 60 German planes.

Naturally one of the most interesting buildings on the grounds is the one devoted to German trophies—and trophies by the thousands there are, from the haughty ornaments taken from the front of German helmets to a great armored biplane whose very wings are covered with metal sheeting; all displayed beneath a flutter of German flags and pennons, including a Prussian Imperial flag. There are guns, mortars and anti-aircraft guns, which, could they possess intelligence, must have strange sensations upon realizing where they have landed after all their ventures. One mortar—was ever one so strange—is made from the metal of French and Belgian church bells. . . . Among the smaller items of interest is a burnished metal helmet found in the headquarters of Prince Eitel Frederick at Lille, and, in a glass case devoted entirely to it, a rich regimental cap of possum fur, red topped, and adorned by a brush of white ospreys, which belonged to the Kaiser's youngest son, Prince Joachim. . . . Even more interesting than the German trophies are some of the Canadian souvenirs of great victory, one of which is the Fuselage of the Sopwith snipe flown by Col. Barker, V.C., and bearing the marks of his sixty victorious encounters with German airmen. Lt.-Col. Bishop, the greatest British ace, is, by the way, in charge of the aerial department of the Exhibition.

One of the most popular exhibits on the grounds, is that devoted to Soldiers' Re-establishment, in the Process Building, where numbers of returned men are engaged in industries, which they have learned since coming from the war, and through which, even though apparently disabled, they will be enabled to start life afresh and become once more useful citizens in a world of peace. Some are making lenses for eye-glasses, others are welding, others making silverware, basketry, woodwork, false teeth—scores of things that people in a civilized world must have; and very significant are the pictures along the walls showing the forlorn plight of disabled soldiers of ancient wars and battles—the Crusades, Crecy, Waterloo, the Crimea, even South Africa—in contrast with those of the present day. Surely the world is growing better when Government, at any cost, provides for its disabled soldiers as it is doing now, realizing that they have paid the great price, and that all that can be done for them cannot begin to repay.—But Government cannot do all. Its work in providing opportunity must be taken up by the people, if the heroes who fought in the Great War are not to suffer still.

And now to come to a very gay and giddy subject: Never before, perhaps, was the dress exhibit in the Manufacturers' Building, so gorgeous, so frivolous, so utterly ridiculous in some respects; and one searches for the reason. Is it "reaction" from the four years' gloom that has been the *raison d'être* of those fantastic robes of gold embroidered

cloth, and silver mesh, and silks rivalling the rainbow in bright hues? Is it the effort of manufacturers to set going again the commerce of the world? Whatever be the reason, behind the glass of the Eaton, Murray-Kay, Simpson and other reservations gleam wondrous robes and soft furs, some beautiful, some strange to grotesqueness, and the most of us must pass them by, curiously interested, yet feeling that such gay feathers can have no closer intimacy for us. Here and there, however, appears a quiet suit or coat in rich dark coloring, that seems "possible." The lines are straight and graceful, the coats of the suits rather long, the skirts fairly narrow and of sensible length. Most of them have fur collars and cuffs, and the favored colors seem to be the various shades of brown, and taupe.

In the furnishing section rich old blues seem to be much in evidence,—appearing in curtains and upholstery, in rugs. Touches of black, in chintz seems also predominant, and some of the rugs have a background of black.

As I write we are in an attic room of a house on Jarvis Street. The house is crowded,—we are three in a room. Every house is crowded. As we looked over the Exhibition Grounds this afternoon, towards the fountain and beyond towards the Dufferin Gate, and then towards the huge crowded grand stand and the Midway, and then again towards the Art Gallery and beyond as far as eye could reach, we wondered where all the people came from. Surely this year the Exhibition will reach the number at which it is aiming—a million and a quarter.—And so 1919 will be the Banner year in numbers as in attractions.

To-morrow we shall start out again in search of more "bits" to send on to those who have not found it possible this year to attend the Big Fair.

(To be continued.)

Among the Books.

"The Mason Bees."

[The *Mason Bees*, by J. H. Fabre, McClelland and Stewart, Publishers; Toronto, \$1.60 net.]

THERE are people who go through life continually dissatisfied, seeing nothing of interest about them, and always convinced that "far away fields are green." There are others who go happily along, pleased with almost everything; and yet others who see so far into the wonders of the commonplace that the world becomes for them transformed into a place of endless wonder. To these even the dooryard opens marvels, while the field beyond becomes a vast unexplored country, with subjects of study enough to last a life-time. Thoreau, it will be remembered, said, "I have travelled much in Concord."

Needless to say, these last are naturalists, artists, or both. Nevertheless, any "common person," with the least liking for such things, who has studied ever so little the ways of the small denizens of field and wood, or learned ever so little to dabble with paint and brushes, may share to some extent the delight of the masters; therefore, it is that the individual to whom the books of Jean Henri Fabre have become intimate, is enthusiastic about introducing them to others.

To begin with Fabre was a naturalist, not an artist, except it be with words—those he handles with a simplicity that means true art. Yet quite unconsciously, he tells the story of the insects with such utter ingenuousness, with such pauses for by-play of fancy and anecdote and humor, that he removes them entirely from the



The Prince of Wales Opening the Canadian National Exhibition.

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realms of mere insectdom. Indeed, as we read his stories of bees, and wasps, and flies, and spiders and beetles, we become vividly aware of that other vast world of beings all about us,—beings with joys, and problems, and work, and obstacles and aims of their own. Henceforth to us a beetle is not just a beetle, nor a fly just a fly. Yet Fabre never falls into the mistake over which many more romantic and less painstaking investigators have tripped, of attributing human attributes to any of these small creatures. He takes pains to show age-long habits; he finds faculties finer and beyond anything that humans possess; yet he finds also an utter lack of the peculiar powers which raise human beings beyond all the lower orders. The insect does things by habit, sometimes stupidly. Man alone is quick to adapt the means to the need.

Jean Henri Fabre was a Frenchman, and died only a few years ago, at a ripe old age. Early in life his interest in insects was aroused, and in *The Mason Bees*, he tells just how that event, which meant so much to him for the rest of his life and to the world for all time, came about.—Yes, may it be repeated, "to the world," for it is no small matter to open the eyes of men and women to the wonders lying about their very feet, and that Fabre has done for the readers of his many books. . . . In 1843, when about 18 years of age, he had begun to teach school, in the primary department attached to the College of Carpentras, and found himself, as he tells us, in "a strange school, upon my word, . . . a sort of huge cellar oozing with the perpetual damp engendered by a well backing on it in the street outside. For light there was the open door, when the weather permitted, and a narrow prison-window, with iron bars and lozenge panes set in lead. By way of benches there was a plank fastened to the wall all round the room, while in the middle was a chair bereft of its straw, a blackboard and a stick of chalk."

—No very inspiring spot, truly, but the shackles for the feet of the mediocre may be the opportunity for the genius. And Fabre was a genius. To secure the interest for his pupils which could not be obtained in the bleak and poorly-equipped school-room, he began taking them far afield to give them lessons in practical surveying, open-air geometry, and one of the places visited was "an untilled, flinty plain," filled with many advantages.—"Here no curtain of green hedges or shrubs prevented me from keeping an eye upon my staff; here—an indispensable condition—I had not the irresistible temptation of the unripe apricots to fear for my scholars. The plain stretched far and wide, covered with nothing but flowering thyme and rounded pebbles."

It was here that the miracle happened. "From the very first day," Fabre tells us, "my attention was distracted by something suspicious. If I sent one of the boys to plant a stake, I would see him stop frequently on his way, bend down, stand up again, look about and stoop once more, neglecting his straight line and his signals. Another, who was told to pick up the arrows, would forget the iron pin and take up a pebble instead; and a third, deaf to the measurement of angles, would crumble a clod of earth between his fingers. Most of them were caught licking a bit of straw. The polygon came to a full stop, the diagonals suffered. What could the mystery be?"

Investigation followed, and Fabre found that the boys knew what he did not, viz., that the pebbles were covered with the small domed huts erected by a big black bee, each hut with its opening, each with its thimbleful of honey. "The magnificent Bee herself," he says, "with her dark-violet wings and black velvet raiment, her rustic edifices on the sun-blistered pebbles amid the thyme, her honey, providing a diversion from the severities of the compass and the square, all made a great impression on my mind; and I wanted to know more than I had learned from the schoolboys, which was just how to rob the cells of their honey with a straw. As it happened my bookseller had a gorgeous work on insects for sale. . . . The purchase was effected. That day my professional emoluments were severely strained: I devoted a month's salary to the acquisition of the book. I had to resort to miracles of economy for some time to come before making up the enormous deficit."—Enormous indeed, for he was receiving

the magnificent salary of 700 francs—about \$140—a year.

However, the buying of the book turned the whole course of Fabre's life. From the beginning, inspired by it, he became first student, then investigator, then writer and world-known author. . . . True, fortune did not come readily, but Fabre had learned to live for his work. It took him 40 years before he was able to buy the place that could give full scope for his investigation, which he finally secured near Serignan in Provence. "It is no easy matter," he tells in another volume (*Souvenirs Entomologiques*) "to acquire a laboratory in the open fields when harassed by a terrible anxiety about one's daily bread. For 40 years have I fought, with steadfast courage, against the paltry plagues of life; and the long-wished-for laboratory has come at last. What it has cost me in perseverance and relentless work I will not try to say."

But the place was at last achieved, and henceforth Fabre's work went on more easily.

In *The Mason Bees* he tells something of his methods, and of the thousands of painstaking and patient experiments by which he was able, not only to confirm or refute the conclusions of other investigators, but also to find out things about the insects that had never been known before. He was able to prove to his own satisfaction that the bees possess a sense of direction, wholly unknown to man, by which they can, directly as the homing pigeon, return to their nest from as great distances as their strength will cover. He found that he must doubt the theory of "Nimesis," or protective coloring, as applied to any great extent to insects. He discovered many things about parasites which no one else had had the patience to follow out. . . . All of these things are set forth, by concrete examples, in *The Mason Bees*, which deals with many other things besides bees.

Perhaps an idea of Fabre's methods of work, and also of his delightful way of describing his experiments, can best be given by direct quotation. We choose a portion of the book which deals with his experiments in trying to find out how the bees return to their homes.

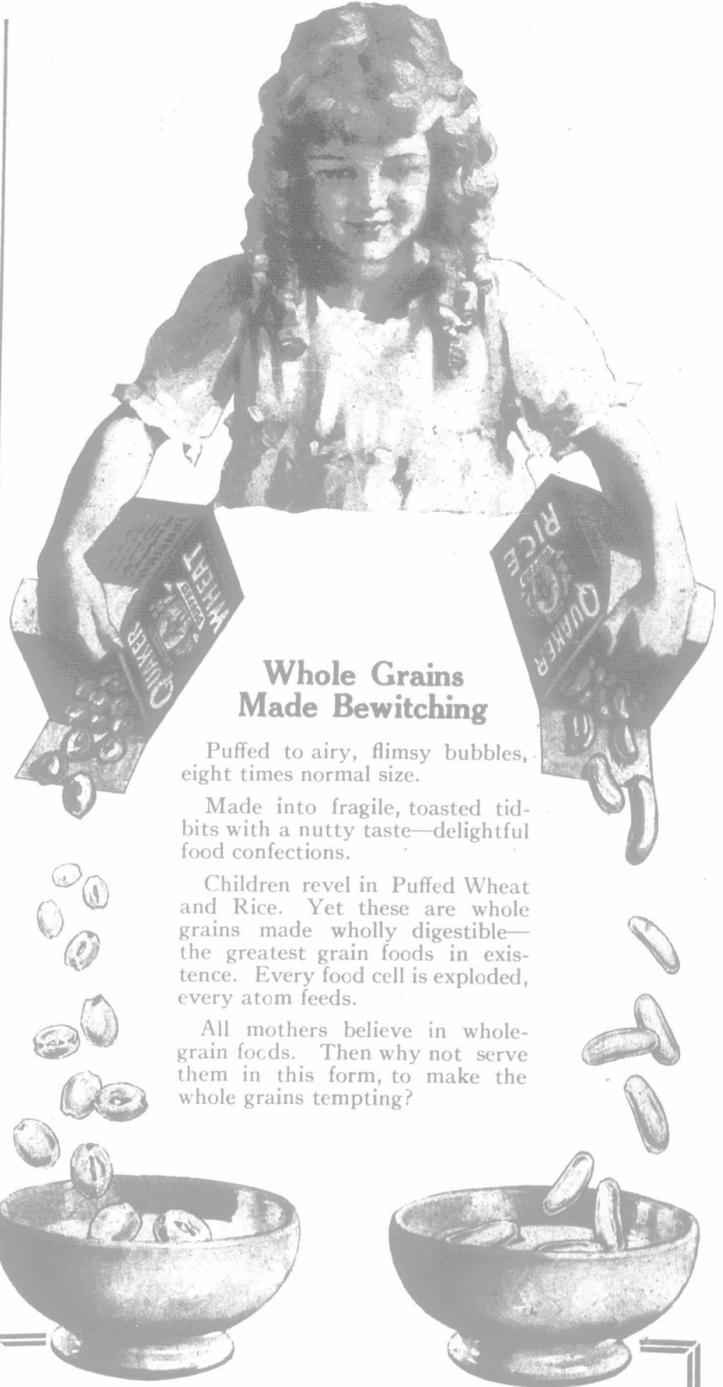
The Return of the Bees.

IN order to reach the nest, I place a ladder against the wall; it will be used by my daughter Aglae and will enable her to mark the exact moment of the return of the first Bee. I set the clock on the mantelpiece and my watch at the same time so that we may compare the instant of departure and of arrival. Things being thus arranged, I carry off my forty captives and go to the identical spot where *Chalcidodoma muraria* works in the pebbly bed of the Aygues. The trip will have a double object: to observe Reaumur's Mason and to set the Sicilian Mason at liberty. The latter will have two and a half miles to travel home.

At last my prisoners are released; all of them being first marked with a big white dot in the middle of the thorax.

You do not come off scot-free when handling one after the other forty wrathful Bees, who promptly unsheathe and brandish their poisoned stings. The stab is but too often given before the mark is made. My smarting fingers make movements of self-defence which my will is not always able to control. I take hold with greater precaution for myself than for the insect; I sometimes squeeze harder than I ought to if I am to spare my travellers. To experiment so as to lift, if possible, a tiny corner of the veil of truth is a fine and noble thing, a mighty stimulant in the face of danger; but still one may be excused for displaying some impatience when it is a matter of receiving forty stings in one's fingers at one short sitting. If any man should reproach me for being too careless with my thumbs, I would suggest that he should have a try: he can then judge for himself the pleasures of the situation.

To cut a long story short, either through the fatigue of the journey, or through my fingers pressing too hard and perhaps injuring some articulations, only twenty out of my forty Bees start with a bold, vigorous flight. The others, unable to keep their balance, wander about on the nearest bit of grass or remain on the osier shoots on which I have placed them, refusing to fly even when I tickle them with a straw. These weaklings, these cripples, these incapables injured by my



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mesh, and silks rivalling bright hues? Is it the art of the world? Whatever behind the glass of the Kay, Simpson and other wondrous robes and beautiful, some strange to and the most of us must be curiously interested, yet in gay feathers can have a fancy for us. Here and appears a quiet suit or work coloring, that seems the lines are straight and hats of the suits rather fairly narrow and of Most of them have fur and the favored colors various shades of brown, . . . section rich old blues in evidence,—appearing upholstery, in rugs, . . . in chintz seems also some of the rugs have black.

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The Books.

"Mason Bees."

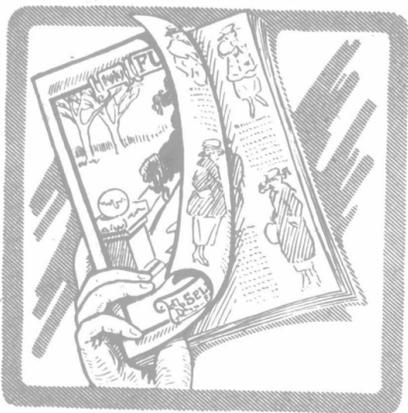
by J. H. Fabre, McArthur, Publishers; Tor-

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fingers must be struck off my list. Those who started with an unhesitating flight number about twenty. That is ample. At the actual moment of departure there is nothing definite about the direction taken, none of that straight flight to the nest which the *Cerceris* wasps once showed me in similar circumstances. As soon as they are liberated the Mason Bees flutters though scared, some in one direction, some in exactly the opposite direction. Nevertheless, as far as their impetuous flight allows, I seem to perceive a quick return on the part of those Bees who have started flying towards a point opposite to their homes; and the probability appear to me to be making for the distance where their nest lies.

I leave this question with certain doubts which are inevitable in the case of insects which I cannot follow with my eyes for more than twenty yards. Hitherto the operation has been favored by calm weather; but now things become complicated. The heat is stilling and the sky becomes stormy. A stiff breeze springs up, blowing from the south, the very direction which my bees must take to return to the nest. Can they overcome this opposing current and cleave the aerial torrent with their wings? If they try, they will have to fly close to the ground, as I now see the Bees do who continue their foraging; but soaring to lofty regions, whence they can obtain a clear view of the country, is, so it seems

to me, prohibited. I am, therefore, very apprehensive as to the success of my experiment when I return to Orange, after first trying to steal some fresh secret from the *Aygues* Mason Bee of the Pebbles. I have scarcely reached the house before Aglae greets me, her cheeks flushed with excitement. "Two!" she cries. "Two arrived at twenty minutes to three, with a load of pollen under their bellies!" A friend of mine had appeared upon the scene, a grave man of the law, who on hearing what was happening, had neglected code and stamped paper and insisted upon also being present at the arrival of my carrier-pigeons. The result

interested him more than his case about a party-wall. Under a tropical sun, in a furnace heat reflected from the wall of the shed, every five minutes he climbed the ladder bare-headed, with no other protection against sunstroke than his thatch of thick, grey locks. Instead of the one observer whom I had posted, I found two good pairs of eyes watching the Bees' return.

I had released my insects at about two o'clock; and the first arrivals returned to the nest at twenty minutes to three. They had, therefore, taken less than three-quarters of an hour to cover the two miles and a half, a very striking result, especially when we remember that the Bees did some foraging on the road, as was proved by their bellies' yellow pollen, and that, on the other hand, the travellers' flight must have been hindered by the wind blowing against them. Three more came home before my eyes, each with her load of pollen, an outward and visible sign of the work done on the journey. As it was growing late, our observations had to cease. When the sun goes down the Mason-bees leave the nest and take refuge somewhere or other, perhaps under the tiles of the roof, or in little corners of the walls.

Next day, when the sun recalled the scattered workers to the nest, I took a fresh census of Bees with a white spot on the thorax. My success exceeded all my hopes. I counted fifteen, fifteen of the transported prisoners of the day before, storing their cells or building as though nothing out of the way had happened. The weather had become more and more threatening; and now the storm burst and was followed by a succession of rainy days which prevented me from continuing.

The experiment suffices as it stands. Of some twenty Bees who had seemed fit to make the long journey when I released them, fifteen at least had returned; two within the first hour, three in the course of the evening, and the rest next morning. They had returned in spite of having the wind against them and—a graver difficulty still—in spite of being unacquainted with the locality to which I had transported them. There is, in fact, no doubt that they were setting eyes for the first time on those osier beds of the *Aygues* which I had selected as the starting point. Never would they have travelled so far afield of their own accord, for everything that they want for building and victualling under the roof of my sheds is within easy reach. The path at the foot of the wall supplies the mortar; the flowery meadows surrounding my house furnish nectar and pollen. Economical of their time as they are, they do not go flying two miles and a half in search of what abounds at a few yards from the nest. Besides, I see them daily taking their building materials from the path and gathering their harvest on the wild flowers, especially on the meadow sage. To all appearance, their expeditions do not cover more than a radius of a hundred yards or so. Then how did my exiles return? What guided them? It was certainly not memory, but some special faculty which we must content ourselves with recognizing by its astonishing effect, without pretending to explain it, so greatly does it transcend our own psychology.

SO much for a bit of Fabre's writing. Already this appreciation has stretched far beyond the bounds of a mere book review, yet one is loth to close without adding a few more words in regard to the man himself, this time a quotation from an enthusiastic article by "H. M. T.," which appeared in *The Nation*.

"Fabre was not only a great naturalist, but he was a writer of genius. In a narrative of his of a creature so insignificant that you had never heard of it until Fabre staged it, you become unconsciously absorbed in the adventures of the atom as though it were a character in drama, beset by inimical circumstances, working out its predestined and irrevocable doom like one of Hardy's Leroines. The fact is Fabre was touched. Once he actually refused something really nice from the Government. He not only had zeal for the obscure work which kept him so poor in goods that people declared him mad, but he was so serene and far-looking that he continued to survey the world below him speculatively yet without reproof. And he had other qualities, expressed as a genial comradeship in his writings, that only now, worse luck, are

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we beginning to prize. He was a really great man, yet allowed that to trouble his fellows so little that few of them knew it. He had no ambition, no desire for fame, showed a strange aversion for meddling with other people's affairs dodged honors as though they were brickbats, and died poor, aged, but happy. All this, when set down, bears such a preposterous resemblance to a successful life that it is unfair to those who have tried genuinely to do well. Still there is no need for us to follow his example, though he may enjoy his books."

Hope's Quiet Hour.

A High Ambition.

I seek not mine own will, but the will of the Father which hath sent me.—S. John V:30.

Follow! so follow on, Christians, every one,
Hold the hope of your patience fast
Till the Day-star arise, and your happy eyes
See the King in beauty at last,
And the Love, Work and Praise of your pilgrimage days
At the feet of your Lord are cast.
Follow on, follow on, till the night is gone:
Till the long, hard quest has its end in rest,
And the Vision of Christ is won.
—S. J. Stone.

ment of Eternity. Are we letting the precious opportunity slip through our fingers? If it is true that "to-morrow never comes," it is no less certain that yesterday never returns. What is our ambition? What is the purpose of our life, the goal we are aiming at?

When a man begins his financial career by earning a dollar a week, and climbs by persistent endeavor up the ladder of riches until he can leave millions to his heirs; is that a proof that he has made a brilliant success of this opportunity of life, which is given to each of us? The millions must be dropped on this side of the gate. It is God, not man, who shall determine how much the man is "worth."

This is the birthday of a gentle, helpful woman, who is always ready to do a kindness to a neighbor. This morning she found outside her door a little birthday gift, and a card inscribed with Lowell's lines, which fit her splendidly:

"Blessing she is, God made her so;
And deeds of weekly holiness
Fall from her noiseless as the snow,
Nor hath she ever chanced to know
That aught were easier than to bless."

What are we living for? Is the purpose of our life one worth paying out the precious hours and years for? When we make up our accounts, at the end of this section of life, shall we find ourselves with any wealth that we can carry out with us—any riches of holiness, courage, patience, love that will have value in the country we must enter?

Our Leader's ambition was a high one and His purpose was unchanging. His one desire was to do the Will of the



MADE to meet a growing demand for finer undergarments, Watson's are soft in texture, faultless in finish—the ultimate in women's underwear.

The easy, elastic comfort of these garments is due to special knitting on Spring Needle Machines. So also is their greater strength and long life.

Many seasonable fabrics. Many styles and all sizes in Men's, Women's and Children's garments.

Watson's SPRING NEEDLE RIBBED Mfg. Co.
UNDERWEAR
THE WATSON MANUFACTURING CO., LIMITED
BRANTFORD, ONTARIO



The Grand Stand, Canadian National Exhibition.

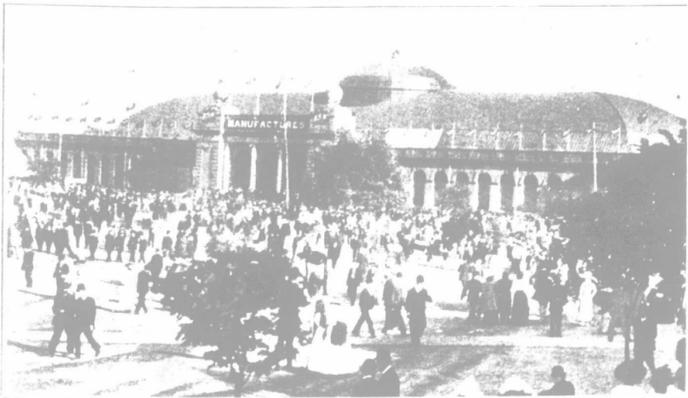
Looking towards the Midway. You go on it to be amused and under it to be fed.

Swiftly—and yet more swiftly—the days fly; and soon this chapter of our life will be closed. What then? Yesterday I was talking to a young woman about the life Beyond. She is walking with unflinching trust along a painful path, and looking with steadfast eyes at the gate which will probably open before long to admit her into the unknown land beyond death. I had just left her when another woman, in a bed close beside my brave friend, slipped quietly and painlessly through that gate.

Is death the "Great Adventure?" Perhaps—if we only realized the fact—we might call this life "the Great Adventure," for day by day we are weaving the thread of Time into the lasting gar-

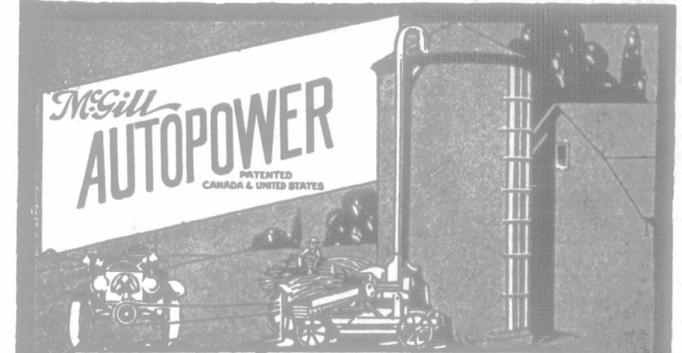
ment of our Father. Even when He prayed that the cup of agony might pass, it was only if the Father willed it so. His one great prayer, "Thy Will be done!" must be our prayer too, if we are to make our lives worth while.

Even when our Lord was a child of twelve He was astonished to find that His mother did not know that He "must" be about His Father's business. He took it for granted that she would naturally look for Him in the Father's house. That compelling "must" puts us to shame. We—like the invited guests in the parable—must be about our own business or pleasure; and only when all our own affairs are settled to our satisfaction can we spare time for our Father's business.



The Manufacturers' Building, Canadian National Exhibition.

Where you find the "latest" in everything.



You Don't Need a 20-H.P. Engine

McGill Autopower does this job better and cheaper

Have you a Ford Car? Then you have the most efficient, economical power-plant in the world for farm work—WHEN IT'S FITTED WITH THE MCGILL AUTOPOWER.

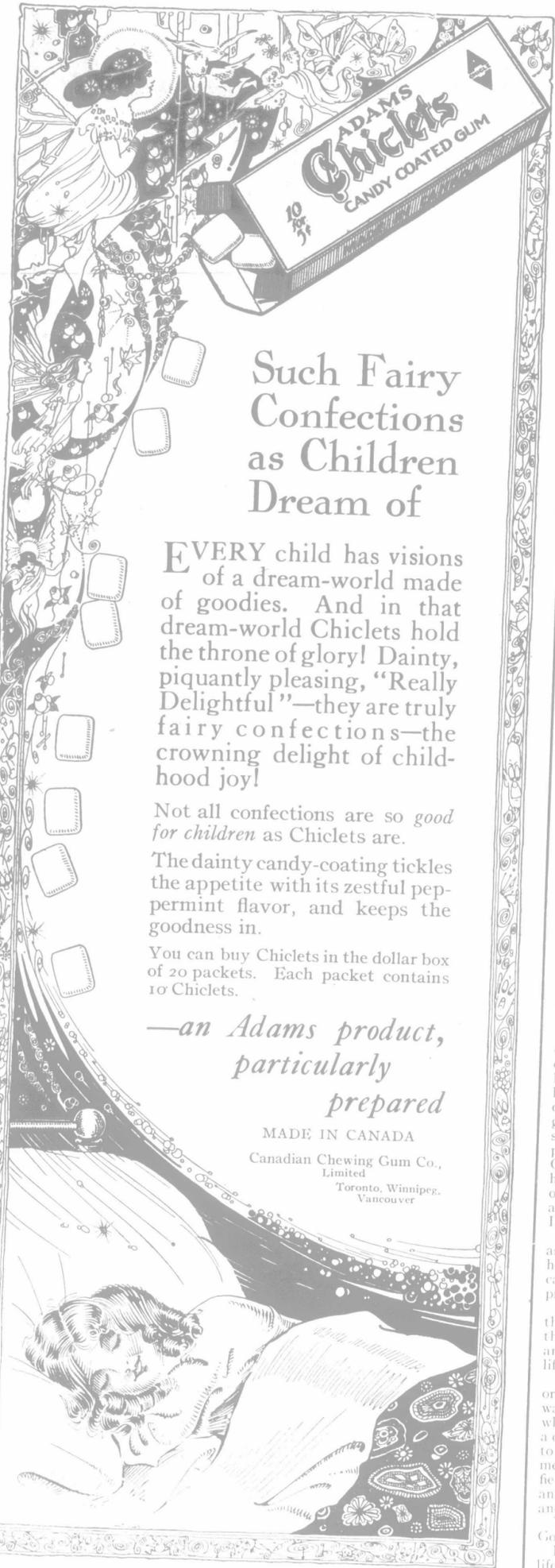
In three minutes you can change your Ford from a pleasure car to a 14 H.P. gas engine for farm work—sawing wood, cutting ensilage, threshing—and in another three minutes it's an auto again.

The McGill Autopower has proved itself. Hundreds of Canadian farmers have been using it for years. Their experience proves that it does not injure the Ford Engine in any way. It has a governor which automatically regulates the power to the load and maintains a steady speed, and an auxiliary fan which keeps the engine cool under all conditions.

Write for literature fully describing it, and actual letters from farmers (some in your neighborhood, perhaps) telling what the Autopower is doing on their farms. Write today for this information.

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EVERY child has visions of a dream-world made of goodies. And in that dream-world Chiclets hold the throne of glory! Dainty, piquantly pleasing, "Really Delightful"—they are truly fairy confections—the crowning delight of childhood joy!

Not all confections are so good for children as Chiclets are.

The dainty candy-coating tickles the appetite with its zestful peppermint flavor, and keeps the goodness in.

You can buy Chiclets in the dollar box of 20 packets. Each packet contains 10 Chiclets.

—an Adams product, particularly prepared

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Canadian Chewing Gum Co., Limited
Toronto, Winnipeg, Vancouver

Yesterday a S. S. teacher said to me: "So many of my boys, who have been at the front, never attend church now." Of course, that is only the outward sign—one of the outward signs—of a man's purpose in life. It is possible that he may be more sincere in his desire to serve God (even though his disappointed friends know that they will not find him in the Father's house) than he was in his careless boyhood. "I know they are groping after God," said that teacher of her boys. Perhaps—in the old days when they gave her pleasure by coming to church,—perhaps, then, they were not even groping after God, but just trying to please their S. S. teacher. It may be that they are really nearer the light now, because they are not deceiving themselves by thinking they have faith when they have none.

This morning I read in the paper an aviator's description of the view from above. He said that cities looked rather like collections of houses built with a child's blocks. Man's great works and achievements seem like children's toys when the beholder is at a great height.

So it was with St. Paul. His ambition to win a great name, with his mental gifts and scholarly training, was left behind with as little regret as a young man feels for the tin sword and toy drum which used to please him. He no longer gloried in earthly wisdom and power, but gloried only in the Lord. He threw aside, as poor weapons, all enticing words of man's wisdom, and fixed his heart on Christ crucified; though such an ambition was, in the opinion of the Jews, a stumbling-block in the path of progress and, in the eyes of the Greeks, was folly.—1 Cor. 1:11.

Then there was another young man, full of the splendid vigor which resulted from a life in the open air and simple food. John the Baptist lived on the heights; therefore, he cared nothing for the offered suggestion that he should proclaim himself the Messiah. His purpose was not to win earthly fame, but to proclaim faithfully the message of God. He did not wish to win a great name for himself, but said he was only a "voice" telling man what God wanted them to do and be. He saw that the fickle multitude would soon turn their backs on him and seek after some new sensation; but that certainly could not disturb his peace for an instant. "I must decrease," he said but not sadly; for the ambition which swayed him was not his own glory but the glory of his great Kinsman. "He must increase!" That hope was enough to flood his own future with light. Herod might try to hold him a prisoner in a dungeon, but his spirit was free to climb to the heights and walk in the courts of a greater King. Herod might send to behead the faithful servant of God, but his messengers only opened a new door of eager service to that brave young spirit. His purpose was to do the Will of God and neither prison nor physical death could hinder that high ambition.

About a year ago I heard a missionary describe the difficulties of a young native of India, who had been a Mahomedan but had found Christ. To come out boldly as a Christian meant the sacrifice of all earthly things. He would have to give up father, mother, wife, children, social position and property. After long perplexity he decided on the side of Christ. The missionary said that he himself had seen a letter from the father of this young man cursing him terribly and declaring: "If you are going to heaven I will go to hell."

Some time afterwards the missionary asked the young soldier of Christ whether he regretted his decision. The answer came unhesitatingly: "No, my only surprise is that I took so long to decide."

How many have bitterly regretted that they wasted this earthly life in seeking their own will! Did you ever hear of anyone who regretted having spent his life in seeking to do the Will of God?

It is purpose that makes a life noble or mean. Jesus, the village Carpenter, was doing the Father's Will as perfectly when He was building a house or making a child's cradle, as when He was preaching to multitudes or raising the dead. Two men can be working side by side in one field, and the one can be living for God and the other for self. God is the Judge, and He looks at the heart.

What is your ambition? Is it to please God or only to win the praise of men?

Don't waste this great opportunity of life in self-seeking! If you do there will certainly come a time when you will bitterly regret your choice. Judas chose a handful of silver and threw away his

loyalty in exchange. Within a few hours he had thrown away the price of his terrible bargain and tried to get rid of the life which his own choice had made unendurable. Choose you this day whom you will serve—and choose wisely!

"I bargained with Life for a penny, And Life would pay no more, However, I begged at evening When I counted my scanty store; For Life is a just employer, He gives you what you ask, But once you have set the wages, Why, you must bear the task. I worked for a menial's hire, Only to learn, dismayed, That any wage I had asked of Life, Life would have paid."

DORA FARNCOMB.

The Windrow.

Several presentations were made to Mrs. Alfred Watt before her departure from England for Canada, in recognition of her work in establishing Women's Institutes there.

The former Kaiser has bought a country house in Holland.

One hundred and eighty soldier teachers have been in Toronto brushing up on various studies before taking the Faculty of Education and Normal School courses this fall.

Andrew Carnegie died worth \$50,000,000, one-tenth of what accrued to him through his business ventures.

The St. Thomas, (Ont.) Horticultural Society captured both prizes on its entries at the American Gladiolus Associations Show in Detroit.

The charms of music were used this year in behalf of the Kansas wheat crop. Bands paraded Kansas to enlist harvesters. Thousands of hands were needed, and New York and Pennsylvania sent recruits.

The calculations of the Prince of Monaco, an authority on oceanography, have been confirmed by the Director of the Meteorological Service of the Azores Islands, showing that floating mines, broken from their moorings have spread to north, south and southwest of the Azores and are floating towards the coasts of England, France and Spain.

Current Events

Premier Hearst says the prohibition referendum on Ontario will be taken at some time between Oct. 1 and Oct. 22, probably on same date as elections.

The U. F. O. has nominated as candidates in the coming elections: A. Hillyer for East Wellington; J. A. Cockburn for South Wellington; and Samuel P. Foote for North York.

The first day of the Exhibition at Toronto broke all previous records of attendance. The aim this year is one and a quarter millions, a mark which, greatly owing to the presence of the Prince of Wales upon certain occasions, will likely be attained.

The British Government is offering \$3,200,000 in prizes for a "safety" competition in flying machines.

All over Great Britain street markets are being opened to fight profiteers, and are selling at nearly 50 per cent. lower than the shops.

The Jugo-Slav delegation at Paris is protesting against Allied support to the Archduke Joseph, the Hapsburg Governor of Hungary who has been placed in power by the Roumanian invasion.

The Roumanian Cabinet has refused to accept the decision of the Peace Conference relative to the division of Banat and Temesva between Roumania and Serbia, and war may be precipitated between the two countries.

The Rules for Departments: paper only. with common the real name enclosing a letter in a stamp (4) Allow answers to qu

DEAR you e paused interesting not importa haps, but j pened and t And don't y often, we w we don't liv as we imagin Sometimes topics going in a note-bo just such lit I am going one day's jot

Note 1.— now what d The other for once I'm for you kno sweet little E. Campbell, and I were which is the said: "There wa on the step th morning. It muff.—There There it wa hot sun, a v looked up pit we stooped to Two men v about the do of them came "It's eyes a I'll take it h lead water in And then in to ask what "It must be ing much wha lives in a b can't carry ho

"Why, yes, starving. I'll restaurant an then I'll take Meanwhile or a mew, wa other as thou consultation w One kitten, good hands. up and went of and utterly car see "loss of sight of a well-man carrying with sore eyes street at noon As we went kindness of t workman who sider the suffer and the dapp achieved the r consciously, su the world is r isn't it?

Note 2. "C what in the w going past a ver house, where a pa from \$50 to a child at a wi up. She was a in a fluffy white blue ribbons. behind her there solid walnut or v very fine lighting awful place in w I thought. No No fence to run little calves, and No breadth of l of sky filled wit sets (for one can No place for end less fresh air. wonderful play-h and beautiful pie imagination glori into a dream of as the little boys than elegance. It seems to me

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.]

DEAR Ingle Nook Friends.—Have you ever, at the end of a day, paused to go over all the little interesting things that happened in it,—not important or outstanding things, perhaps, but just little incidents that happened and the thoughts they gave rise to? And don't you think, if we did this more often, we would come to the conclusion we don't live in quite such a Dumdrudge as we imagine?

Sometimes, in the interests of keeping topics going for this column, I jot down in a note-book a few words to indicate just such little incidents, and so to-day I am going to make you the victims of one day's jottings.

Note 1.—"Kitten on Step."—Ah—um—now what does that mean?—Oh, yes—The other day a friend and I,—yes for once I'm going to tell you her name, for you know her already through her sweet little poems—it was Miss Amy E. Campbell,—well, then, Miss Campbell and I were going along the streets on which is the Patricia theatre, when she said:

"There was a tiny little kitten lying on the step there, when I came down this morning. It looked like a little grey muff.—There it is yet."

There it was, sure enough, lying in the hot sun, a wee little scrap of fur that looked up pitifully and blinked at us as we stooped to look at it.

Two men were carpentering something about the door of the theatre, and one of them came over.

"It's eyes are sore," he said, "I think I'll take it home and put some sugar of lead water in them."

And then a dapper young man stopped to ask what was wrong.

"It must be starving," we said, wondering much what we could do, for when one lives in a boarding-house one simply can't carry home starving kittens.

"Why, yes," he said, "of course it's starving. I'll take it to the Chinese restaurant and get it some milk and then I'll take it home with me."

Meanwhile the kitten, without a move or a mew, was looking from one to the other as though wondering what all the consultation was about.

One kitten, at least, had fallen into good hands. The young man picked it up and went off with it, stroking its back, and utterly careless whether anyone might see "loss of dignity" in the unusual sight of a well-dressed, well set-up young man carrying a wee rag-tag of a kitten with sore eyes down the crowded main street at noon of a summer's day.

As we went on we remarked on the kindness of the two men—the busy workman who could take time to consider the suffering of so tiny a bit of life, and the dapper young man who had achieved the real dignity of doing, unconsciously, such a kind little act.—But the world is really full of kind people, isn't it?

Note 2. "Child at Window."—Now, what in the world?—Oh, yes, again: In going past a very large and fine apartment house, where apartments rent at anywhere from \$50 to \$75 a month, I noticed a child at a window about three stories up. She was a very pretty child, dainty in a fluffy white dress, her hair tied with blue ribbons. Doubtless in the room behind her there was a beautiful rug, and solid walnut or mahogany furniture, and very fine lighting fixtures, yet—"what an awful place in which to bring up a child!" I thought. No yard to run about in. No fence to run to and peek through at little calves, and sheep, and flying birds. No breadth of horizon and great dome of sky filled with clouds and rosy sunsets (for one cannot see sky in the city) No place for endless exercise and boundless fresh air. No lovely spot to make mud-pies in. No fence-corner for a wonderful play-house with bits of moss, and beautiful pieces of broken china, and imagination glorifying the summer day into a dream of Araby.—"No nothin'," as the little boys say, with more emphasis than elegance.

It seems to me that every child has a

The Legacy of War

Canada's Dead and Missing	- - - - -	63,038
Canada's Wounded	- - - - -	149,709
Canada's National Debt	- - - - -	\$1,670,263,691
Soldiers' Annual Pensions	- - - - -	\$35,000,000

THE WORLD is staggering with debt. Some of the leading countries are verging on bankruptcy.

Five years ago Canada had never dreamed of the financial burden she carries to-day.

Canada entered the Great War with a National Debt of \$337,000,000, or \$42 per head of population. Canada emerges with a National Debt to date of \$1,670,263,691, which is expected to approximate \$2,000,000,000 by the end of the fiscal year—or about \$250 for every man, woman and child in the country. Interest charges alone will eat up nearly one-half our present national revenue, and soldiers' pensions will have to be provided as well.

Can Ontario Afford to Spend \$36,000,000 a Year on Booze?

PREVIOUS to the Ontario Temperance Act the drink bill of the Province approximated \$36,000,000 per year, an amount about equal to Ontario's share of the Annual interest on our National Debt. In the face of our financial responsibilities alone, is this the time to repeal the Ontario Temperance Act or relax a single one of its restrictions upon waste of money and man power? To every question on the Referendum Ballot vote—

"No!"—Four Times—"No!"

No Repeal—No Government beer shops—No intoxicating beer in Standard Hotel bars—No Government beer and whiskey shops. Be sure you are on the voters' list. Be sure you mark your ballot four times—X—X—X—X—in the column headed No.

Ontario Referendum Committee

JOHN MACDONALD, Chairman. D. A. DUNLAP, Treasurer. ANDREW S. GRANT, Vice-Chairman and Secretary. (1001 Excelsior Life Bldg.)

right to be brought up either right in the country, or in conditions as near to it as possible. The country is the best of all; the big yard on the edge of a city the next.—And when that can't be given, surely the world owes a children's park and supervised playground to the little ones.

But these big apartment-house hives for little children!—Never!—Thanks be, children are not very welcome there either, for if they were there are probably enough foolish mothers to rent them.

Note 3. "Nazimova."—No need to tug at recollection here.

Perhaps you like movies and perhaps you don't.

Speaking for myself, I may say that I do like, once in a while, to go to a really good "picture," especially if the vaudeville or other part of the programme has been chosen with care—as it should

always be—so that there is nothing to offend.

Recently such a pretty play was shown here, "The Rosebush of a Thousand Years," with the famous Russian actress, Nazimova, and her husband, taking the leading parts.

Briefly the story is this: A young American artist, poor, studying in Paris, goes to a cabaret one evening to eat a frugal meal. While there he sketches a young dancer, Joline, so well that he interests her, and she consents afterwards to pose for him as a model. She is full of tempers and moods, but very charming in spite of them, and so he paints her in various character, and in the meantime she falls in love with him, preferring him to an elderly admirer, a Count, who imagines that love can be bought. Meantime, because of this wonderful new model, the fame of the artist increases, and he is able to move from his poor studio in

the Quartier Latin to a much better one.

One day the elderly admirer, ostensibly for the purpose of separating the girl from the artist, proposes to him that he go to a distant town to paint the story of a legend there. The story is this. Once upon a time there grew in the garden of the monastery in that town a rosebush that had ceased to bloom, a visible sign, so the monks thought, of the displeasure of the Holy Mother. But one among them never ceased to pray, beside the rosebush, for some sign of the restoration of the divine favor. At last one day, in the heart of the bush the Holy Mother appeared to him, and straightway the whole bush became abloom with beautiful roses that tossed in the wind. For long years it bloomed, and then again the roses were seen no more. Once more, the Count explains, a Brother is anxious to bring back the sign, and prays before the rosebush every day.

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97

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Further we ask you to send no money, just mail your order, we ship the tires on approval, C.O.D., all express charges paid to any address in Ontario, Quebec or the Maritime Provinces. If after you have thoroughly examined the tires

you are not satisfied, you are at perfect liberty to return them at our expense. What could be fairer—what offer more straight forward and above board?

Size.	Plain.	Non-skid.	Tubes.
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33 x 4	22.60	26.00	5.15
34 x 4	23.40	28.00	5.40

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31 x 4	\$24.00	33 x 4	26.00
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Ajax Patch, 35c per box.

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TORONTO

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OURS is an independent all-Canadian concern. We have absolutely no connection whatever with any international trust or combine. Our twines are the highest quality, try them and be convinced.

We submit them to a special preserving treatment to make them insect-proof.

BRANDS

Gilt Edge, 650 ft.
Gold Leaf, 600 ft.
Silver Leaf, 550 ft.
Maple Leaf, 500 ft.

BRANTFORD BINDER TWINE

13

The artist becomes entranced with the idea. He will paint the Holy Mother in the midst of the blooming roses, with the kneeling Brother in adoration before her,—and he will paint it on the spot, in the very garden behind the grim old walls of the monastery. The trouble is to find a model worthy to serve as the Mother of Our Lord. For once the wild, wilful Joline is gently repulsed. In vain does she drape herself to take the part. To her grief and fury she will not do. The Count sends one beautiful girl and then another, and the second is so approved by the artist that he engaged her, whereupon Joline flies upon her like an enraged cat and scratches her. The next moment so sweet is she in her repentance and sorrow for her naughtiness, that she dawns upon the artist as the very model for his great picture. . . . She goes with him to the monastery, to which she finally gains access by dressing as a boy, donning her long robes and posing for the picture while the monks are in the chapel with their devotions. One day the Brother sees her there, with her hand resting on a branch of the rosebush. He thinks he has seen the vision and faints with joy. Meanwhile the artist and his model make their escape. But next day, strangely, the branch on which Joline's hand had rested bursts into bloom. The miracle has happened and the monks rejoice, opening the gardens for both men and women so that all may come and worship there. In the meantime Joline's conscience is troubled, and she finally goes into the chapel and confesses to the venerable old Prior there. He tells her not to trouble because "through the eyes of every woman the eyes of the Holy Mother, at some time, look." The Brother, he thinks, saw her at that divine moment, and so really beheld the vision, beheld the Holy Mother. . . . This idea so takes hold of Joline that she becomes completely changed,—the evil drops away, the good shines forth. She becomes a Red Cross nurse. Meanwhile the artist, in his studio, with the picture of Joline as the Mother of Our Lord in the rosebush, which he will not sell, has found out that he loves Joline. But the call to the War comes to him when the American troops march through Paris. He enlists, and, of course, the story ends appropriately when, wounded, he is reunited with Joline in the hospital—Joline the most loved and loving of all the nurses who go to and fro through the halls of pain.

It was a beautiful story and a beautiful picture, and I hope some day you may have a chance to see it. You will understand then, better than through my mere telling, its lesson: That there is a gleam of divinity in every human soul.—And its practical lesson: Take it for granted that one is good and that one will be better than before.

Perhaps, if you see it, I shall have spoiled somewhat, for you, the expectancy of the story, but I have told this little of it for those who cannot see it at all.

JUNIA.

Worth Thinking Over.

"If you will engrave upon the tablet of your heart this little word 'Up' and have it lead you, you will never know how to fail."

"If we are ever going to develop a decent human civilization here in Canada we shall have to hold some higher ideal than the base commercial one of taking all we can get from our fellow citizens."—A. Stevenson, London, Ont.

About a Kitchen Floor.

Dear Sir.—Your advice last winter helped us to save a splendid row of elm trees from the axes of the Bell Telephone line men, and our gratefulness tempts us to apply again for help in a minor problem. We have a hardwood floor in our kitchen. It was laid fifteen years ago, and was treated in the first place by a coat of hot oil. This must have been a mistake, as we have ever since had trouble. The room is used by a large family every day in the year, and as we are farmers it means that the floor must be dusted or cleaned every day. A few weeks ago it was well scrubbed and lye was used to take off previous finishes and dirt. Then Valpar was used, and now though we clean carefully it has turned gray and dirty looking. Would it be best to clean with some kind of oil? Sometimes we use warm

water with a little coal oil or milk, and we also use liquid veneer. Always we use a soft woollen cloth and dry well, but no matter, the result is distressing and unsightly. Can you help us?

Thanking you for the help we know you will try to give.

Frontenac Co., Ont. M. SEROULE.

A hardwood floor is the best kind there is, yet in a farm kitchen, as you have found, it presents some difficulties. In a living-room, where there is comparatively little "wear and tear" and more care can be given, the most attractive finish has been found to be waxing, or first stain and then waxing; and for this washing is not recommended, the use of a cleanser and re-waxing being found to be the proper treatment. But the farm kitchen is a different proposition. The wax is too slippery for it; it marks too easily; in short, it will not do at all except, perhaps, where the family is limited to two or three extra careful souls. I have just telephoned a dealer in floor finishes about your difficulty, and he says first to clean the floor very thoroughly, then apply two or three coats of good floor varnish, which can be cleaned afterwards, very nicely, with a mild soap and soft warm (not hot) water. Whenever lye is used for cleaning a floor, the wood should be very well rinsed with several waters, then finally rinsed with vinegar water to kill any corroding effects of the lye.

Scientific American gives the following method for cleaning a floor perfectly: "Take some clean, sifted white sand and scatter it on the floor. Dissolve 1 lb. of American potash, or pearl ash, in 1 pint of water, and sprinkle the sand with the solution. Have a pail of very hot water and scrub the boards lengthwise with a hard brush, and use good hard soap. Change the water frequently. This will whiten the boards and take out stains." It might be wise for you to try this treatment before putting on the floor varnish. If you like the floor light apply the varnish over the dry, white floor. If you like it dark first apply a stain, then, when thoroughly dry, put on the varnish. Keep a few heavy hooked or braided mats to save the floor where there is most walking.

I trust this will solve your problem. An article on floors, by the way, will appear in an early issue of this paper.

Dyeing Query.

For M. P., Grey Co., Ont.:

We think the dye you used could not have been good. Would advise re-dyeing it. Get a reliable brand dye recommended for silk and follow directions closely. Some dyes require salt, others vinegar to set the color.

Peaches and Plums.

Peach Butter.—Four quarts pared and sliced peaches, 1 quart sliced apples, 1/2 cup vinegar, 1/2 cup water, 3 lbs. brown sugar, spice bag (if liked). Place all in a kettle, bring slowly to a boil, mash well with a potato masher and cook slowly until thick. Put in sterilized tumblers and cover, when cool, with melted paraffine. Put on lids or tie down with paper. Use an asbestos mat under the kettle to prevent scorching.

To Can Peaches.—One quart peaches, 1 cup sugar, 2 cups water: Make a syrup of the water and sugar, boiling hard for 5 minutes. Set back on the stove, let settle, then skim thoroughly. Let come to a boil again, and put in enough peaches (which have been cut in half and pared) to fill a jar. When tender take the fruit out and place in the jar, then fill with the boiling syrup, being careful to tilt the jar as you pour it in to prevent cracking. Run around the inside of the jar with a sterilized silver knife to break any bubbles, and seal at once. Of course, the jars must be sterilized before putting the fruit in.

Spiced Peach Pickle.—One peck freestone peaches, 7 lbs. sugar, 1 1/4 gallon good cider vinegar, cloves, allspice, and cinnamon to taste. Select firm peaches and let lie in hot soda water until the fur can be rubbed off with a coarse cloth. Let the vinegar, sugar and spice come to a hard boil, then add the peaches a few at a time, and let simmer until a straw can be run through. Put in sterilized jars and pour the boiling syrup over. If preferred the peaches may be sliced.

Sweet Pickled Peaches.—Four quarts peaches, 2 lbs. sugar, 1 stick cinnamon, a few cloves, 3 cups vinegar. Cook sugar and vinegar to a syrup, adding the spices

a little coal oil or milk, and
the liquid veneer. Always we
woolen cloth and dry well, but
the result is distressing and
Can you help us?
you for the help we know
to give.

Co., Ont. M. S. ROULE.
od floor is the best kind there
farm kitchen, as you have
resents some difficulties. In a
where there is comparatively
and tear" and more care
n, the most attractive finish
ound to be waxing, or first
then waxing; and for this
not recommended, the use of
d re-waxing being found to be
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a different proposition. The
slippery for it; it marks too
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extra careful souls. I have
ned a dealer in floor finishes
difficulty, and he says first
floor very thoroughly, then
or three coats of good floor
ch can be cleaned afterwards,
with a mild soap and soft
(hot) water. Whenever lye is
ning a floor, the wood should
rinsed with several waters,
rinsed with vinegar water to
oding effects of the lye.

merican gives the following
cleaning a floor perfectly:
clean, sifted white sand and
the floor. Dissolve 1 lb. of
stash, or pearlash in 1 pint
l sprinkle the sand with the
ave a pail of very hot water
e boards lengthwise with a
and use good hard soap
water frequently. This will
boards and take out stains."
wise for you to try this treat-
putting on the floor varnish.
floor light apply the varnish
white floor. If you like it
apply a stain, then, when
dry, put on the varnish.
heavy hooked or braided
the floor where there is most

s will solve your problem.
floors, by the way, will ap-
ply issue of this paper.

Dyeing Query.

Grey Co., Ont.:
he dye you used could not
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reliable brand dye recom-
eilk and follow directions
e dyes require salt, others
the color.

es and Plums.

Four quarts pared and
1 quart sliced apples, 1/2
cup water, 3 lbs. brown
ag (if liked). Place all in
slowly to a boil, mash well
masher and cook slowly
Put in sterilized tumblers
when cool, with melted
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an asbestos mat under the
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Pickle.—One peck free-
7 lbs. sugar, 1 1/4 gallon
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off with a coarse cloth.
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dd the peaches a few at a
immer until a straw can
Put in sterilized jars and
syrup over. If preferred
y be sliced.

Peaches.—Four quarts
ugar, 1 stick cinnamon, a
ps vinegar. Cook sugar
syrup, adding the spices

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Furs
now
and buy
Hallam
Furs
by mail
It is cheaper
easier & more
pleasant

GUARANTEED
FROM TRAPPER TO WEARER



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how last year we advised, even urged, every-
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from 10% to 75%.

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the Trappers from all parts of Canada large
quantities of the best and most suitable raw furs
we could obtain.

Then, do you remember how mild
it was last winter?—how the war
ceased?—and how terribly the "Flu"
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All these unforeseen events tended
to considerably reduce the sale of fur
garments, though the sales of Hallam's
Fur Garments showed a greater in-
crease than ever last season.

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season's prices.

We have made these up into the
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In addition, by our policy of selling
"direct from trapper to wearer" you
save the middlemen's profits—high
store rents, etc.

Further, by conducting the entire
operations ourselves of turning the raw
furs into complete garments, we are
able to select and know the quality of
every square inch of fur that goes to
make up the famous guaranteed

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FUR GARMENTS

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satisfied with a Hallam Fur garment
—just send it back at our expense, and we will refund
your money in full by return."

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Marmot
Coat**

This new and attractive coat is the 40-inch
length, slightly fitted in the back, has slash
pockets, wide reverse border at the bottom,
deep-shawl collar and cuffs, fancy buttons
fastening with silk elastic loops. The skins
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blended a rich Mink shade. Richly lined with
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finished. Sizes 32 to 42 bust.

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General Manager

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tied in a cheesecloth. Peel the peaches and cook gently in the syrup until tender. Lift into sterilized jars, boil the syrup down a little, pour to fill jars, and seal hot.

Plum Jelly.—Put the washed fruit in a kettle with water to cover, heat slowly until soft, stirring and pressing with a wooden spoon. Drain through a jelly bag until the pulp is dry. Allow a pound of sugar to each pint of juice. Boil the juice 20 minutes from the time it starts to boil, skimming often. Add the sugar which has been heated in the oven, stir well and bring again to the boiling point, then turn into sterilized jelly-glasses. When cold and stiff cover with melted paraffine, seal closely, and put in a cool, dry cupboard.

Markets

Continued from page 1595.

Toronto Produce.

Receipts of live stock at the Union Stock Yards, West Toronto, on Monday, September 1, numbered 278 cars, 5,525 cattle, 686 calves, 2,479 hogs, 2,855 sheep and lambs. Slow market. General quality very poor. Steers and heifers 25 to 50 cents lower. Top, \$14.75 for one load. Cows and bulls 25 cents lower; calves \$1 lower. Sheep steady; lambs \$14 to \$15; bulk at \$14.50. Hogs, \$20.75, fed and watered; buyers quote 50 cents lower for balance of week.

Farm Produce.

Trade in butter was firm at unchanged quotations; choice creamery fresh-made pound squares selling at 54c. to 56c., and best dairy at 47c. to 49c. per lb. Dealers state that they paid 38c. to 40c. for choice dairy at country points.

Eggs were also a firm trade at prices steady with the previous week; new-laid selling at 54c. to 55c., and selects in cartons at 58c. to 59c. per doz.

Cheese was quoted as being a steady trade at 28c. to 28½c. per lb.

Poultry.—The market was active at lower price levels. Spring chickens that were in good condition were in strong demand, but the skinny truck was not wanted at any price. The demand for old hens was also good, and ducks were an improved trade. Latest quotations for live birds delivered Toronto were as follows: Spring chickens, 28c. to 30c. per lb.; old hens, 6 lbs. and over, 30c. per lb.; old hens, 5 lbs. and over, 26c. per lb.; old hens, 3½ to 5 lbs., 25c. per lb.; old roosters, 28c. to 30c. per lb.; choice ducks, over 5 lbs., 22c. per lb.; ducks, 4 lbs. and over, 20c.

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Blueberries.—\$1.75 to \$3 per 11-qt. basket.

Grapes.—Moore's Early, 65c. to 75c. per 6-qt. leno, and 50c. per 6-qt. flat basket; champignons, 35c. to 40c. per 6-qt. basket.

Peaches.—Crawfords, 60c. to 85c. per 6-qt., \$1 to \$1.75 per 11-qt. basket.

Pears.—Bartlett and Clapp's Favorite, 50c. to 60c. per 6-qt., 85c. to \$1 per 11-qt. basket.

Plums.—60c. to \$1 per 6-qt., \$1.25 to \$1.50 per 11-qt. basket.

Thimbleberries.—15c. to 20c. per box.

Tomatoes.—Ripe, outside grown, 25c. to 30c. per 6-qt., and 35c. to 40c. per 11-qt. basket.

Tomatoes.—Green, 20c. per 11-qt. basket.

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

Beets.—New, Canadian, 25c. to 30c. per dozen bunches, 35c. per 11-qt. basket.

Cabbage.—Canadian, 75c. per dozen.

Carrots.—25c. to 30c. per dozen bunches; 20c. per 6-qt., 40c. per 11-qt. basket.

Cauliflower.—\$2.50 to \$3 per dozen.

Corn.—12c. to 15c. per dozen.

Celery.—Domestic, 40c. to 45c. per dozen; imported, 40c. per dozen.

Cucumbers.—20c. to 25c. per 11-qt. basket; (pickling), 30c. to 50c. per 6-qt., 50c. to \$1.25 per 11-qt. basket.

Egg Plant.—\$1.25 to \$1.50 per 11-qt. basket.

Lettuce.—Leaf, 40c. to 50c. per doz.; Canadian head, 75c. to \$1 dozen, extra choice \$1.25 to \$1.50 per dozen.

Onions.—Imported, \$7.50 per 100-lb. sack; Domestic, 50c. per 6-qt., \$1 per 11-qt. basket; Spanish, \$9.50 per 135-lb. case.

Breadstuffs and Feeds.

Wheat.—Ontario (f.o.b. shipping points according to freights)—No. 1 winter, per car lot, nominal; No. 2 winter, per car lot, \$2.03 to \$2.08; No. 3 winter, per car lot, nominal; No. 1 spring, per car lot, No. 2 spring, per car lot, nominal; No. 3 spring, per car lot, nominal. Manitoba (in store, Fort William), No. 1 northern, \$2.15; No. 2 northern, \$2.12; No. 3 northern, \$2.08; No. 4 wheat, \$2.02.

Oats.—Ontario (according to freights outside)—No. 3 white, 90c. to 92c.

Barley (according to freights outside)—Malting, \$1.35 to \$1.39.

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

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Prices deliv City Hiden 35c., flat; cal veal kip, 45c.

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cured, 35c.; p bob calf, \$2.50 take-off, No.

to \$8; No. 1 s horse hair, far

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 50c. to 75c. per
 \$7 per bbl.
 35c. to 40c. per 6-qt.,
 1-qt. basket.
 1.75 to \$3 per 11-qt.

's Early, 65c. to 75c.
 and 50c. per 6-qt. flat
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 fords, 60c. to 85c. per
 per 11-qt. basket.
 and Clapp's Favorite,
 qt., 85c. to \$1 per 11-qt.

\$1 per 6-qt., \$1.25 to
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 15c. to 20c. per box
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 own, 50c. to 75c. per

Canadian, 25c. to 30c.
 35c. per 11-qt. basket.
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 to \$1.50 per 11-qt.

c. to 50c. per doz.;
 to \$1 dozen, extra
 per dozen.
 \$7.50 per 100-lb.
 per 6-qt., \$1 per
 h, \$9.50 per 135-lb.

and Feeds.
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 —No. 1 winter, per
 winter, per car lot,
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 rn, \$2.12; No. 3
 wheat, \$2.02.
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prompt shipment), No. 2, 3 and 4 yellow, nominal.
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 Flour.—Manitoba (Toronto)—Government, standard, \$11; Ontario (prompt shipment, in jute bags). Government standard, \$10 to \$10.50, Montreal and Toronto.
 Millfeed.—Car lots delivered, Montreal freight, bags included)—Bran, per ton, \$42 to \$45; shorts, per ton, \$44 to \$50; good feed flour, \$3.25 to \$3.50.
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 Country Markets.—Beef hides, flat, cured, 35c.; part cured, 33c.; deacon bob calf, \$2.50 to \$3; horse hides, country take-off, No. 1, \$10 to \$11; No. 2, \$7 to \$8; No. 1 sheep skins, \$2.50 to \$3.50; horse hair, farmer's stock, 33c. to 35c.
 Tallow.—City rendered, solids, in barrels, 9c. to 10c.; country solids, in barrels, No. 1, 7c. to 8c.; cakes, No. 1, 11c. to 12c.

Wool, unwashed, coarse, 42c.; medium coarse, 50c.; fine, 59c.
 Wool, washed, coarse, 65c.; medium, 70c.; fine, 75c.

Buffalo.
 Cattle.—Cattle trade at Buffalo for the first half of last week ruled very satisfactory, prices ranging steady to strong, with the previous week, but the close of the week witnessed a slump, which figured fully a half to seventy-five cents. The agitation for lower food prices, along with Federal Government consideration of legislation which is regarded by packers as most hurtful to their business, is given as some of the contributing causes. Then again, sheep and hog prices have shown a very heavy decline, and trade has come to the conclusion that beef prices should be on a nearer level with other meats. The impression prevails that values may show another drop in the immediate future. The very high prices of meats generally has no doubt had a substantial tendency towards reducing consumption, as the result of which the coolers are pretty well filled with beef all round. With the Government consumption out of the reckoning, the proposition is that the supply of live cattle is large and that the consumption is falling below normal wants, and the belief is general that prices on cattle will work to a lower level. The week's close at Buffalo was weak. Offerings for the week totaled 7,100 head, as against 5,575 head for the previous week, and as compared with 7,775 head for the corresponding week a year ago. Canadians were liberal for the week, there being approximately 150 cars, best Canadian steers ranging from \$15.25 to \$15.50. Quotations:

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 MARRIED MAN DESIRES POSITION ON farm. Experienced. Henry, Box 523, Oakville, Ont.
 "PURE BRED FLEMISH GIANTS. DOES (bred) Four Dollars. Both sexes four months. Two Dollars each. Trevor McLennan, Beaverton, Ontario.
 "WANTED MANAGER FOR MILK COLLECTING Station, which combines butter making, cheese making and milk condensing. Must be experienced butter maker and good mechanic and produce references as to honesty and sobriety. The Pure Milk Co. Ltd., Hamilton, Ontario.
 WANTED, AN EXPERIENCED MARRIED man for general farm work, yearly engagement; house supplied. J. A. Pettit, Freeman, Ontario.
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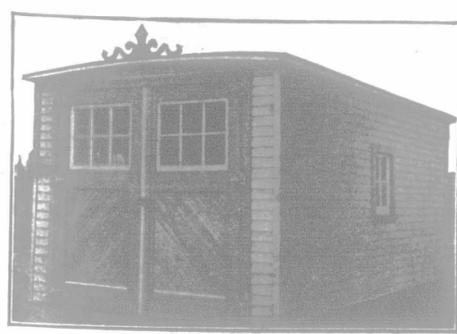
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WINNIPEG, OCTOBER 20-21-22

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To consider education in its relation to Canadian citizenship. To undertake the establishment of a permanent bureau to guide and assist the educational thought of the country.

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Its Aim and Its Object

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In view of the imminence of the Ontario Referendum the activities of the League will for the present be chiefly directed to

SANE LIQUOR LEGISLATION

The Ontario Temperance Act, adopted by the Government as a war measure—without the vote of the people—is legislation that does curtail personal liberty and one which has bred great dissatisfaction.

The Citizens' Liberty League is absolutely opposed to a return of the open bar as it previously existed in Ontario under the old License Act. The League believes that The Ontario Temperance Act should be repealed and so enable the Government to enact a law in accord with the sentiment of the people, permitting the general sale of non-intoxicating beer and light wines and the sale of pure spirituous liquor only through Government agencies under proper restrictions.

Now that a Referendum is about to be taken, the members of the League feel that every citizen should clearly understand the meaning and significance of the questions asked in the Referendum Ballot.

In order to accomplish this purpose the Citizens' Liberty League will discuss all phases of this great issue in the public press in the interests of sane, moderate temperance legislation.

CITIZENS' LIBERTY LEAGUE

22 College Street, Toronto

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Sir EDMUND B. OSLER

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EXECUTIVE COMMITTEE

No person directly or indirectly interested in the liquor business may become a member of the League or contribute to its funds.

The Corn Wheat

The Western wheat is generally lived in it spread to the prairie and numbers from the whole, has grown and to-day than it has farmers report while others

The Sawfly is a bodied, four-yellow band from about July and matures by its wings upon plants. Egg stems of wheat short time yellowish-white to feed about burrow down the base of out of the length is cent. They usually 1, and at 1 inch in length stem through it inside, pl hidden with year when it

The Wheat the stubble flies from the laying its closest to its. It may be as far more first plants are usually are the cent

REMEDIES land between of the following five inches so that the are upside a spring plough

(2) When the entire possible about worst.

(3) When very bad or immune to account of suffer far less. Burning stub does not kill

Prosecution est fires by debris with in Ontario wick. Co have already cases. Of fore the Ne fourteen we penalties. rated them human safety sors' proper settlers to in burning of Manitoba fire losses year largely ment of the fires. Exact Saskatchewan by the Pro result that credibly large Alberta has in curbing t it belongs t berta's loss mous and provincial irrigation, sequences, sociation.

Breeders horns and it profitable Farm, at Toronto by Both static herd sires the breeding When visit would not If interest vale.

The Control of Sawflies in Wheat, Rye and Barley.

The Western Wheat-stem Sawfly originally lived in native grasses. From these it spread to small grains such as wheat, rye and barley. It has fluctuated in numbers from time to time but on the whole, has gradually become more numerous and to-day is probably more abundant than it has ever been before. Many farmers report a fifteen per cent loss while others have suffered still more.

The Sawfly, when mature, is a slender-bodied, four-winged fly, with two or more yellow bands on its body. It is found from about June 10 to the first week in July and may be recognized from other flies by its habit of resting head-downwards upon the stem of cereals and other plants. Eggs are deposited within the stems of wheat, rye and barley. In a short time these eggs hatch into small yellowish-white grubs which commence to feed above the topmost joint and burrow downwards until they reach the base of the plant. This hollowing out of the stem throughout its entire length is characteristic of the insect. They usually reach the base by August 1, and at this time are almost half an inch in length. The grub then cuts the stem through by gnawing a ring around it inside, plugs up the stub and remains hidden within until June of the following year when it turns to the adult fly state.

The Wheat-stem Sawfly winters in the stubble of last season's crop; it flies from there to the new crop usually laying its first eggs upon the plants closest to its last season's breeding ground. It may then move into the crop but as far more eggs are deposited on the first plants reached, the edges of fields are usually more severely infested than are the centres.

REMEDIES.—(1) Plough all infested land between August 1st and June 10th of the following year and not less than five inches in depth. Turn the furrows so that the stubs in which the grubs occur are upside down. The packing of loose spring ploughing is also advisable.

(2) When it is impossible to plough the entire field turn down as much as possible along the edges where injury was worst.

(3) When the injury promises to be very bad oats may be grown as they are immune to the insect. Winter rye, on account of its earliness, is also apt to suffer far less than wheat or spring rye. Burning stubble, disking or cultivating does not kill the grubs.

Forest Fires.

Prosecutions of settlers for causing forest fires by burning their land-clearing debris without official permits are proceeding in Ontario, Quebec and New Brunswick. Convictions with heavy fines have already been secured in numbers of cases. Of twenty settlers brought before the New Brunswick courts in July, fourteen were convicted and given stiff penalties. In addition the magistrates rated them severely for indifference to human safety and the security of neighbors' property. Quebec has sent several settlers to jail because of carelessness in burning off their lands.

Manitoba had by far the lowest forest fire losses of the prairie provinces this year largely because of a vigorous enforcement of the system of supervising settlers' fires. Exactly the same law is in force in Saskatchewan, but was left a dead letter by the Provincial authorities, with the result that Saskatchewan lost an incredibly large share of its timber properties. Alberta has not yet taken provincial action in curbing the forest fire evil, although to it belongs the primary responsibility. Alberta's losses in timber have been enormous and the evil effects upon the provincial water supply, for power and irrigation, are among the serious consequences. — Canadian Forestry Association.

Breeders interested in milking Short-horns and Berkshire swine would find it profitable to visit Credit Grange Farm, at Meadowvale, Ontario. The farm is only forty minutes ride from Toronto by C. P. R. or Guelph Suburban. Both stations join the farm. Imported herd sires are used in both herds, and the breeding stock is of high quality. When visiting Toronto Exhibition it would not take long to see these herds. If interested, write J.B. Pearson, Meadowvale.



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Imperial Eureka Harness Oiler
—simple and convenient. Should be in every barn.

Imperial Mica Axle Grease
—keeps the metal spindle from contact with the hub-lining. Coats both with a smooth covering of mica and the finest grease. Kills friction and makes axles and wheels last longer and run easier. Helps the horse and saves wagon repairs. Sold in many sizes—1 lb. to barrels.



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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 Grains, etc.

CRAMPSEY & KELLEY
Dovercourt Road - Toronto.

Questions and Answers.
Veterinary.

Blind Bull.

Two-year-old Hereford bull has gone blind. He was on pasture until a month ago, since which time he has been in a box stall in a well-lighted stable. His eyes appear normal except that they protrude too far out of the sockets.

J. D. S.

Ans.—The symptoms indicate amaurosis, a disease due to paralysis of the optic nerve. There are slight hopes of recovery, but in rare cases a recovery takes place. All that can be done is administer nerve tonics as 2 drams of nuxvomica 3 times daily.

V.

Erysipelas.

Cow's eyes swelled and ran fluid. Then her foreleg swelled badly and has a sort of rash that discharges watery stuff. Both swelling and rash are extending in all directions.

A. H. B.

Ans.—This is a form of erysipelas, which is always very serious and often fatal. Give her 1½ pints raw linseed oil and follow up with 2 drams chlorate of potassium and ½ oz. tincture of iron in a pint of cold water as a drench 3 times daily. Feed well. If a tendency to constipation be noticed at any time during treatment, give ½ to 1 pint raw linseed oil as required. Dress the parts that are exuding liquid 3 times daily with a lotion made of 2 oz. each of acetate of lead and sulphate of zinc to a quart of water.

V.

Miscellaneous.

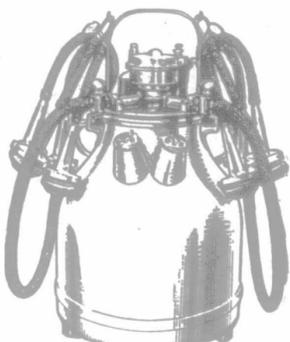
Tenant Moving.

A rented a farm from B for three years at a stated yearly rent to be paid at the end of the year. The first year's rent was paid, but the second year the crops were a failure on account of dryness. A is removing all the stock and implements off the farm to cheat B out of his rent. What must B do to stop A?

2. What would be the proper way to rent a farm on shares? Should B furnish anything besides the farm? S. K.

Ans.—1. B is not in position legally to prevent such removal.

**Had Thirty Cows—
Intended Selling**



Good for The Herd

He was tired of the drudgery of hand-milking, tired of hired help always complaining. So he thought of selling his thirty cows.

But instead he bought a

**BURRELL
B-L-K
MILKER**

Now he has increased his herd to 50 cows. He is contented, so is his hired help. He lets them off Sunday and with his boy does the milking easily.

That is an oft-repeated experience. One average man with two 2-cow Burrell Milkers can milk from 24 to 30 cows an hour, do the work of three hand milkers, and do it well.

Write for the experience of others to whom you can write.

D. Derbyshire Co., Limited - Brockville, Ontario

KNITTING MACHINES FOR MAKING MONEY HOME & RED CROSS WORK
CREELMAN BROS., Manufacturers, Box 701 GEORGETOWN, ONT., CAN.

2. There are different ways of share farming. Where the owner of the farm supplies stock and implements, it is customary for him to get sixty per cent. of the returns and the tenant forty per cent. In some cases where the tenant supplies both stock and implements the division of returns is reversed. We know of some who are farming on a fifty-fifty basis, the man being required to do the work for his share and the owner furnishing the farm, stock and implements.

Landlord and Tenant.

A leased a farm to B for two years. In the meantime A sold it to C before B's time was up. Can C turn B out before his time is up? When A helped sign the lease nothing was said about selling the farm.

Ontario.

Ans.—No.

Stripping Cows.

Where cows are milked with the milking machine is it injurious to leave the stripping for fifteen or twenty minutes, or should the cows be stripped immediately?

N. B. C.

Ans.—It is preferable to milk the cows immediately after the machine has been removed, but if left fifteen or twenty minutes there should be no injurious effects.

Widow's Rights.

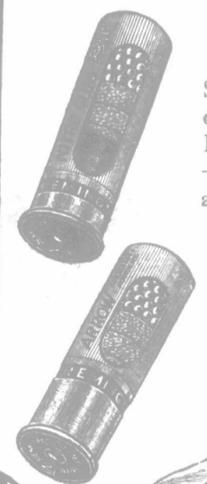
A man dying separated from his wife, the wife now claims her third. Can she take her third out of the crop? He had a small garden of onions which was looked after by a neighbor.

Ontario.

Ans.—She may have deprived herself of her right to a distributive share of the estate by the separation agreement, if any. Otherwise she would be legally entitled to claim one-third of the estate remaining after payment of her husband's debts and funeral and testamentary expenses. She could not take it directly out of the crop of onions, but in the regular course, should apply to the administration of the estate for payment of her share of the estate. It would be his duty to see to the harvesting and sale of the crop. If letters of administration be not taken out promptly by one of the children of the deceased, she could make application to the Surrogate Court for grants of same to herself.

J. T. L.

Remington UMC



Every Shot Counts

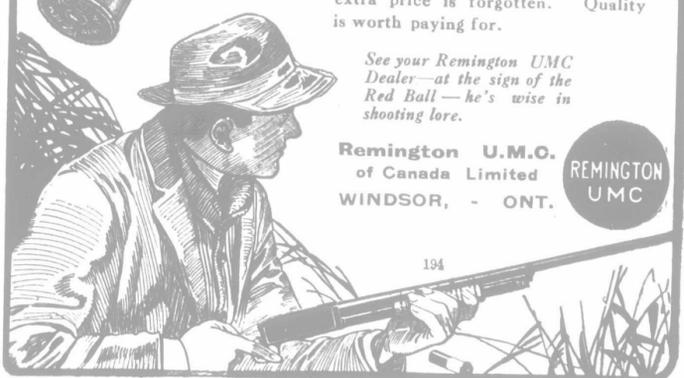
So shoot 'em straight—and quick—and often! How? With a Remington UMC Pump Gun, of course—you get 6 shots—just slide the wooden fore-end forward and back—smooth, easy and lightning-fast. Bottom ejection, solid metal breech, hammerless and safe.

"Nitro Club" and "Arrow" —Wetproof Shells

Yes—really Wetproof—stand an all day soaking without a sign. Try these steel-lined speed shells, with their splendid pattern and you'll remember their performance long after their extra price is forgotten. Quality is worth paying for.

See your Remington UMC Dealer—at the sign of the Red Ball—he's wise in shooting lore.

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has thousands of acres of fertile land, suitable for mixed farming and live stock raising, for sale at low prices and on easy terms. Land that will grow grain, and fodder crops of various kinds may be had at from \$11 to \$30 an acre. Only one-tenth down and twenty years to pay the balance.

IRRIGABLE FARM LANDS

capable of producing large crops of wheat and other grains, alfalfa and all kinds of fodders, beets, potatoes, tomatoes, vegetables, every season and supporting maximum number of live stock per acre, for sale at \$50 an acre, including water rights. One-tenth cash and twenty years to pay balance. Loan of \$2,000 for buildings, fencing, etc., on these lands.

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Beaver Hi... to 20 months... and ram lamb... ALEX. MCK

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**Stock
 Prosperity**

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WAY

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FARM LANDS

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 Puffs, and all lameness from Spavin,
 Ringbone and other bony tumors.
 Cures all skin diseases or Parasites,
 Thrush, Diphtheria. Removes all
 Bunches from Horses or Cattle.
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 Sprains, Sore Throat, etc., it is invaluable.
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 topping steers and cows which
 are profitable milk producers, is
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Kennelworth Farm Angus Bulls—The
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 a number are ready for service. Prices reason-
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 to 20 months. Females all ages. Shearing rams
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 ALEX. MCKINNEY, R. R. No. 1 Erin, Ont.

**Impressions of a Canadian
 Among British Farms.**

While overseas with the Canadian
 forces, I had on several occasions oppor-
 tunities of visiting farms both in England
 and Scotland. When first that oppor-
 tunity came, I went out to various farms
 with very mixed feelings. First, I ex-
 pected to see great things at some of
 them, and in this I was not disappointed.
 Secondly, I expected to find the methods
 of handling machinery and horses some-
 what crude from the Canadian point of
 view, and in this I was not entirely disap-
 pointed. Further observation modified
 my views on all the processes of farming
 operations and left me convinced that
 there was something for us to learn from
 the British farmer. In fact, I am strongly
 of the opinion that we could teach the
 other some things very much to our
 mutual advantage.

I was most quickly impressed by the
 differences in the machines and vehicles
 used, by what I would call the crudeness
 of the methods of hitching and by their
 ways of driving their horses. I used to
 see many binders running in the large
 fields of Yorkshire, where the machines
 were drawn by three horses, two of which
 were hitched to the pole in the ordinary
 way, while the third was hitched in front
 of the other two, by means of a chain
 and singletree. No eveners was used.
 The horses were driven by one man who
 rode one of the horses, while another rode
 the binder and handled the levers. No
 bundle carriers were used, and a great
 deal of work was required to gather up
 the bundles. When the plows were
 turned into the same fields later in the
 season, there were seven teams in the
 one field. All the plows were single hand
 machines, and each man was driving only
 two horses. When the wagons or carts
 were busy on the road, the horses were
 invariably hitched tandem artillery
 fashion. On some occasions, three horses
 were strung on in front of each other and
 two men were required to drive them, the
 men walking by their sides.

Those are a few of the scenes that
 gave me my first and perhaps my most
 lasting impression of British farms. They
 are a few of the things which strike the
 eye quickly and produce a striking im-
 pression, past which a good many ob-
 servers never go; consequently, Canadians
 of that type think the British farmer as
 antique as he was a thousand years ago,
 and conclude discussion of the subject by
 saying so. But they are hasty and they
 have failed to discover the real merit in
 the British farmer's methods.

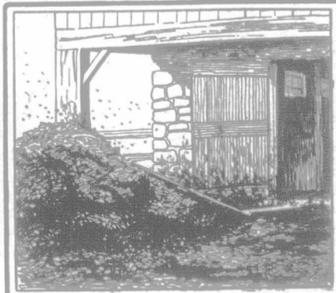
When I first entered a British farm-
 yard I was struck by the neatness of the
 place. The clean, carefully swept yard,
 the carefully housed machinery and the
 general absence of litter and disorder.
 At first I thought this a model farmyard.
 When I had visited several others and
 found them similar, I came to the con-
 clusion that I must have been lucky in my
 choice of the day for my visit. But when
 I had been in and by many in different
 parts of the British Isles, at different
 times and at different seasons of the year,
 I discovered that it was characteristic of
 British farmyards. The same may be
 said of the work in the fields as about the
 farmyard. The British farmer turns a
 straight furrow and does a good job of his
 work. He thins evenly and hoes his roots
 carefully. He piles his manure carefully,
 and spreads it when well rotted, and after
 a day of hauling manure or threshing, he
 cleans the yards carefully and leaves
 things so spick and span at night as if
 the job were complete. If the wagons
 are in use during the day they are all
 backed carefully into their sheds at night.
 If the thresher is in use, all litter is
 cleaned up and the machine is covered up
 for the night. Upon one occasion I was
 stationed at an aerodrome in Yorkshire
 just between two large farms of 600 or
 700 acres each, and day after day I noted
 that the general care and thoroughness
 mentioned were practiced on both these
 farms.

Those are a few of the scenes that left
 different impressions upon my mind re-
 garding British farms and lead me to be-
 lieve that thoroughness also was charac-
 teristic of the British farmer.

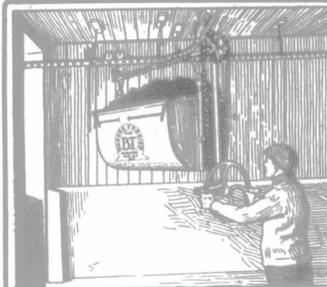
Now let us look for a moment at the
 British farmer among his live stock. Over
 there I saw farms as I have done here that
 we call stock farms, where the raising of
 stock is the particular business of the
 farm. I saw farms largely given over to
 grain growing, but the more common



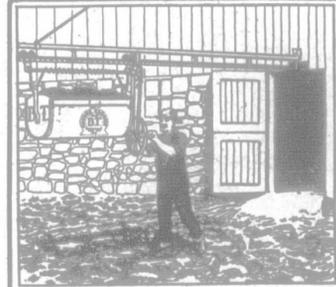
Day in and day out, the hard work of
 cleaning the stable has to be done.
 Stable cleaning with a wheelbarrow is
 a monotonous, hard, disagreeable chore.
 It is hard to wheel a heavy wheelbarrow
 load through a muddy yard and up a
 slippery plank. And the worst of it is,
 this hard, disagreeable chore has to be
 done every day.



It is practically an impossibility to get
 the manure far enough away from the
 stable. The conditions in the yard
 make it impossible. Manure piles right
 up close to the stable give off ammonia
 fumes that spoil paint and woodwork,
 rot harness and at the first opportunity
 breed flies.



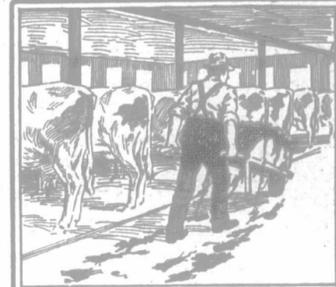
A wheelbarrow does not hold
 much at a load, which means
 many trips before the work is
 done. The BT Carrier holds
 three times as much as a wheel-
 barrow. It will tackle 800 lbs. in
 one load.



The hard work of cleaning the stable is
 cut in two with a manure carrier. It
 runs on overhead track so it does not
 matter about the state of the yard. No
 planks to lay; no snow to shovel; no
 more pushing to the top of the pile with
 a wheelbarrow.



If you want to dump the manure
 sixty feet away from the barn you
 can do it easily. No more manure
 piles at the stable door. The BT
 Manure Carrier is loaded, run out
 and dumped in a jiffy. A boy can
 do the work.



With a BT Carrier there is no
 muss in the passage ways. The
 big steel bottom bucket holds
 every bit of the manure including
 the valuable liquid. With a wheel-
 barrow, the manure slops over and
 the passages become filthy.



Help is scarce and you have much to do.
 Another hour to yourself and relief from
 the drudgery of the hardest chore on
 the farm would be much appreciated,
 would it not? Let us send you our free
 book on Manure Carriers so that you
 can judge for yourself.

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Please send me a copy of your illustrated
 catalogue on Manure Carriers. I have answered
 your questions below.

Are you thinking of
 putting in a Manure Carrier.....

If so, when.....

How many cows have you?.....

Your name.....

P. O.

R. R. No. Province.....

Reputation



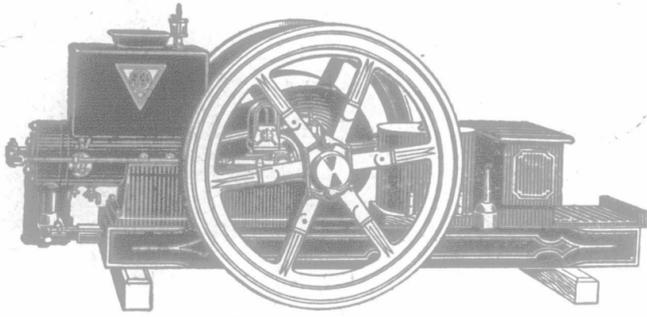
Trade Mark

THE reputation of the De Laval Company is a most valuable asset. For over thirty years it has been building up this reputation among Canadian dairymen and farmers.

The ALPHA Gas Engine represents the same high quality among engines as the DE LAVAL Separator among cream separators. The reputation of the entire Company is back of every machine it puts out.

That is why the ALPHA Engine is a safe buy for the farmer. It is a dependable engine with thirty years of reputation for honesty and service behind it.

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THE DE LAVAL COMPANY, Ltd.

LARGEST MANUFACTURERS OF DAIRY SUPPLIES IN CANADA.
Sole manufacturers in Canada of the famous De Laval Cream Separators and Ideal Green Feed Silos, Alpha Gas Engines, Alpha Churns.
Catalogues of any of our lines mailed upon request.
MONTREAL PETERBORO WINNIPEG VANCOUVER
50,000 BRANCHES AND LOCAL AGENCIES THE WORLD OVER

farm in Britain is the one where stock are a most important part of the farm's produce. First, I must say this: that in almost every case I was forcibly impressed with the general evidence of good breeding among the live stock of Britain. One never sees a flock of sheep, or a herd of cattle, where he cannot see at once the predominant blood of the breed which they represent. This is even true among grades, and the scrub from the point of view of blood is almost non-existent in Britain. I was not only impressed by the evidence of good breeding, but by the high quality of the live stock showing that breeding. As a rule, the live stock kept by the British farmer is of a very high quality. A great evidence of the value of blood. The British farmer I found very attentive to the needs of his live stock. He has his sheep dipped always. His shepherd watches closely and corrects injuries to the feet and sore mouths among his sheep. He provides his sheep and cattle with salt and oil cake and all the little details of attention that go to make up good care. Not only does the large breeder do this, but the small farmer who only has a few animals, handles them with the greatest care and attention, and many of the finest animals in Britain are bred and reared by the small, but careful and attentive farmer.

With the single exception of the labor question, I was impressed also by the economy of the British farmer. He does not neglect, but he does not waste and he utilizes every bit of straw, manure and fodder of every kind that he has about the place. He further increases his economy by preventing waste by damage to machinery, fodder or live stock. These, then, are the impressions which I received from visits to British farms. In the first the comparison is much in favor of the Canadian farmer, and it is in these matters that we could give the British farmer some useful lessons. In the thoroughness and efficiency of the work accomplished, the comparison is in favor of the British farmer. Of course, his methods do not make for speed to the extent that the Canadian method does, and therein lies the objection from our standpoint. I am not prepared to say that it is possible for the British farmer to wholly adopt our methods of work and our improved machinery, nor am I prepared to say that

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SIZES to suit your openings. Fitted with glass. Safe delivery guaranteed.
Write for Price List (B). Cut down fuel bills. Insure winter comfort.

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DUAL-PURPOSE Shorthorns

Present offering 6 young bulls, Red & Roans, also a number of females. They have size quality and breeding from good milking dams. Prices Moderate. Satisfaction guaranteed.
Chas. Graham, Port Perry, Ont.

Please mention Advocate

ROBERT MILLER, Stouffville, Ont., Has EIGHT of the best young bulls that he has owned at one time, good ages and beautifully bred. Also sex-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

Newcastle Herd of Shorthorns & Tamworths for Sale—5 choice bull calves 5 to 6 months old, several heifer calves 6 months old, good dual-purpose cows bred to him, good dual-purpose cows. A choice lot of Tamworths of both sex and various ages, young sows or two bred to farrow in Sept. or Oct., all from noted prize winners.
Long Distance Phone A. A. Colwill R. R. No. 2, Newcastle, Ont.

SHORTHORNS SHROPSHIRE COTSWOLDS
Blairgowrie Stock Farm
Cows in calf and calf by side. Also heifers in calf and others ready to breed. Bulls of serviceable age.
JNO. MILLER (Myrtle Stations, C.P.R., G.T.R.) ASHBURN, ONTARIO.

WALNUT GROVE SHORTHORNS AND OXFORD SHEEP
We are offering choice young heifers and bulls by our herd sires, Gann and Felipe and Trent Creek Wonder. Also a few yearling and ram lambs for sale.
DUNCAN BROWN & SONS, Shedden, Ontario. P. M. M. C. R.

Milking Shorthorns—Herd headed by Royal Capt. the 129153, son of Capt. the 2nd, with R.O.P. record of 17,724 lbs. milk and 1,636 lbs. fat in a year. Three bulls, 4 to 8 months old, by above sire; two bulls, 18 months, by Lloyd George, which have been used and are sure breeders. The dams of these bulls are big, strong cows with creditable records. Inspection of herd solicited.
JOHN WALKER, Naticoke, Ont. (Haldimand County).

Your Part of 250,000,000 Bushels of Wheat

FARMERS of Canada will endeavor to produce 250,000,000 Bushels of Wheat in 1919. With such a crop the use of the Grain-Saving Wind Stacker will save at least 2,500,000 bushels that would otherwise be lost—a cash gain to farmers of several millions of dollars.

Grain-Saving Stacker

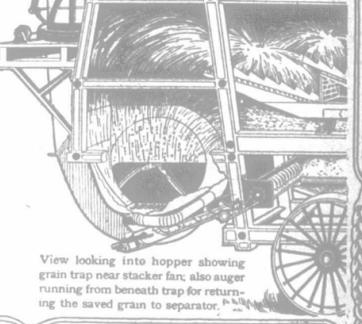
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- The Grain-Saving Device Originated With The Indiana Manufacturing Company, Indianapolis, Ind., Who Also Originated the Wind Stacker

Get your share by insisting that the machine which threshes your grain is equipped with the Grain-Saving Stacker.

This improved stacker returns to the separator the grain blown to the stack in the ordinary process. It saves more than enough to pay the threshing bill.

Get the facts from any one of the makers of North America's standard threshing machines. Many of these are also familiar to you as makers of the leading tractors and farm implements.



View looking into hopper showing grain trap near stacker fan; also auger running from beneath trap for returning the saved grain to separator.

it is possible for us to adopt all his though it is possible for us to adopt all his thoroughness and carefulness; conditions do not permit. That the British farmer could save himself much by adopting some of our simple methods of hitching and driving and by using some of our improved machinery is undoubted. We on the other hand could profitably adopt some of his thorough and careful methods. Neither is entirely right and neither is entirely wrong. Each has had to meet conditions that are very different in crops, climate and market, and each has discovered ideas that would be useful to the other.

Now that both the Government and the people of Great Britain have learned by experience that it is a perilous act to neglect the agricultural industry, we may look for a considerable resumption of grain-growing in Britain. The people have been encouraged during the war to make use of all land available, and they will not easily be turned from that course. The Government are more disposed than ever before to give support to agricultural development. The future then is very likely to find us realizing that the British farmer is more of a factor in the food markets than he has been in the past. He is out to adopt some of our methods in the larger fields, we must be after some of his in the live-stock industry.
F. W. CRAWFORD.

Ex-President William H. Taft delights to tell of one of his maiden speeches, in which he was anything but a hero. The speaker was on that easiest of easy tasks, attacking the government, when the heckler cried out: "You're wrong, sir!" A little nettled, Taft continued without heeding. Presently, in answer to another strong assertion came again: "You're wrong, sir!" Taft looked angry, but continued on the warpath. "You're wrong, sir!" again rang out. Angriely addressing the persistent interrupter, Taft cried: "Look here, I could tell this man something about the government that would make his hair stand on end." "You're wrong again, sir!" came from the critic, as amid the roars of the crowd, he stood up and removed his hat. His head was as bald as a billiard ball.

More A Meet

Now that as something the soil—as social needs men—there a need which though perhaps this need has me of late I are conting pass my tho consideration laborer or I access to pu and his frie business me while the fa for such ga church, or fo of such meet The disad house for th obvious;—th limited in r apt to be d meddled wi school pre v horses or v churches fo greater obs the use of th is in direct views held I ever our per gard to thi the honest o Then, too, general pu alterations v labor of doi time and of season. Of conveniently need to go i people are objections o use of the ever-incr place for pu nities. It may n sary or adv or park in or three sec a convenient building an left to those convinced th cial Govern interest in t In addition always avail Women's Ir lectures, for country pe place in whi ment, and b meet and o clubs, or p relating to the world in too, I am f future ther special wint adapted to country dis misconcepti sponsibiliti deprived of becoming a citizen of C I am inde youths in c value ther which I ha is a consciou men and m sponsibilitie edge of pra practice in f for knowled upon which managed, for consider that if my ditions in appeal to t may at leas ing country which city

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More Accommodation for Meetings Required.

Now that the farmer is being recognized as something more than a mere tiller of the soil—as one who has mental and social needs equal to those of the best of men—there arises in country communities a need which already has been felt though perhaps not defined. And since this need has been more impressed upon me of late because of other needs which are contingent to it, I have decided to pass my thought on to others for further consideration. The city man, be he laborer or business man, has long had access to public halls and parks, where he and his friends may assemble to hold business meetings or to be entertained, while the farmer has to confine himself for such gatherings to a school-house or church, or forego the pleasures or benefits of such meetings altogether.

The disadvantages of using the school-house for these various purposes are quite obvious;—the seats are too small and too limited in number,—school sessions are apt to be dislocated or school property meddled with, and in addition to this school premises afford no shelter for horses or vehicles. As to the use of churches for general purposes even greater obstacles present themselves; the use of the church for secular purposes is in direct opposition to the religious views held by many persons, and whatever our personal notions may be in regard to this, we are bound to respect the honest convictions of our neighbors. Then, too, the church, when used for general purposes, frequently requires alterations which necessitate the double labor of doing and undoing in a limited time and often at a most inconvenient season. Often, too, there is no church conveniently located. But there is no need to go into further details as country people are only too familiar with the objections constantly raised against the use of the church or the school-house for the ever-increasing demands for a suitable place for public gatherings in rural communities.

It may not be deemed either necessary or advisable to have a public hall or park in every school section, but two or three sections might unite and choose a convenient location. The details of the building and grounds could be safely left to those directly interested, but I am convinced that the provincial and municipal Governments should take an active interest in this matter.

In addition to having a public place always available for agricultural meetings, Women's Institute meetings, for public lectures, for public entertainments, the country people would always have a place in which to gather for social enjoyment, and better still, a place in which to meet and organize reading clubs, study clubs, or progressive clubs of any kind relating to matters or subjects in which the world in general is interested. Then, too, I am hoping that in the very near future there will be provision made for special winter school sessions particularly adapted to the needs of the youths in country districts whom necessity or a misconception of the duties and responsibilities awaiting them have been deprived of the education that is daily becoming a positive necessity to every citizen of Canada.

I am indebted to the farmers and the youths in country places for whatever value there may be in the suggestions to which I have given expression. There is a conscious need felt both among young men and men who have assumed the responsibilities of homes for a better knowledge of practical English, for power and practice in the art of self-expression, and for knowledge in general of the principles upon which the business of the world is managed. But I leave the matter here for consideration and discussion, hoping that if my rude outline for improved conditions in rural communities does not appeal to those interested, my thought may at least breed a wiser plan for affording country people more of the privileges which city people enjoy. N. L. M.

The Vegetable Growers' Association of America are holding their annual convention in Detroit, Mich., from September 9 to 12, at the Statler Hotel. This convention should prove of interest and value to all vegetable growers. Experts in the various lines of vegetable growing will give addresses at the meeting. The program covers every phase of the work.



Polarine Prevents Bearings, Gears, Valves and Cylinders from Overheating

Polarine is the real friction-reducing lubricant. With it you can speed your engine to the limit. The parts are lubricated with a firm, protective oil film that withstands intense heat and severe contact. Some oils can't stand rubbing or heat. They break down, gum, let friction gain headway.

Polarine keeps engines young and repair bills away. Stops power escaping from the cylinders—burns with hardly a trace of carbon. Good for your truck and tractor, too.

Three grades—Imperial Polarine, Imperial Polarine Heavy and Imperial Polarine A—take care of every type of engine and service condition. For motors that require an unusually heavy lubricant.

Comes in steel barrels and half-barrels—in one-half, one and four-gallon sealed cans. Imperial Polarine for sale by good dealers everywhere.

The Imperial Oil Man will advise the best lubricant for your car, truck or tractor. He is well posted on every lubrication need.

Ask for Polarine book on Automobile Lubrication.

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FRICTION REDUCING MOTOR OIL
"Makes a good car better"



IMPERIAL OIL LIMITED
Power · Heat · Light · Lubrication
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Plaster Hill Herd Dual-Purpose Shorthorns

For sale ten young bulls from large, deep milking cows, with records up to 12,000 lbs. 15 cows and heifers heavy producers mostly all in calf to Green Leaf Record 96115 or Dictator whose two nearest dams average over 12,000 lbs.

ROSS MARTINDALE CALEDONIA, R. R. No. 3, ONT.
Long Distance Phone.

Grand River Dual-Purpose Shorthorns

Herd numbers 63, headed by "Prince Lavander" 10449 whose dam gave 16,596 lbs. milk as four year old. We now have 30 cows in milk, could spare a dozen females. Seven splendid young bulls coming on.

HUGH A. SCOTT CALEDONIA, ONTARIO.
Phone 5-18

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.

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 heifers in calf, of such noted strains as Princess Royal, Golden Drop, Broadhooks, Augusta, Miss Ramsden, Whimple, etc. Make your selection early.

(All railroads. Bell phone) Cobourg, Ontario
GEO. ISAAC.
Hean Dorothy Star (imp.) now at head of Scotch bred and dual-purpose Shorthorns. Two Shearling rams and a few good ram lambs. For sale now.
Lucan Crossing 1 mile east of farm Miss Charlotte Smith, Clandeboye, R. R. No. 1

1854 Maple Lodge Stock Farm 1919

Shorthorns Landed Home—My last importation of 80 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, Broadhooks, Augusta, Miss Ramsden, Whimple, etc. Make your selection early.
GEO. ISAAC.
Hean Dorothy Star (imp.) now at head of Scotch bred and dual-purpose Shorthorns. Two Shearling rams and a few good ram lambs. For sale now.
Lucan Crossing 1 mile east of farm Miss Charlotte Smith, Clandeboye, R. R. No. 1

Ability to Move Maximum Loads

In this Shires are easily pre-eminent. Business demands, too, require that large loads be moved at one operation, and there are only two factors which can accomplish this, heavy horses and motor lorries. Anything lighter than a typical Shire is completely useless for this purpose.

G. de W. GREEN

Sec.-Treas. Canadian Shire Horse Association
58 Grenville St., TORONTO

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 13,599 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.R. 3 Ont.

Alloway Lodge Stock Farm

ANGUS, SOUTHDOWNS, COLLIES

A choice lot of Angus cows in calf to Queen's Edward. Collie puppies—A litter now ready.

ROBT. McEWEN, R. 4, London, Ont.

Sunny Side Herefords—Heifers to calve in Sept., some calves at foot. A few bulls ready for service. All priced to sell.
ARTHUR F. O'NEIL & SONS
Phone Granton. Denfield, Ont.

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F. W. CRAWFORD.

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Concerning Your Fall Shoes

IF you would secure service and satisfaction from your shoes this Fall, it is more than ever important that you should go to a reputable dealer in whom you have confidence, and see that the maker's trade-mark is on the shoes you buy. This for the reason that leather is now scarcer than at any time during the war, prices are higher, and some grades of leather are to-day almost unobtainable at any price.

¶ Millions of pairs of shoes, millions of feet of leather, have been bought for the Nations of Europe whose stocks of footwear were entirely wiped out by the war. This has more than offset the reduction in demand for army shoes. And coming upon a supply of material which was already scarce, it has resulted in a situation which, for the time being, is serious.

¶ Therefore, unless you have first-hand technical knowledge of shoes and leather, you must rely more closely than ever this Fall upon the reputation of the maker and of the retailer.

¶ The retailer who has a reputation to sustain will not endanger it for the sake of a little extra profit. And no established manufacturer will stamp his trade mark upon goods which do not represent good value at a fair price.

¶ The chances are that you do not feel any great interest in the leather market, or in the conditions which govern the manufacture and distribution of shoes. But you ARE interested—vitaly interested—in securing for yourself and your family reliable footwear at fair prices. And the value which you receive for your hard-earned dollars is inexorably determined by those same conditions which govern what we call the shoe trade. You cannot control them, any more than we can. But you CAN control your method of buying, so as to get the greatest possible value for every dollar you spend.

¶ So we think it only just and proper to tell you, at the commencement of each season, what the conditions really are, so that you may base your buying judgment upon them.

To Buy Wisely This Fall:

FIRST: Go to a reliable dealer whose reputation you know and whose judgment you can trust: and

SECOND: Make sure that the trade-mark of a manufacturer whose standing is known is stamped upon the shoes you buy.

Our booklet, "How to Buy Shoes," is gladly sent without charge to any address in Canada. Please address inquiries to our head office at Montreal.

AMES HOLDEN McCREADY

T. H. RIEDER, President LIMITED

Shoemakers to the Nation

HALIFAX ST. JOHN QUEBEC MONTREAL
OTTAWA TORONTO LONDON



WINNIPEG REGINA SASKATOON CALGARY
EDMONTON VANCOUVER

50b

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 Dairy Shorthorns

Would it not be good practice to introduce new blood and increase flow of milk in your herd? We have for sale the right kind of young bulls to do this—the offspring of highly-bred, imported English animals. We have also for sale young stock of that excellent breed of pigs, English Large Blacks.

LYNNORE STOCK FARM
F. W. COCKSHUTT, Brantford

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

A 12 MONTHS' OLD ROAN WIMPLE BULL FOR SALE
Others coming on. Also Lincoln lambs, rams and ewes, got by an imported ram, out of heavy shearing ewes.
J. T. GIBSON, Denfield, 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.**

WALNUT GROVE HOLSTEINS
I am offering a choice lot of bull calves sired by May Echo Champion who is a full brother of world's champion May Echo Sylvia; also a few cows just fresh.
(Take Radial Car from Toronto to Thornhill) **C.R. James, Richmond Hill, R.R. No. 1, 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

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 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 MOCK & SON, R. R. 1, Tavistock Ont.

9 HOLSTEIN BULLS
Any age up to 14 months. From high record and untested dams. Sired by May Echo Prince and Gipsy Pontiac Cornucopia; both 30 lb. bulls. Price right.
JOS. PEEL, Port Perry, Ontario.

Questions and Answers. Miscellaneous.

Heifer Not in Calf Gives Milk.

One of my heifers was bred to freshen this coming September. In the spring she made udder and I could draw a thin, watery fluid from her. The udder has increased very little during the summer. She shows no sign of being in calf and comes in season regularly. Is it possible for this heifer to make udder and still not be in calf, and it is safe to breed her?
A. M. S.

Ans.—This is not an uncommon occurrence, and the fact that the heifer comes in season regularly indicates that she is not in calf. It would be quite safe to breed her.

Marrows, Onions, Canning Corn.

1. What is the best method of keeping the Hubbard Squash during the winter?

2. Will vegetable marrow be good for winter keeping, and if so, kindly give best method of keeping them also, and when are they ripe enough to cut for use?

3. Also, give the best method of drying onions. Have quite a lot of black seed onions coming on.

4. What is the best approved method for canning corn?
H. A.

Ans.—1. Squash will keep best if stored in a dry atmosphere at a temperature that is fairly warm, about 60 degrees if possible. They should be stored in single layers, so that they are not piled on top of one another; otherwise they will be apt to rot.

2. Vegetable marrows can be kept satisfactorily in the winter in the same way as ordinary varieties of squash. Fall and winter sorts are not harvested until the approach of frost.

3. Onions from seed are harvested during August and September, after the tops are dead and more or less shrivelled up. They are usually pulled and laid in windrows, one for every four rows, being careful not to expose white onions to too much sunlight and for too long a time. After drying in the field for a time they are gathered in crates and either left in the field for a few days or taken to a curing shed. This should be a cool and well-ventilated place.

4. This question has been answered several times in the Home Magazine section of "The Farmer's Advocate." See the issues of June 19, page 1187; June 26, page 1229; July 31, page 1403. We prefer the boiler method.

Growing Black Raspberries.

How are black raspberries grown, with information as to soil, propagation, fertilizers, shade and pruning?
B. C. E.

Ans.—Black raspberries are quite different in their method of propagation from red raspberries, in that they are reproduced by layering for commercial purposes. The tips of the new growth bend over and reach the ground about August or the first of September, and are then covered with a spadeful of ground, when they take root and the following spring send up a new plant. At that time the young plants can be cut away from the parent plant and set out in another plantation. Generally speaking, a sandy loam soil is best, although black caps can be grown quite successfully in heavier soils if care is taken to cultivate well and add some humus. Black raspberries can be grown very successfully in a garden that is cultivated well and kept clean. They are better if not exposed to too much excessive hot weather, but, on the other hand, they should not be grown in the shade for best results. A moderate application of barnyard manure every year is the most common and satisfactory method of applying fertilizer, but if too much manure is applied the canes may grow too rapidly and be winter-killed. Black-cap raspberries will send up a few sprouts from the root, but too many should not be allowed in order to secure the best development of the plants. If a trellis is not provided, the bushes can be made stouter by pinching off the sprouts when they are about fifteen inches high, and the next spring the lateral canes may be shortened back to twelve or fifteen inches. Old canes of black raspberries that have borne one crop of fruit have no further value and should be taken out as soon as the crop is harvested. New canes will be sent up each year to take their places.

A Land

BY DR. C. D. H. TORONTO, ONT.

The primary concernment is to capital stock, lies the difficulty and forestry trees with no crop on the s removes the planning for this fundame completed, th if possible, to of the capita Although mi of technique circumstances ental principle practice. Ke that its retu as possible; in of the capita hard for a bu In fact, som practice as t principles in productivity o

Cutting

Suppose yo covered with Now, trees po of rejuvenati and the resul Let us suppo down in a gro of an acre tot per acre. Yo wood each ye would remain consider that on capital inv yourself cuttin And the wor that you, your children could as the sun shi wood is only so plus a small p from the soil. words, you an the state, the never pass th of what might in government ards that they business.

The primary then, is to ma a productive be the founda mate business r vestment. As b your initial Do you or hav mand in beha you are part-o to the public t reduce the cos business, whate

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Perhaps you hand. Let us for you. One area of Canad of producing t the inhospita ditions. The areas probably miles" and at been burned. travelled in th has even ridden railways must that our fores maintained according to ot object of fores been attained.

The capital are incompre of this loss of already appar lumber concern year farther and which means t pay more and products of th in Toronto for material came the height of l

Questions and Answers.
Miscellaneous.

Calving Gives Milk.

ifers was bred to freshen in the spring and I could draw a thin milk from her. The udder has little during the summer. I am of being in calf and milking regularly. Is it possible to make udder and still keep it safe to breed her?
A. M. S.

not an uncommon occurrence. The fact that the heifer regularly indicates that it would be quite safe.

Ons, Canning Corn.

best method of keeping corn fresh during the winter? Is it better to mash or to put in a barrel of marrow be good for and if so, kindly give me the recipe. I am keeping them also, and I am not sure enough to cut for.

the best method of drying corn? I have a lot of black seed.

best approved method?
H. A.

sh will keep best if stored in a dry atmosphere at a temperature of about 50 degrees. They should be stored in a place that they are not piled on top of each other; otherwise they

marrows can be kept in the winter in the same way as the varieties of squash. The roots are not harvested until after the first of frost.

seed are harvested in September, after the more or less shrivelled roots are pulled and laid in every four rows, being covered with white onions to keep them from getting too long a time. The field for a time they are left in the ground and either left in the ground for a few days or taken to a cool place to be stored.

n has been answered in the Home Magazine Farmer's Advocate." See page 1187; June 19, page 1403. We thank you.

Black Raspberries.

raspberries grown, with the soil, propagation, and pruning?
B. C. E.

berries are quite difficult to propagate, in that they are very sensitive to frost. The new growth of the new growth of the ground about the first of September, and are very spadeful of ground, and the following year. At that time they can be cut away from the ground and set out in another place. In speaking, a sandy soil is better than a heavy soil. Black raspberries can be successfully in a garden and kept clean. They are not exposed to too much weather, but, on the other hand, they should not be grown in a place where they would be exposed to a moderate wind and manure every year. A moderate amount of fertilizer, but if too much is used, the canes may be winter-killed. They will send up a few canes, but too many will be killed in order to secure the plants. If a bush is cut, the bushes can be kept off the sprouts by cutting them fifteen inches high. The lateral canes may be cut to twelve or fifteen inches. Black raspberries are a crop of fruit have no value to be taken out as they are harvested. New raspberries should be taken each year to take

A Land of Forests—Without Forestry.

BY DR. C. D. HOWE, FACULTY OF FORESTRY, TORONTO, IN ADDRESS TO TORONTO BOARD OF TRADE.

The primary object of forest management is to maintain unimpaired the capital stock, the forest wealth. Herein lies the difference between lumbering and forestry. Lumbering removes the trees with no thought of a future forest crop on the same area; forestry practice removes the trees only after careful planning for the future crop. When this fundamental object has been accomplished, the next procedure in order is, if possible, to increase the earning capacity of the capital invested in the forest. Although minor objects and methods of technique may differ under varying circumstances, these are the two elemental principles at the base of all forestry practice. Keep the capital intact so that its returns will be as continuous as possible; increase the earning capacity of the capital. Nothing about that is hard for a business man to understand! In fact, someone has defined forestry practice as the application of business principles in obtaining the continued productivity of woodlands.

Cutting Coupons—and Cords.

Suppose you had an acre of land covered with trees of commercial value. Now, trees possess the miraculous power of rejuvenating themselves each year and the result is a layer of new wood. Let us suppose that the new wood laid down in a growing season on all the trees of an acre totals a cord—a cord of wood per acre. You could remove a cord of wood each year and your capital stock would remain unimpaired. You could consider that cord of wood as earnings on capital invested or you could imagine yourself cutting coupons instead of cords. And the wonderful thing about it is that you, your children, or your children's children could go on doing this as long as the sun shines and the rain falls, for wood is only solidified sunshine and water plus a small percentage of mineral salts from the soil. I will substitute for the words, you and your children the term, the state, the nation. I confess I can never pass this point without dreaming of what might be if men only demanded in governmental business the same standards that they insist upon in their private business.

The primary object of forestry practice, then, is to maintain the capital stock in a productive condition. I take this to be the foundation upon which all legitimate business rests—the security of the investment. As business men you make this your initial demand upon the state. Do you or have you made the same demand in behalf of the forests in which you are part-owners, which yield revenues to the public treasury, and so indirectly reduce the cost of carrying on your business, whatever it may be?

Some Business Data.

Perhaps you have not the data at hand. Let me answer the question for you. One-third of the geographical area of Canada doubtless, is incapable of producing trees of sawlog because of the inhospitable climate or soil conditions. The actual sawlog producing areas probably do not total 500,000 square miles and at least one-half of this has been burned. Any of you who have travelled in the north country or who has even ridden on the Transcontinental railways must be fairly well convinced that our forest capital has not been maintained unimpaired and therefore, according to our definition, the primary object of forestry practice has not yet been attained.

The capital values destroyed by fire are incomprehensibly large. The effect of this loss of wealth upon industry is already apparent, for it has forced lumber concerns to seek materials each year farther and farther from the market, which means that the consumer has to pay more and more each year for the products of the forest. We are using in Toronto forest products whose raw material came from the other side of the height of land in the Hudson Bay

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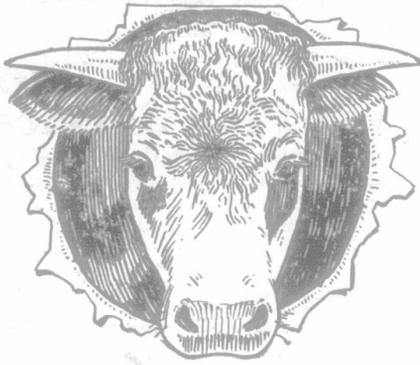
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This is the seven day butter record and the one day milk record of the dam of my last bull of serviceable age—an exceptional bred youngster and a choice individual. Also have a month old bull whose dam and sire's average 34.36 lbs. of butter in 7 days, 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.

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Cedar Dale Farm

—The Home of Lakeview Johanna Lestrangle, the \$15,000 sire—chief sire in service. We are offering a few females bred to him, and is our by him, at right prices. Other older bulls, sired by our former herd sire, Prince Segis Walker, son of King Segis Walker. A. J. TAMBLYN, Cedar Dale Holsteins (C. N. R. station one mile) Orono, Ontario.

drainage basin. Think of the transportation charges on that material! I see in this room wood material which came from the Southern States. The wages expended in converting the raw material into the finished product went to the citizens of another country and yet those wages might have gone to our own citizens; we could have the raw materials better adapted for the purpose within 200 miles of Toronto, if we had taken the first step in forestry practice, that is, had we maintained our forest capital unimpaired.

How the Consumer Pays.

We as consumers are paying heavily to-day for our neglect of this elementary business precaution, yet the failing of timber supplies through the devastation of forest fires is not the most serious aspect of the problem. Mother nature is a great restorer; if undisturbed, she eventually heals all wounds, and in time she might recover our fire scarred forest areas with commercially valuable trees, but, unfortunately, she is not allowed to carry out her plans. The forests are burned not once, but repeatedly. I know areas that have been burned thirteen times in the past 50 years. The repeated forest fire is a vicious and destructive thing, for it kills the young trees which are to make the future forest and it kills the mother trees (seed trees) which might, if allowed to live, replace the destroyed young.

One-half of our commercial timber lands have been burned. You see, even if there never was another forest fire, one-half of our future supply of timber should come from these areas. Every fire decreases that possibility by destroying the young commercial trees. You cannot kill the children for several generations and look forward to the continuance of the race; you cannot kill the young pine and the young spruce on an area every 5, 10 or 20 years and expect eventually to get saw logs.

Killing the Forest Children.

Let me state once more the conditions on the burned areas: Thousands of square miles of forest land in the Dominion have been so severely burned by repeated fires that they will lie barren of commercial trees for hundred of years unless they are planted by man. Other thousands of square miles, less seriously burned are restocking themselves naturally to valuable species, but these areas are being constantly reduced and transferred into the first class mentioned because of inadequate fire protection. I asked you a moment ago, if you had demanded security for the Canadian forest capital in which you share. Have you? You have spent a million dollars a year for the past ten years for protection of your property. You have invested ten million dollars in a certain project. Have you asked for an adequate return on that investment? Let me tell you, although you have spent millions of dollars on forest protection, the safety of the forests is still largely in the hands of Providence. I mean it depends upon weather conditions. Things go fairly well until we have an exceptionally dry season. The technique of fire-fighting methods has not been sufficiently developed to cope with extra dry season. A very effective preventive method, although successfully practised in certain districts in the West, has not yet been employed other than experimentally in the East, namely the disposal of the slash which becomes extremely inflammable in softwood forests, as in the north country. Unless the slash in certain districts is burned at the time of lumbering, we may as well become resigned to periodic forest holocausts. The best fire-fighting organization in the world could not master a situation in which all the odds were against it.

The Patronage Millstone.

Another reason for this insecurity of the forest, the reason more time and thought have not been put upon the development of fire-fighting methods is largely because the rangers are not hired because they are efficient workmen or even good fire-fighters—but for other reasons.

I have only words of praise for the men in charge of the Dominion and Provincial Forestry Branches. There are men at Ottawa; there are men here in Queen's Park, men in nearly every provincial capital, hard working, patriotic men who are giving the best efforts of their lives in the attempt to protect our forest capital, but they are far from

successful because astride every monster, political blame for this have thought of and I have come politician, no is to blame; the an inherited regard to the m ment business the responsible citizen is to b demand in g same standard own private b age is a quest the problem w ground.

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For the past investigating Conservation a of spruce and burned pulpwo of Quebec. I details of my to tell you wh representative had been sev spruce trees p We counted those 97 acres rate. We fou chantable size trees per acre 26 spruce tre operations, or be one-third the future fore

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Forest Children.

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successful because in the end they find
astride every trail that hideous grinning
monster, political patronage. Who is to
blame for this state of affairs? Now, I
have thought over the matter a good deal
and I have come to the conclusion that no
politician, no official of the government
is to blame; they are simply the victims of
an inherited political tradition with
regard to the methods of handling govern-
ment business. You and I are really
the responsible parties. The average
citizen is to blame because he does not
demand in government business the
same standard that he demands in his
own private business. Political patron-
age is a question of public morals and
the problem will be solved only on this
ground.

If, as an organization, you are con-
templating presenting a memorial at
Ottawa or in Queen's Park on this subject,
I make bold to suggest that you state
the case something like this: Our forests
are in a precarious condition. Unless
they are relieved, their revenue-producing
function will be practically destroyed be-
cause of repeated forest fires. We
believe this condition is chiefly due to
an archaic, inefficient, rotten system of
political patronage, a system for which
you are not responsible because you
inherited it from your political ancestors.
In fact, we acknowledge that we as tax-
paying citizens are really responsible
for a condition of affairs for which we
have in the past condemned you. Now,
cannot we get together and devise some
means of putting forest protection on
a business basis. I have a feeling that the
responsible politician, I mean the legislator
and the cabinet minister are just as
disgusted with the whole business as
anyone else, and that approached in this
manner, they would meet you more than
half way.

What of White Pine?

Let me say again that the first step
in forestry practice is the maintenance
of the earning power of the capital stock.
This primary object has not yet been
accomplished in Canada because we
have not yet devised the means and
methods to make the forests reasonably
safe from destruction by fire.
Now, let us turn to the unburned logged-
over lands and see how our definition
of forestry applies to their treatment.
We have the testimony of lumbermen
that the end of the white pine supply
in Eastern Canada is in sight. There
will be scattered white pine trees in the
forests for many years, but outside the
forest reserves only a few large stands
of virgin white pine remain. Investiga-
tions that white pine does not reproduce
itself when removed from the ordinary
mixed forest. The young seedlings
require light and the dense thickets
that spring up after logging choke and
finally kill the little trees.

Certain areas in the old pineries, that
is, where the trees were in pure stand
when cut, are undoubtedly regenerating
themselves with pine, but we don't
know how extensive such areas are.
It is very important that we should
know, but we don't know. We need
much more investigation of the matter,
but so far as the investigations have gone,
indicate that we have not accomplished
the first object of forestry practice in
respect to white pine, that is, we have
not kept the capital stock represented by
white pine trees unimpaired and con-
tinuously productive.

A Two-Thirds Reduction.

For the past two summers I have been
investigating for the Commission of
Conservation at Ottawa, the regeneration
of spruce and balsam on cut-over un-
burned pulpwood lands in the Province
of Quebec. I cannot here go into the
details of my results, but I would like
to tell you what we found on a certain
representative area of 97 acres which
had been severely culled. Twenty-six
spruce trees per acre had been removed.
We counted all the young trees on
those 97 acres and determined the death
rate. We found when they reach mer-
chantable size there will be only 7 spruce
trees per acre to take the place of the
26 spruce trees removed by the logging
operations, or, in other words, there will
be one-third as many spruce trees in
the future forest as in the virgin forest.

We don't know yet whether this area
is representative of all the cut-over
balsam lands in Eastern Canada. It is
very important that we should know.
If it is representative, then it will be
very evident to you as business men that

Lubrication Very Important

Are you giving your Automobile, Station-
ary Engine, Tractor and other farm
machines the proper lubrication attention?
All of these must be correctly lubricated if
they are to give you the kind and length
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Imperial Oil brand, you cannot find a better
lubricant—but it is possible that the way
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We have the right lubricant for each pur-
pose and it is only by using the right one
that results may be secured.

Imperial Farm Lubricants are well known
to Canadian farmers. If you are using an

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SIZES**

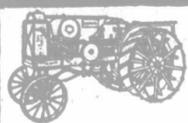
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rels and barrels.
There is a stock
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veniently near
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If you need advice on lubrication
ask the *Imperial Oil man*. He
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every standpoint—knows
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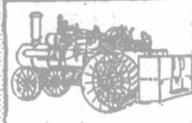
A Correct Lubricant for every Farm Machine



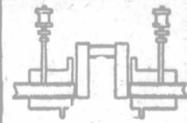
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Our bulls took the Senior Championship, Junior Championship and Grand Cham-
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like them. Write for catalogue.

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 - surfaces are now in their most receptive condition, practically every trace of moisture having been eliminated by the summer sun.
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 - a surface needing protection should never be allowed to go over the winter without it.
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- "Save the Surface and you save all."**

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No matter how substantial your building may be, the elements will damage it if you give them the chance.

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Barns weaken and sometimes even partially collapse. Silos decay. Pens and coops go to pieces and are split up for wood. Outbuildings are replaced—all of which, too often happens long before the building's normal time.

Surface protection preserves buildings indefinitely. Disintegration is impossible if the surface is protected. Save the surface and you save all.

Whatever the material, whether wood, metal, concrete, cement, stucco or plaster, remember the great importance of surface protection. Save the surface and you save all.

THIS ANNOUNCEMENT is issued by the Canadian Save the Surface Campaign Committee, for the purpose of educating the public in the Preservative and Protective value of Paint, Varnish and Allied Products for the Conservation of Property, and has received the approval of the Canadian Trade Commission in the following words:

"The realization of the above objects will lead to employment during the Reconstruction Period and bears our entire approval.

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Shearing and ram lambs by imported ram. Also a few ewes, all stock my own breeding.
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We are offering Ewes and Rams of both breeds fitted for show purposes or in field condition. All are selected individuals, true to type and sired by our Show and Imported Rams.

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We are offering nine strong-boned typey Shearling rams, in good condition, also our 3-shear stock ram—a show proposition.
Jno. E. Jackson, "Hilldale Farm" Ballycroy Ont.

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A few two-shear rams in show condition, and several shearlings and lambs, both rams and ewes. Also Shorthorn bulls and heifers.
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America's Pioneer Flock
Present offering is between ninety and a hundred shearling and two shear rams. Flock headers a specialty. Also a number of shearling 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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the forest capital stock represented by spruce trees has not been maintained unimpaired and continuously productive. Therefore, we have not accomplished the primary object of forestry practice in respect to spruce.

Balsam in Quebec.

Balsam trees at the rate of 32 per acre had been cut from these same 97 acres. Following the same line of investigation as with the spruce, we found that in the next crop there will be 12 trees per acre where 32 have been taken away, or, in other words, there will be a little more than a third as many balsam trees in the future forest as were in the virgin forest. Nor is this the whole story. Our investigations indicate that 7 of those 12 balsam will be so badly damaged by heart rot as to be unfit for pulpwood; so the final result will probably be 5 pulpwood bearing balsam trees where 32 were taken away.

We don't know yet whether this area is representative of all the cut-over balsam lands in Eastern Canada. It is very evident that we should know. If it is representative then it is no longer necessary for me to bring to you any more illustrations to drive home my assertion that we have not attained the first objective of forestry practice because we have not maintained the forest capital unimpaired and in a continuously productive condition.

Who Should Manage the Forests?

Let me point out to you a great anomaly that very largely accounts for our present forest conditions. As business men you will appreciate the point. The Forestry Branch at Ottawa is charged with the care of 25,000,000 acres of Dominion Forest Reserves. It has a staff of technically trained foresters. With the exception of settlers' permits and a few odd logging jobs, the activities of the Branch are confined to fire protection. All the licensed lands, all the big logging operations within the forest reserves are in charge of another branch at Ottawa, which has not a forester in it. Let us come nearer home. The Province of Ontario has around 7,000,000 acres in forest reserves. It has 10,000,000 acres under timber license and practically the same area in pulpwood concessions. There is a Forest Branch with technically trained foresters. There are no better foresters in the Dominion, yet they have no part in carrying out the timber regulations for the licensed lands. That is in the hands of another branch which has no forester in it. Managing forests so that they will remain continuously productive is a big job; it calls for men with special ability and special training. Those of you who are manufacturers—to whom do you turn with your technical problems? Do you turn them over to your clerks?

A Challenge to Business Men.

May I refer you back to my text Canada stands practically naked of any forestry practice. The reason for this is that you and business men like you throughout the Dominion have not taken interest enough in your property to see that it is properly managed, to demand an account of stewardship. I think it is the part of patriotism as well as the part of elementary business policy to make an effort to sustain an industry which stands third as a producer of wealth in this country, an industry that created for Canada in 1917 forest products valued at \$116,000,000, an industry that employs over 50,000 people and distributes nearly 40 million dollars in wages. These are concerned with wood products as such. If we add to these sums the industries partially dependent upon wood in some form, we find that they increased the wealth of Canada in 1917 by over \$250,000,000. Surely in the interests of the continued prosperity of our country, the wheels of these industries should continue to turn.

The Brighter Side.

We are still much better situated in regard to timber supplies than any other country, but that does not justify indifference or the delay of recuperative methods. Four-fifths of Canadian soil is probably better adapted to the growing of trees than to any other purpose. No other country has such large forest areas, so accessible to transportation by water and by rail, so near the great consuming markets. Russia may have more timber; the United States undoubtedly has more and in greater variety,

but I repeat large forest consuming proper action the should no ments of our great all time of wealth into they never lands, a b so many recuperative at once, ur like you more inter you have Forestry J

Quest

Ha Having pillar on a like to kno Ans.—T sent by de Gonzac Moth Cater from its far locks of h specimen w Wealthy a it does no h of slug ca in color, n covered w each side pendages s which give ance. Wh inch in le breadth. which is u the tree of The moth, dark brown crossed by and are ma same light it measures a half. The caterpillar protective c being devou enemies.

1. Is a n was not at 2. Can g effect by co people? 3. Can t without fixi cross? 4. Coun bridge, put notices up them fix bri to go to cut waiting for 5. The b road has b Can they cl Ans.—1. member of withstanding the nominat 2. A "G adopted by and without to the vot 3. and 4. thereof, is corporation repair a rea through traf all owners, v their propert 5. The b closed by th ing that it ha

Through t B. H. Heide Album of th Exposition, office. It is book, giving drawing atten tional featur it also gives classes of live with the pla illustrated bo animals in th it to their int book in their secured from sum of 50 cen

al stock represented by as not been maintained continuously productive. have not accomplished object of forestry practice.

n in Quebec. at the rate of 32 per acre from these same 97 acres. line of investigation ce we found that in the will be 12 trees per acre been taken away, or, here will be a little more many balsam trees in the were in the virgin forest. whole story. Our in- cate that 7 of those 12 so badly damaged by be unfit for pulpwood; ult will probably be 6 g balsam trees where ay. v yet whether this area of all the cut-over Eastern Canada. It is t we should know. If ve then it is no longer s to bring to you any s to drive home my have not attained the forestry practice be maintained the forest d and in a continuously on.

Manage the Forests? to you a great anomaly accounts for our present As business men you e point. The Forestry a is charged with the 0 acres of Dominion It has a staff of tech- esters. With the ex- s' permits and a few the activities of the ed to fire protection. ds, all the big logging the forest reserves are er branch at Ottawa, forester in it. Let me. The Province of d 7,000,000 acres in t has 10,000,000 acres ense and practically alpwood concessions, ranch with technically There are no better minion, yet they have out the timber regulat- ed lands. That is in er branch which has c. Managing forests remain continuously job; it calls for men and special training. are manufacturers— n with your technical n turn them over to

Business Men. a back to my text tically naked of any The reason for this business men like you dominion have not gh in your property properly managed, to nt of stewardship. art of patriotism as elementary business effort to sustain an ls third as a producer try, an industry that 1917 forest products 0,000, an industry 50,000 people and 0 million dollars in concerned with wood If we add to these partially dependent form, we find that wealth of Canada in 00,000. Surely in the continued prosperity e wheels of these continue to turn.

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but I repeat, no other country has such large forest areas so near the great consuming markets of the world. With proper forethought and proper fore- action there is no reason why Canada should not supply the timber require- ments of the world. Properly managed our great forest areas might turn for all time continuous streams of sylvan wealth into our public treasuries. But they never will; they will lie as idle waste lands, a burden upon the tax-payer, as so many of them already are, unless recuperative methods are inaugurated at once, unless you and the business men like you throughout the country take more interest in them in the future than you have in the past.—From Canadian Forestry Journal.

Questions and Answers.
Miscellaneous.

Hag Moth Caterpillar.
Having found this species of caterpillar on a Wealthy apple tree, we should like to know what kind it is. J. J. A.
Ans.—The very peculiar caterpillar sent by J. J. Alexander, St. Louis, de Gonzague, P.Q., is called the Hag Moth Caterpillar (Phobetron pithecium) from its fancied resemblance to the brown locks of hair on a witch's head. This specimen was found eating the leaves of a Wealthy apple tree; being a rare insect it does no harm. It belongs to the family of slug caterpillars, and is dark brown in color, nearly square in shape, thickly covered with short, fur-like hairs; on each side there are four peculiar appendages sticking out from the body, which give it an extraordinary appearance. When fully grown it is about an inch in length and nearly the same breadth. It spins a round cocoon of silk which is usually fastened to a twig of the tree on which it has been feeding. The moth, into which it finally turns, is dark brown in color, its front wings are crossed by a pale, yellowish wavy band and are marked with some spots of the same light color. With wings expanded it measures from an inch to an inch and a half. The strange appearance of the caterpillar no doubt forms a complete protective disguise, which saves it from being devoured by birds or other natural enemies. C. J. S. B.

Miscellaneous.
1. Is a man a legal councillor when he was not at nomination?
2. Can good road system be put into effect by council without the voice of the people?
3. Can they lay out a grant on road without fixing bridge that is not safe to cross?
4. Council have fenced each end of bridge, put big log across road, and notices up to close road. Can I make them fix bridge, as I have to cross bridge to go to cut my hay, and my hay is out waiting for the bridge to be fixed?
5. The bridge is on concession and road has been travelled for 15 years. Can they close it now? R. F.
Ans.—1. A man may be legally a member of a Municipal Council, notwithstanding that he was not present at the nomination meeting.
2. A "Good-Road" system may be adopted by the county council by by-law and without first having submitted same to the vote of the electors.
3. and 4. While the highway, or portion thereof, is closed to traffic, the county corporation must provide and keep in repair a reasonable alternative route for through traffic and a suitable by-road for all owners, who cannot obtain access to their property by any other public road.
5. The bridge in question may be closed by the municipality, notwithstanding that it has been travelled for 15 years.

Through the courtesy of the Secretary, B. H. Heide, a copy of the Review and Album of the International Live Stock Exposition, 1918, was received at this office. It is an exceptionally attractive book, giving a history of the Exposition, drawing attention to the many educational features which were put on, and it also gives a review of the various classes of live stock in the ring, together with the placings. It is a beautifully illustrated book, showing the champion animals in the various classes. All interested in the International would find it to their interest to have a copy of this book in their library. The book may be secured from the Secretary for the small sum of 50 cents.

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You want a tractor to do farm work.

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At once you'll be able to see the difference. The Moline-Universal Tractor shows its breeding in its build.

It plows fast and well. You sit on the implement—tractor and plow are like one machine—back and turn short. Lay out and finish without horses. Disc and harrow, reap and mow. Do belt work. These are things which we can prove to you—

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The Moline-Universal Tractor costs less for fuel and oil because of the high-grade Moline motor. Costs much less for the day's work, because you will stop the Moline motor whenever the tractor stops. *The Moline starts easily with its electric self-starter.*

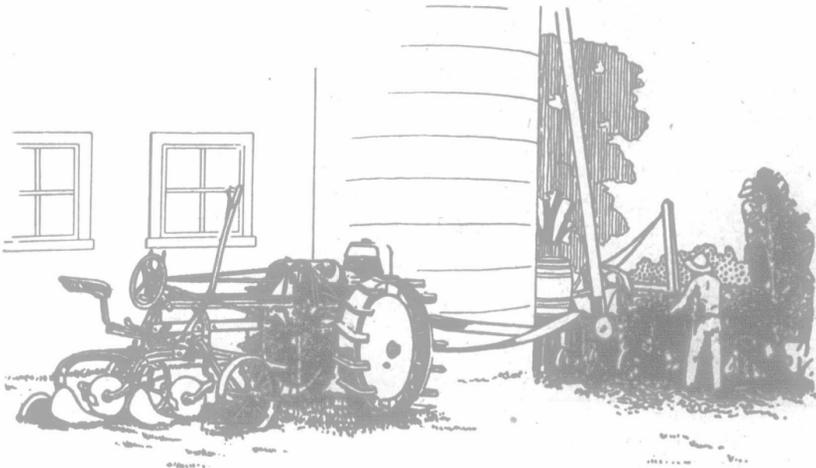
Repair and replacement costs are reduced to the minimum—long life is assured—because of high-grade Moline construction. Perfected four-cylinder motor, Hyatt roller bearings, gears running in oil, all moving parts enclosed, motor up out of the dust and dirt. You can't get Moline quality in any other tractor.

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We are now booking orders for Fall pigs, both sexes. Several large litters to choose from.

WELWOOD FARM, Farmer's Advocate
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ELMHURST LARGE ENGLISH BERKSHIRES
From our recent importation of sows, together with the stock boar, Suddon Torredor, we can supply select breeding stock all ages. Satisfaction and safe delivery guaranteed.
H. M. VANDERLIP, Breeder and Importer, R.R. 1, BRANTFORD ONTARIO
Langford Station on Brantford and Hamilton Radial.

Big Type Chester Whites—In our fifth importation just arrived we have Wildwood Prince Again, he weighing 1,010 lbs., and two 800-lb. sows, safe in pig to the 1,000-lb. champion boar, Calloway Edd. We are now offering bred sows, April boars and weaning pigs. **JOHN ANNESSER, Tilbury, Ont.**

BERKSHIRES—My Berkshires for many years have won the leading prizes at Toronto, London and Guelph. Highcleres and Sallys, the best strain of the breed, both sexes, any age.
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CREDIT GRANGE FARM. The Berkshire Herd is headed by two imported sires. Seven different strains represented in the herd. Young stock of all ages for sale.
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Exhibition and breeding stock of both sex. Also three good Shorthorn bulls, about ready for service, at reasonable prices.
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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.
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Boars ready for service—a choice lot to select from; also young sows bred for spring farrow. Write:
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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

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.

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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.

For Sale—Four Berkshire Hogs

Three months old.
W. J. MAHON, North Wakefield, Que.

Fill Your Silo Quicker With Less Power

All the latest improvements are embodied in the various sizes of feed cutters we make. Dangers of breakage at high speed are eliminated, and our feed cutters can handle the largest quantities of corn in quick time and with the least power.

Peter Hamilton Feed Cutters and Silo Fillers

have convinced many farmers that they positively stand the test of hard usage. The frame is well built of thoroughly seasoned timber which is always tight and rigid.

Our Ensilage Cutter and Blower (as illustrated) will easily handle 8 to 10 tons of corn per hour.

A splendid feature of our Ensilage Cutter and Blower is the solid steel knife and blower wheel, which cannot break or blow to pieces from excessive speed or by the entrance of a stone or other foreign substance. The wheel weighs 150 pounds and gives great momentum for heavy cutting.



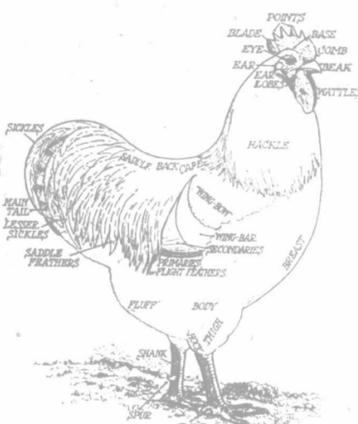
The Peter Hamilton Co., Limited, Peterborough, Ont.
Exclusive Territory Open to Good Dealers

13B

Our School Department.

Points of a Good Hen.

It will not be very long before the School Fair will be held, and then it will be necessary to exhibit the chickens that have been raised during the summer from eggs supplied by the Agricultural Representative. In some townships the boys and girls have to exhibit their whole flock, and, in addition, pick out the best pullet and best cockerel for separate classes. At the school fairs all the chickens are judged according to their utility value, that is to say, according to their usefulness for egg production when they are fully grown. The accompanying picture shows a rooster with the various points of a chicken marked. These points, however, refer mostly to the feathering of the bird, and are not so essential when judging only according to utility value.



The Points of a Fowl.

In the latter case, vigor is one of the most essential points to consider, since a bird must be vigorous in order to produce eggs and meat economically. A vigorous bird will be able to turn its feed into eggs and meat more cheaply than a weak bird, and will, therefore, be more profitable. The head is a good indication of vigor; the eyes should be bright and active. In pullets and cockerels considerable red color will be seen on the side of the shanks, and the cockerels will be anxious to crow as loudly and as often as they can. The beak should be strong and the head itself should be full at the side of the face, and the eyes prominent.

Constitution, of course, is something like vigor, and it means ability to stand up and do well under trying conditions. To have constitution a bird must have a strong body, with a full breast, a strong back, and other parts of the body in proportion. A good breast is also valuable for meat production. The shape of the body should be neat, and the crop should be full, showing that the bird is a good feeder. The bones of the legs should be flat, and not round.

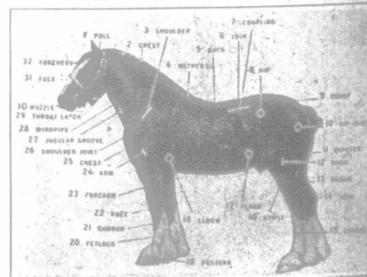
The bone running along the bottom of the body is called the keel bone, and on either side of the vent are the pin-bones. These should be wide apart and not thick or coarse. The distance, too, between the pin-bones and the keel bone should be fairly wide in a pullet, so that as a hen she will show indications of being able to lay a great many eggs. Of course, these things are not so well marked in a young bird as they should be in a hen that is actually laying, but a lot can be judged of the hen's ability from these indications.

A hen that will make a good layer usually has a thin skin, while every bird that is a good hard worker and will be likely to lay eggs faithfully will show it by her general appearance. She will contrast with the lazy, sleek-looking bird that does not work any harder than she should. If two birds are equally good in these useful points, but are different when it comes to coloring and the barring of the feathers, of course the one that has the best feathering should be shown, but otherwise the points of usefulness are much more important. Study the diagram shown here so that you will be able to identify the various parts of the body and the different kinds of feathers.

Points of a Draft Horse.

Boys and girls frequently hear their parents and neighbors discussing the merits of various horses owned by themselves or others. At fair time this discussion is often more common and enlivened by a wee bit of excitement on certain occasions. Many boys of school age are able to pick out a good horse from a poor one, but their judgment is usually based on general appearances only, and they are unable to give reasons for their choice. The accompanying illustration of a draft horse is taken from "Elementary Agriculture and Horticulture," which is used in Ontario schools, and it shows the principal points of a horse about which we shall say a few words so children will be better acquainted with an animal they see and, in some cases, make use of every day.

A draft horse must, in the first place, be large; that is, he must weigh from 1,500 pounds up, and the larger he is the better so long as his quality and conformation are right. By conformation we mean the relation one part bears to another. For instance, a large horse with a long, weak back, a slim neck and straight pasterns or shoulders would have poor conformation. The head of a draft horse should be fairly lean and not out of proportion with the body. The face should be wide between the eyes, as this denotes intelligence, and the muzzle should be broad. Coming to the neck, this ought to be strong and muscular and smoothly coupled with the shoulder. The shoulder is a very important part of a draft horse, for it is here that all the power of the body is transmitted to the collar. The shoulder ought not to be straight or upright; a certain degree of slope is required as indicated in the picture, for it means a stronger conformation, and the animal will be a better mover. The pastern, too, should have about the same slope as the shoulder so the action will be springy and less jarring on the feet, legs and body. The arm must be large and muscular, and the fore-arm should be comparatively long, strongly muscled at the upper part and tapering to the knee. Viewing the knee from the front it should be broad, and it ought not to be tied in or restricted just below the joint. Next beneath the knee comes the cannon bone which is itself round, but there are tendons running from the knee to the fetlock which gives that part of the leg a flat appearance.



The Points of a Horse.

As viewed from the side the cannon should be wide instead of roundish, for a round cannon indicates a poor quality of bone and lack of strength. We have mentioned the pastern before, but emphasis must be placed on the slope to be found here. Horses which stand straight on their pasterns usually have bad feet after being used a few years, and when their feet fail them they are not so valuable. "No foot, no horse," is a common saying, so good horsemen are very particular about the feet; they like them wide at the top and behind, well supported at the heel and carried true when the horse is moving.

We have not the space to describe all the points, but boys and girls interested in the horse ought to study the illustration well and get their parents or teacher to go over the animal in detail. We have mentioned a few points only to indicate how one should go about a study of the horse.

Make an effort to have the school grounds neat and clean when the teacher returns.

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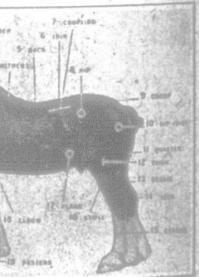
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LONDON, ONT.

ment.

A Draft Horse.

frequently hear their neighbors discussing the horses owned by them. At fair time this discussion is more common and a little bit of excitement on the part of the boys of school. Many boys of school pick out a good horse from their judgment is usually based on appearances only, and do not give reasons for their choice. The accompanying illustration taken from "Elementary Horticulture," which is used in the schools, and it shows the points of a horse about which a few words so children acquainted with an animal in some cases, make use of

must, in the first place, weigh from 1,500 to 2,000 lbs. The larger he is the better. The quality and conformation of the horse we mean the one that bears to another. For a draft horse with a long, weak neck and straight pasterns or a horse with poor conformation. A horse should be fairly well proportioned with the head should be wide between the eyes, intelligent, and the neck should be broad. Coming to the body, it should be strong and well coupled with the shoulder is a very important part of the body is transferred to the collar. The shoulder should be straight or upright; a slight slope is required as shown in the picture, for it means a better action, and the animal will be more powerful. The pastern, too, should be at the same slope as the body. The action will be springy and the feet, legs and body should be large and muscular, and should be comparatively well placed at the upper part of the knee. Viewing the horse from the side it should be broad, and the neck should be tied in or restricted. Next beneath the scapula is the cannon bone which is supported by tendons running down to the fetlock which gives the leg a flat appearance.

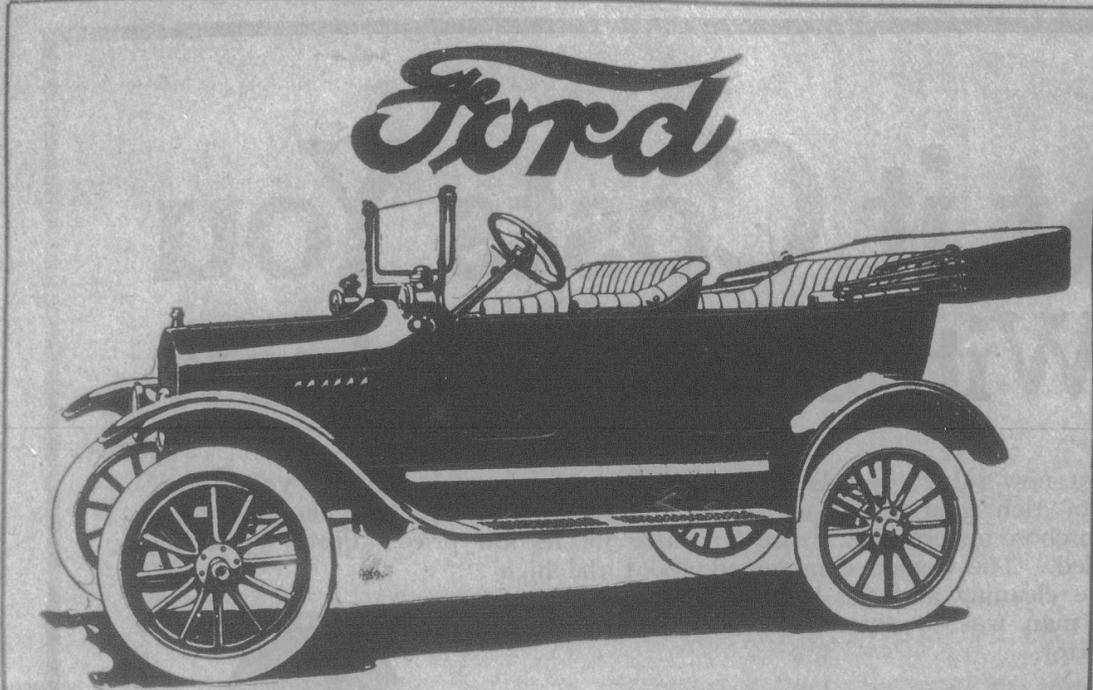


Points of a Horse.

the side the cannon bone should be roundish, for a square indicates a poor quality of strength. We have seen horses with a square pastern before, but they are not so good as those with a round pastern. Horses which stand on square pasterns usually have a few years, and then they are not so good as those with a round pastern. A good horseman will look at the feet; they like to see the feet well set up and behind, well placed and carried true.

space to describe all the points of a horse, and girls interested in the study of the horse should read the illustrations in detail. We have given only a few points to indicate about a study of the

to have the school teacher when the teacher



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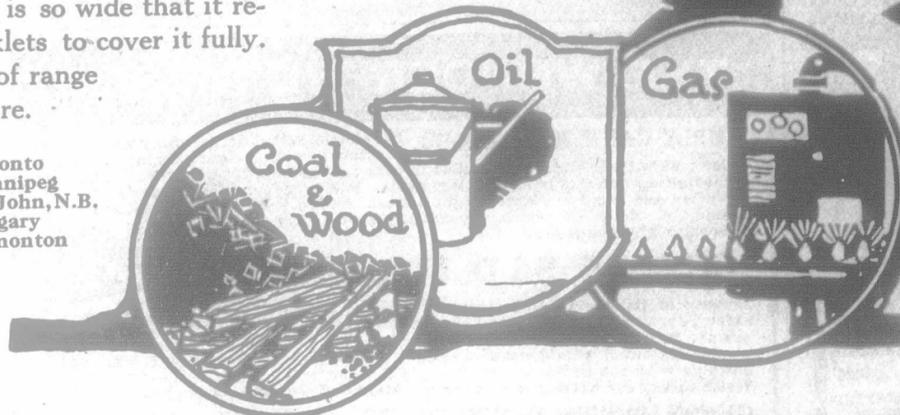
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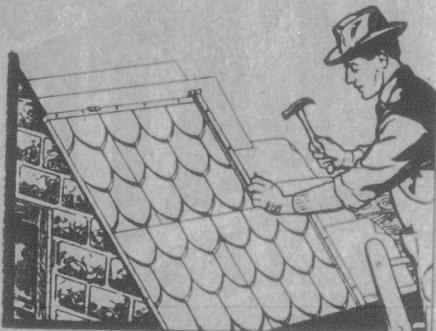
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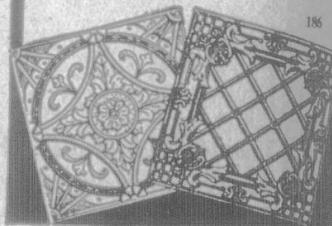


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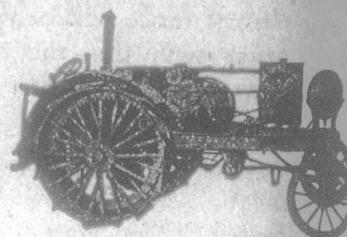
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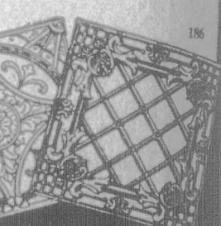
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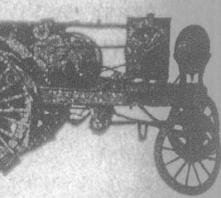
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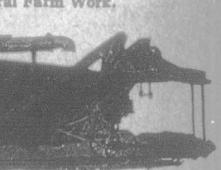


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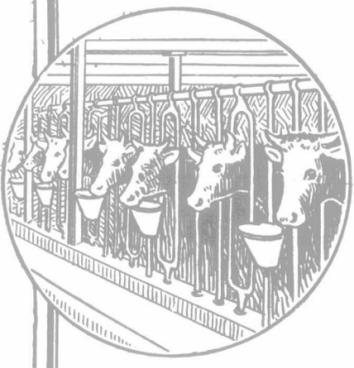
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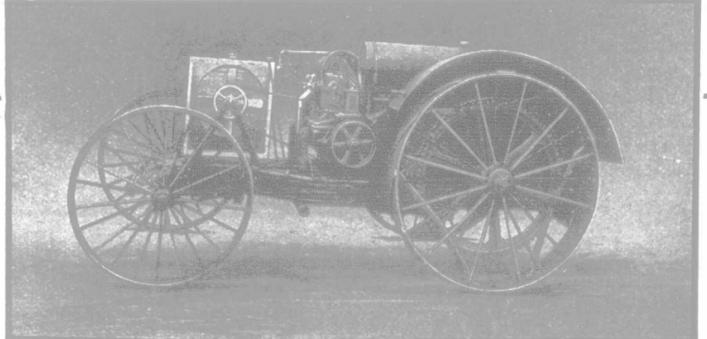
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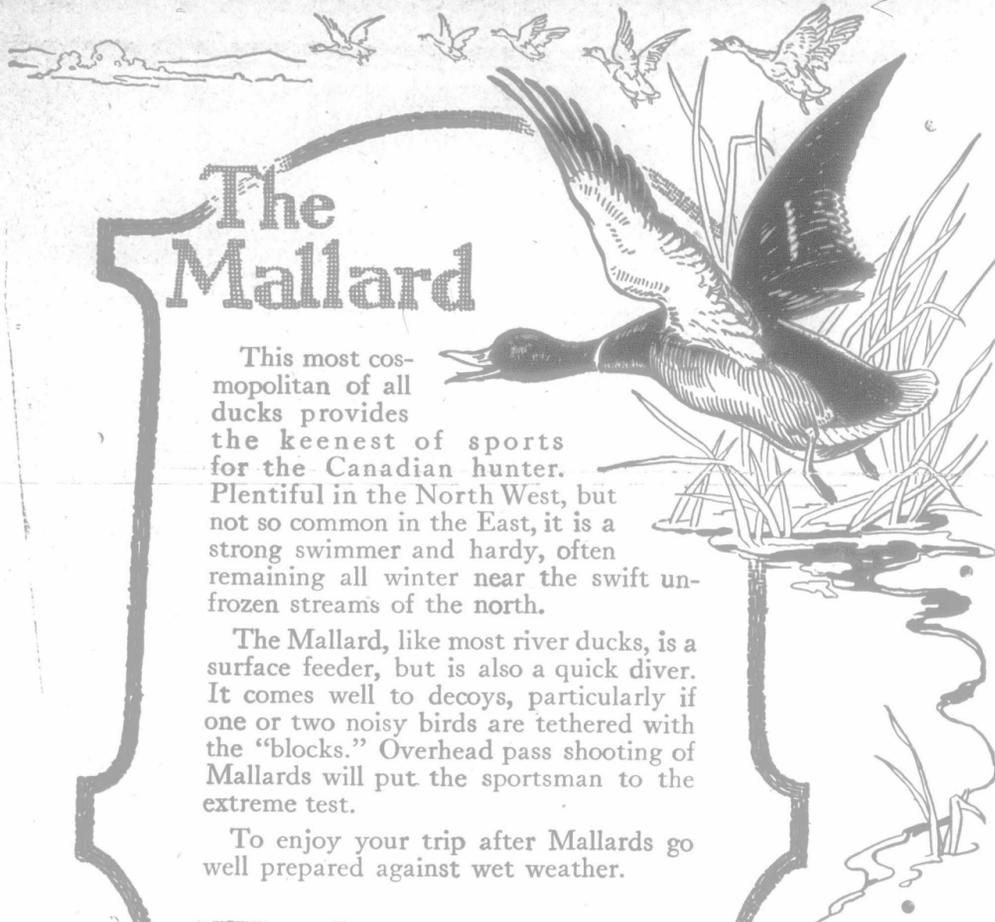
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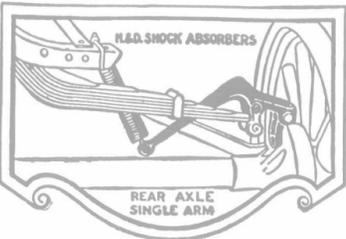
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LONDON, ONTARIO, SEPTEMBER 11, 1919.

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EDITORIAL.

Silage will be none too plentiful during the coming winter, and it is all the more important to see that it is harvested in good condition and put away so that it will keep well.

The acreage of fall wheat is promising. Good yields are more likely if nothing but good plump seed of standard varieties is used. Sow six pecks to the acre if the seed is good.

In two months' time the newly organized record of performance work with poultry will have been begun. It is to be hoped that it will have a speedy effect upon the average productiveness of the farm hen.

Soon the potato harvest will be on. Districts from which large quantities of spuds are marketed should have a potato marketing association unless there is already in existence an organization that can take care of the crop.

It is to be hoped that better prices will be realized for export apples on the British markets than some we have recently seen quoted. Nova Scotia growers have a good crop, but with high freight rates the price needs to be good too.

Good live stock is fundamental to success in farming. This is true to-day as never before. The high cost of feed and labor makes imperative the use of animals that will give the most economical returns. The scrub never wins out here.

The Prince of Wales has certainly endeared himself to all with whom he has come in contact so far during his visit to Canada. It is only natural that a democratic country should soon learn to appreciate a democratic young prince.

Let us all hope that the coming autumn weather will be favorable for farm work. Farmers of Eastern Ontario in particular will retain lasting memories of the unfavorable seasons that have followed one another during the past twelve months.

Not long ago a good farmer accustomed to rearing good horses said he was going to stop it, as he hardly thought it paid him well enough. We should have more farmers raising good heavy horses instead of fewer. There is good money in raising the heavy type that the market demands.

There are plenty of people who are willing to live on the products of the farm, but too few who want to live on the farm itself. Is it too much to hope that the high cost of living will drive them to the land peaceably? Eventually they must come, and why not do it without undue disturbance?

The Dominion Live Stock Commissioner is now back from England, and should have with him a comprehensive knowledge of European live stock conditions and requirements. The more knowledge of this kind we have the better will Canadian live-stock men be able to meet the requirements of the export market.

The House of Commons is again in session at Ottawa, and an editor of "The Farmer's Advocate" will follow the proceedings as during the last session. The present session promises to be a short one if members will get down to business and endeavor to earn their second sessional indemnity. Some members would earn it were it twice as large; others could not earn it were it cut in two.

Ontario's Dairy Industry.

The old idea that a farm with its family of hard workers and its crops and live stock is a unit by itself, without dependence upon the outside world for success, is fast losing ground. Originally, independence was the watchword of the farmer, but this was forced aside and interdependence among neighbors took its place. Now, dependence upon the outside world is an established fact, as regards a great many features of farm life, and in none more so than in the marketing of farm products.

The dairy industry is a splendid example of the way in which farmers must depend upon the outside world. Every great industry must respond to the same forces that move other industries, and the individual who engages in it must learn to feel that his work is but a small fraction of the effort necessary to assure the success of the industry as a whole; and, also, that unless the industry is on a successful footing he himself cannot succeed so well. This is the lesson that dairy farmers must learn. No longer can they feel independent of the actions of other dairymen, and the sooner each feels that he and his family, working industriously, are nevertheless only small parts of a great branch of national endeavor, so soon will dairying assume its proper importance and reward its workers with adequate returns.

Ontario's dairy industry viewed as a whole is of tremendous size. It is a big business enterprise, involving the production of products valued at about \$75,000,000 yearly and, what is more to the point, every dairy farmer should consider himself a shareholder in this business. There are, according to figures supplied by the Dairy Branch of the Ontario Department of Agriculture, 970 cheese factories in Ontario, using 1,369,897,671 pounds of milk annually to make 121,173,086 pounds of cheese valued at \$30,293,271. There are 160 factories making 28,714,352 pounds of creamery butter annually from 736,336,800 pounds of milk, and valued at \$14,357,189; besides 9 condenseries using 157,803,513 pounds of milk and 5 powder factories using 56,233,145 pounds. In addition, there is the market milk, ice cream, and dairy butter supply to be accounted for, which, together with farm consumption is valued at \$25,000,000. Truly this is a sizable industry in which no individual should dare to exercise thoughtlessly his own sweet will in the pursuit of it.

No ordinary commercial enterprise of this magnitude could, under any circumstances, be conducted along lines of individual action and success. Neither can the great dairy industry make much further progress without some governing body acting with the full support and co-operation of the mass of milk producers. Organization is necessary, and it must not be forgotten that this costs money. If good men with a knowledge of the producer's problems are to work in his behalf, they must be paid and paid well. Not much should be necessary from each, but that little must be forthcoming or the organization is doomed to failure. We have now in Canada a National Dairy Council, organized, but without funds unless either the producers, whom it will benefit, or the Government whom it will have to fight upon occasion, come to its support. For very obvious reasons the financing should certainly be done by producers and the manufacturers of dairy products. The industry it is fighting for should provide the National Dairy Council with the munitions and the sinews of war.

Provincial organizations are necessary too, for two principal reasons. They are necessary to co-ordinate the work of the national body and to attend to matters of a purely provincial nature. The present situation in Ontario with regard to the price of market milk is one that only a strong provincial organization can cope with. The recent disappointment regarding the price fixed for cheese by the British Ministry of Food should

serve to awaken every dairyman in Canada to the folly of poor organization. Never again should it be possible for any two or three men to practically buy up the whole Canadian export surplus of cheese without once consulting the producers. Prices for our milk are fixed by world demand, and every dairyman should rally freely to the organization that will aid him in securing a larger and better market.

A Farmer Writes a Book.

It is seldom that one has the opportunity of reading a book written by a farmer. It is proverbial, in fact, that farmers seldom find time to read books, much less write them, a circumstance which makes the writing of books by farmers as noteworthy as the examples are rare. Farmers have written books before, quite a few of them no doubt, but we always had the impression that most of the authors were not honest-to-goodness tillers of the soil; merely lovers of fresh air, whose enthusiasm had erupted, or scientifically trained men who sought authorship as a means of raising themselves into the lap of luxury. For these reasons, therefore, we are glad to note the production of a thoughtful and carefully-prepared book entitled "Production and Taxation in Canada," and written by an Ontario farmer. The author, W. C. Good, of Brant County, is a man fairly well known to readers of the farm press, and to those acquainted with the progress of agricultural organization in Ontario. Many may feel inclined to view his ideas of economic reform as being too advanced, and even radical, but we feel safe in saying that few practical farmers, such as Mr. Good is, have given as much serious thought to the present condition of agriculture as himself. Few men, too, who realize the present inadequacy of reward from agricultural endeavor, could or would write so clearly and at the same time in such a moderate tone.

There are no tirades against anyone. Plain facts are made still plainer, the fundamental idea inspiring the writer being, perhaps, best suggested by the following sentence from an early chapter: "The revival of agriculture will consist of, and result in *Better Farming, Better Business and Better Living* but will depend primarily upon *Better Returns* for the effort expended." Four chapters contain such facts as it was possible to gather regarding the actual economic condition of agriculture, and, naturally, we are not surprised to note two chapters dealing largely with the tariff and its manner of increasing the profit of urban industries at the expense of agriculture. One cannot, however, escape some surprise at the result produced by the cold logic of the author in his handling of available statistics. These two chapters alone are worth the most careful study. Mr. Good credits Canadian agriculture with an annual deficit of \$110,000,000 during 1910-14, while Canadian manufacturing during the same period gained a surplus profit each year of \$260,000,000. He also figures the total tax due to the tariff on Canadian manufacturers to be \$497,000,000, of which agriculture bears one-half, or what amounts to about \$350 per rural family, yearly. About one-quarter only of the total tax reaches the federal treasury, he believes, so that \$180,000,000 yearly is diverted from agriculture to the pockets of the protected interests. Assuming all these figures to be approximately correct, one can have all the joy of anticipation by merely subtracting this amount from the \$260,000,000 profit to urban industries and adding it on to the \$110,000,000 deficit of the farmer. The result is a substantial and fairly equal profit for both and, considering that the rural and urban populations are about the same, equal profits must be just if farming is a business and not merely a mode of existence.

Careful reading of this little book does much to explain the rapid spread of co-operation among farmers

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